
Neptune

Thermal Power Plant Trainer

TPP

Variable List

Department/Author:

Approved by:

Berit Baggerud (s)

Harald Kluken (s)

© 2009 Kongsberg Maritime AS
All rights reserved
No part of this work covered by the copyright
hereon may be reproduced or otherwise copied
without prior permission from
Kongsberg Maritime AS

DOCUMENT STATUS

Issue No.	Date/Year	Inc. by	Issue No.	Date/Year	Inc. by
SO-1420-A	6-Feb-09	BEBA			

CHANGES IN DOCUMENT

Issue No.	ECO No.	Paragraph No.	Paragraph Heading/ Description of Change



<This page is intentionally left blank>

TABLE OF CONTENTS

1	DIRECTORY LIST	1
2	VARIABLE LIST PAGES	2
2.1	Page:0100 MD010** SIM CONTROL : EXTERNAL CONDITIONS	2
2.2	Page:0101 MD010** SIM CONTROL : PROCESS OVERRIDE	2
2.3	Page:0102 MD900** SIM CONTROL : SEQUENCE OVERRIDE 1.....	3
2.4	Page:0103 MD902** SIM CONTROL : SEQUENCE OVERRIDE 2.....	3
2.5	Page:0110 MD010** SIM CONTROL : HFO DATA	4
2.6	Page:0111 MD010** SIM CONTROL : COAL DATA	4
2.7	Page:0112 MD010** SIM CONTROL : PELLET DATA.....	5
2.8	Page:0113 MD010** SIM CONTROL : BIO FUEL SELECTION	5
2.9	Page:0130 MD010** SIM CONTROL : TRIP SURVEY (1)	6
2.10	Page:0131 MD010** SIM CONTROL : TRIP SURVEY (2)	6
2.11	Page:0190 MD01** CONFIGURABLE PAGE	7
2.12	Page:1000 MD100** HFO SERVICE TANK (1)	7
2.13	Page:1001 MD100** HFO SERVICE TANK (2)	8
2.14	Page:1002 MD100** HFO SERVICE TANK (3)	8
2.15	Page:1003 MD100** HFO SUPPLY PUMPS (1)	9
2.16	Page:1004 MD100** HFO SUPPLY PUMPS (2)	9
2.17	Page:1005 MD100** HFO SUPPLY HEATERS (1).....	10
2.18	Page:1006 MD100** HFO SUPPLY HEATERS (2).....	10
2.19	Page:1020 MD100** HFO SUPPLY PRESSURE CONTROL.....	11
2.20	Page:1021 MD100** HFO SUPPLY TEMPERATURE CONTROL	11
2.21	Page:1022 MD100** HFO SERVICE TANK TEMP CONTROL	12
2.22	Page:1040 MD100** HFO SUPPLY PUMP CONTROL DATA	12
2.23	Page:1090 MD10** CONFIGURABLE PAGE	13
2.24	Page:1200 MD120** LP STEAM GENERATOR (1)	13
2.25	Page:1201 MD120** LP STEAM GENERATOR (2)	14
2.26	Page:1202 MD120** LP STEAM GENERATOR (3)	14
2.27	Page:1203 MD120** LP STEAM GENERATOR (4)	15
2.28	Page:1204 MD120** STEAM COOLING TANK	15
2.29	Page:1205 MD120** STEAM DRAIN INSPECTION TANK.....	16
2.30	Page:1220 MD120** LP STGEN PRESSURE CONTROL	16
2.31	Page:1221 MD120** LP STGEN WATER LEVEL CONTROL.....	17
2.32	Page:1222 MD120** LP STGEN DRAIN TANK LEVEL CONTROL	17
2.33	Page:1223 MD120** LP STGEN INSPECTION TANK LEVEL CONTROL.....	18
2.34	Page:1224 MD120** STEAM COOLING TANK PRESSURE CONTROL.....	18
2.35	Page:1225 MD120** STEAM COOLING TANK LEVEL CONTROL	19
2.36	Page:1290 MD12** CONFIGURABLE PAGE	19
2.37	Page:1400 MD140** PLANE A PRIMARY AIR SUPPLY.....	20
2.38	Page:1401 MD140** PLANE A COAL MILL (1)	20
2.39	Page:1402 MD140** PLANE A COAL MILL (2)	21
2.40	Page:1405 MD140** PLANE A FUEL SUPPLY	21
2.41	Page:1408 MD140** PLANE A BURNER STATES	22
2.42	Page:1409 MD140** PLANE A BURNER READY LIMITS	22
2.43	Page:1410 MD140** PLANE A BURNER 1 SYSTEM (1).....	23
2.44	Page:1411 MD140** PLANE A BURNER 1 SYSTEM (2).....	23
2.45	Page:1412 MD140** PLANE A BURNER 2 SYSTEM (1).....	24
2.46	Page:1413 MD140** PLANE A BURNER 2 SYSTEM (2).....	24



2.47	Page: 1414 MD140**	PLANE A BURNER 3 SYSTEM (1).....	25
2.48	Page: 1415 MD140**	PLANE A BURNER 3 SYSTEM (2).....	25
2.49	Page: 1416 MD140**	PLANE A BURNER 4 SYSTEM (1).....	26
2.50	Page: 1417 MD140**	PLANE A BURNER 4 SYSTEM (2).....	26
2.51	Page: 1420 MD140**	PLANE A FUEL OIL FLOW CONTROL	27
2.52	Page: 1421 MD140**	PLANE A SEC. AIR FLOW CONTROL	27
2.53	Page: 1422 MD140**	PLANE A COAL FEEDER SPEED CONTROL.....	28
2.54	Page: 1423 MD140**	PLANE A PRIM. AIR FLOW CONTROL.....	28
2.55	Page: 1424 MD140**	PLANE A PRIM. AIR TEMP CONTROL.....	29
2.56	Page: 1425 MD140**	PLANE A MISC. CONTROL.....	29
2.57	Page: 1430 MD140**	PLANE A COAL MILL TRIP.....	30
2.58	Page: 1431 MD140**	PLANE A COAL MILL SEQUENCES	30
2.59	Page: 1490 MD14**	CONFIGURABLE PAGE	31
2.60	Page: 1500 MD150**	PLANE B PRIMARY AIR SUPPLY	31
2.61	Page: 1501 MD150**	PLANE B COAL MILL (1)	32
2.62	Page: 1502 MD150**	PLANE B COAL MILL (2)	32
2.63	Page: 1505 MD150**	PLANE B FUEL SUPPLY	33
2.64	Page: 1508 MD150**	PLANE B BURNER STATES	33
2.65	Page: 1509 MD150**	PLANE B BURNER READY LIMITS.....	34
2.66	Page: 1510 MD150**	PLANE B BURNER 1 SYSTEM (1).....	34
2.67	Page: 1511 MD150**	PLANE B BURNER 1 SYSTEM (2).....	35
2.68	Page: 1512 MD150**	PLANE B BURNER 2 SYSTEM (1).....	35
2.69	Page: 1513 MD150**	PLANE B BURNER 2 SYSTEM (2).....	36
2.70	Page: 1514 MD140**	PLANE B BURNER 3 SYSTEM (1).....	36
2.71	Page: 1515 MD150**	PLANE B BURNER 3 SYSTEM (2).....	37
2.72	Page: 1516 MD150**	PLANE B BURNER 4 SYSTEM (1).....	37
2.73	Page: 1517 MD150**	PLANE B BURNER 4 SYSTEM (2).....	38
2.74	Page: 1520 MD150**	PLANE B FUEL OIL FLOW CONTROL	38
2.75	Page: 1521 MD150**	PLANE B SEC. AIR FLOW CONTROL	39
2.76	Page: 1522 MD150**	PLANE B COAL FEEDER SPEED CONTROL.....	39
2.77	Page: 1523 MD150**	PLANE B PRIM. AIR FLOW CONTROL.....	40
2.78	Page: 1524 MD150**	PLANE B PRIM. AIR TEMP CONTROL.....	40
2.79	Page: 1525 MD150**	PLANE B MISC. CONTROL.....	41
2.80	Page: 1530 MD150**	PLANE B COAL MILL TRIP.....	41
2.81	Page: 1531 MD150**	PLANE B COAL MILL SEQUENCES	42
2.82	Page: 1590 MD15**	CONFIGURABLE PAGE	42
2.83	Page: 1600 MD160**	PLANE C PRIMARY AIR SUPPLY	43
2.84	Page: 1601 MD160**	PLANE C COAL MILL (1)	43
2.85	Page: 1602 MD160**	PLANE C COAL MILL (2)	44
2.86	Page: 1605 MD160**	PLANE C FUEL SUPPLY.....	44
2.87	Page: 1608 MD160**	PLANE C BURNER STATES	45
2.88	Page: 1609 MD160**	PLANE C BURNER READY LIMITS.....	45
2.89	Page: 1610 MD160**	PLANE C BURNER 1 SYSTEM (1).....	46
2.90	Page: 1611 MD160**	PLANE C BURNER 1 SYSTEM (2).....	46
2.91	Page: 1612 MD160**	PLANE C BURNER 2 SYSTEM (1).....	47
2.92	Page: 1613 MD160**	PLANE C BURNER 2 SYSTEM (2).....	47
2.93	Page: 1614 MD160**	PLANE C BURNER 3 SYSTEM (1).....	48
2.94	Page: 1615 MD160**	PLANE C BURNER 3 SYSTEM (2).....	48
2.95	Page: 1616 MD160**	PLANE C BURNER 4 SYSTEM (1).....	48
2.96	Page: 1617 MD160**	PLANE C BURNER 4 SYSTEM (2).....	48
2.97	Page: 1620 MD160**	PLANE C FUEL OIL FLOW CONTROL	48



2.98	Page: 1621 MD160**	PLANE C SEC. AIR FLOW CONTROL.....	48
2.99	Page: 1622 MD160**	PLANE C COAL FEEDER SPEED CONTROL.....	48
2.100	Page: 1623 MD160**	PLANE C PRIM. AIR FLOW CONTROL	48
2.101	Page: 1624 MD160**	PLANE C PRIM. AIR TEMP CONTROL.....	48
2.102	Page: 1625 MD160**	PLANE C MISC. CONTROL.....	48
2.103	Page: 1630 MD160**	PLANE C COAL MILL TRIP	48
2.104	Page: 1631 MD160**	PLANE C COAL MILL SEQUENCES	48
2.105	Page: 1690 MD16**	CONFIGURABLE PAGE	48
2.106	Page: 1700 MD170**	PLANE D PRIMARY AIR SUPPLY	48
2.107	Page: 1701 MD170**	PLANE D COAL MILL (1)	48
2.108	Page: 1702 MD170**	PLANE D COAL MILL (2)	48
2.109	Page: 1705 MD170**	PLANE D FUEL SUPPLY.....	48
2.110	Page: 1708 MD170**	PLANE D BURNER STATES.....	48
2.111	Page: 1709 MD170**	PLANE D BURNER READY LIMITS.....	48
2.112	Page: 1710 MD170**	PLANE D BURNER 1 SYSTEM (1).....	48
2.113	Page: 1711 MD170**	PLANE D BURNER 1 SYSTEM (2).....	48
2.114	Page: 1712 MD170**	PLANE D BURNER 2 SYSTEM (1).....	48
2.115	Page: 1713 MD170**	PLANE D BURNER 2 SYSTEM (2).....	48
2.116	Page: 1714 MD170**	PLANE D BURNER 3 SYSTEM (1).....	48
2.117	Page: 1715 MD170**	PLANE D BURNER 3 SYSTEM (2).....	48
2.118	Page: 1716 MD170**	PLANE D BURNER 4 SYSTEM (1).....	48
2.119	Page: 1717 MD170**	PLANE D BURNER 4 SYSTEM (2).....	48
2.120	Page: 1720 MD170**	PLANE D FUEL OIL FLOW CONTROL	48
2.121	Page: 1721 MD170**	PLANE D SEC. AIR FLOW CONTROL	48
2.122	Page: 1722 MD170**	PLANE D COAL FEEDER SPEED CONTROL	48
2.123	Page: 1723 MD170**	PLANE D PRIM. AIR FLOW CONTROL	48
2.124	Page: 1724 MD170**	PLANE D PRIM. AIR TEMP CONTROL	48
2.125	Page: 1725 MD170**	PLANE D MISC. CONTROL	48
2.126	Page: 1730 MD170**	PLANE D COAL MILL TRIP.....	48
2.127	Page: 1731 MD170**	PLANE D COAL MILL SEQUENCES	48
2.128	Page: 1790 MD17**	CONFIGURABLE PAGE	48
2.129	Page: 1800 MD180**	BOILER PURGE SYSTEM	48
2.130	Page: 1801 MD180**	BURNER DISPLAY SELECT	48
2.131	Page: 1802 MD180**	BURNER 1/2 DISPLAY	48
2.132	Page: 1803 MD180**	BURNER 3/4 DISPLAY	48
2.133	Page: 1820 MD180**	FUEL MASTER CONTROL	48
2.134	Page: 1821 MD180**	FLUE GAS OXYGEN CONTROL	48
2.135	Page: 1822 MD180**	FUEL DISTRBUTION CONTROL (1)	48
2.136	Page: 1823 MD180**	FUEL DISTRBUTION CONTROL (2)	48
2.137	Page: 1830 MD180**	BOILER TRIP SYSTEM (1)	48
2.138	Page: 1831 MD180**	BOILER TRIP SYSTEM (2)	48
2.139	Page: 1890 MD18**	CONFIGURABLE PAGE	48
2.140	Page: 1900 MD190**	BLOCK ENERGY SET POINTS (1)	48
2.141	Page: 1901 MD190**	BLOCK ENERGY SET POINTS (2)	48
2.142	Page: 1920 MD190**	BLOCK ELECTRIC ENERGY CONTROL - BLE	48
2.143	Page: 1921 MD190**	BLOCK WATER ENERGY CONTROL - BLW.....	48
2.144	Page: 1922 MD190**	BLOCK LOAD MASTER CONTROL - BLM	48
2.145	Page: 1923 MD190**	WATER TEMP MASTER CONTROL - TMC	48
2.146	Page: 1930 MD190**	BLOCK LOAD REDUCTION SYSTEM	48
2.147	Page: 1940 MD190**	BURNER MANAGEMENT SYSTEM (1)	48
2.148	Page: 1941 MD190**	BURNER MANAGEMENT SYSTEM (2)	48



2.149	Page: 1990 MD19**	CONFIGURABLE PAGE	48
2.150	Page: 2000 MD200**	COMBUSTION AIR CONDITION	48
2.151	Page: 2001 MD200**	BOILER COMB. AIR FANS	48
2.152	Page: 2002 MD200**	BOILER FLUE GAS FANS.....	48
2.153	Page: 2003 MD200**	BOILER COMB. AIR COLD BOX.....	48
2.154	Page: 2004 MD200**	BOILER COMB. AIR RING CHANNEL	48
2.155	Page: 2005 MD200**	BOILER FURNACE (1)	48
2.156	Page: 2006 MD200**	BOILER FURNACE (2)	48
2.157	Page: 2007 MD200**	BOILER FLUE GAS FLOW	48
2.158	Page: 2008 MD200**	BOILER FLUE GAS TEMPERATURE.....	48
2.159	Page: 2009 MD200**	BOILER FLUE GAS PRESSURE	48
2.160	Page: 2010 MD200**	BOILER HEAT TRANSFER AREA FACTORS	48
2.161	Page: 2020 MD200**	RING CHANNEL AIR PRESSURE CONTROL.....	48
2.162	Page: 2021 MD200**	RING CHANNEL AIR PRESS SP CONTROL.....	48
2.163	Page: 2022 MD200**	COMB. AIR FAN LOAD BALANCE CONTROL	48
2.164	Page: 2023 MD200**	FURNACE PRESSURE CONTROL.....	48
2.165	Page: 2024 MD200**	FLUE GAS FAN LOAD BALANCE CONTROL	48
2.166	Page: 2025 MD200**	FURNACE OFA FLOW CONTROL	48
2.167	Page: 2090 MD20**	CONFIGURABLE PAGE	48
2.168	Page: 2100 MD210**	WATER AIR PREHEATER 1	48
2.169	Page: 2101 MD210**	WATER AIR PREHEATER 2	48
2.170	Page: 2102 MD210**	STEAM AIR PREHEATERS	48
2.171	Page: 2103 MD210**	AIR PREHEATERS PRESSURE DROP	48
2.172	Page: 2105 MD210**	ROTARY AIR PREHEATER 1 (1).....	48
2.173	Page: 2106 MD210**	ROTARY AIR PREHEATER 1 (2).....	48
2.174	Page: 2107 MD210**	ROTARY AIR PREHEATER 2 (1).....	48
2.175	Page: 2108 MD210**	ROTARY AIR PREHEATER 2 (2).....	48
2.176	Page: 2120 MD210**	AIR PREHEATER 1 TEMP CONTROL	48
2.177	Page: 2121 MD210**	AIR PREHEATER 2 TEMP CONTROL	48
2.178	Page: 2190 MD21**	CONFIGURABLE PAGE	48
2.179	Page: 2400 MD240**	BOILER FEED / FILLING WATER	48
2.180	Page: 2401 MD240**	BOILER START UP HEAT EXCHANGER	48
2.181	Page: 2402 MD240**	BOILER EVAPORATOR / SUPERHEATER 1.....	48
2.182	Page: 2403 MD240**	STEAM SEPARATOR.....	48
2.183	Page: 2404 MD240**	STEAM SEPARATOR DRAIN.....	48
2.184	Page: 2406 MD240**	BOTTUM BLOW TANK	48
2.185	Page: 2420 MD240**	BOILER FEEDW FLOW CONTROL	48
2.186	Page: 2421 MD240**	BOILER FEEDW PUMP SPEED CONTROL.....	48
2.187	Page: 2422 MD240**	BOILER FEEDW VALVE POS SET POINT	48
2.188	Page: 2423 MD240**	BOILER FEEDW MASTER CONTROL (DT).....	48
2.189	Page: 2425 MD240**	SEPARATOR LEVEL CONTROL 1.....	48
2.190	Page: 2426 MD240**	SEPARATOR LEVEL CONTROL 2.....	48
2.191	Page: 2427 MD240**	SEPARATOR LEVEL CONTROL 3.....	48
2.192	Page: 2428 MD240**	BOTTUM BLOW TANK LEVEL CONTROL.....	48
2.193	Page: 2429 MD240**	BOILER OUTLET STEAM PRESSURE CONTROL	48
2.194	Page: 2490 MD24**	CONFIGURABLE PAGE	48
2.195	Page: 2500 MD250**	SUPERHEATER 2	48
2.196	Page: 2501 MD250**	SUPERHEATER 3	48
2.197	Page: 2502 MD250**	REHEATER 1	48
2.198	Page: 2503 MD250**	REHEATER 2	48
2.199	Page: 2504 MD250**	ECONOMIZER.....	48



2.200	Page: 2506 MD250**	WATER INJECTION	48
2.201	Page: 2520 MD250**	SUPERHEATER 2 STEAM TEMP CONTROL	48
2.202	Page: 2521 MD250**	SUPERHEATER 3 STEAM TEMP CONTROL	48
2.203	Page: 2522 MD250**	REHEATER 2 STEAM TEMP CONTROL	48
2.204	Page: 2523 MD250**	STEAM TEMP CONTROL VALVE/SENSOR TC.....	48
2.205	Page: 2524 MD250**	STEAM TEMP RATE CONTROL.....	48
2.206	Page: 2590 MD25**	CONFIGURABLE PAGE	48
2.207	Page: 2600 MD260**	HIGH PRESSURE STEAM SYSTEM	48
2.208	Page: 2601 MD260**	INTERMEDIATE PRESSURE STEAM SYSTEM.....	48
2.209	Page: 2602 MD260**	SAFETY VALVES	48
2.210	Page: 2604 MD260**	SOOT BLOWING STEAM + +	48
2.211	Page: 2605 MD260**	LP STEAM DUMP SYSTEM	48
2.212	Page: 2620 MD260**	HP BYPASS STEAM PRESSURE CONTROL	48
2.213	Page: 2621 MD260**	HP BYPASS STEAM TEMP CONTROL	48
2.214	Page: 2622 MD260**	HP BYPASS WATER INJECTION DP CONTROL	48
2.215	Page: 2623 MD260**	HP BYPASS STEAM PRESS GLIDE CONTROL	48
2.216	Page: 2624 MD260**	LP BYPASS STEAM PRESSURE CONTROL.....	48
2.217	Page: 2625 MD260**	LP STEAM DUMP CONTROL	48
2.218	Page: 2630 MD260**	HP TURBINE TEMP PROTECTION	48
2.219	Page: 2690 MD26**	CONFIGURABLE PAGE	48
2.220	Page: 3000 MD300**	HP TURBINE	48
2.221	Page: 3001 MD300**	IP TURBINE 1/2	48
2.222	Page: 3002 MD300**	IP TURBINE 1 SECTIONS.....	48
2.223	Page: 3003 MD260**	IP TURBINE 1 EXTRACTIONS	48
2.224	Page: 3004 MD300**	IP TURBINE 2 SECTIONS.....	48
2.225	Page: 3005 MD300**	IP TURBINE 2 EXTRACTIONS	48
2.226	Page: 3006 MD300**	LP TURBINE 1	48
2.227	Page: 3007 MD300**	LP TURBINE 1 SECTIONS	48
2.228	Page: 3008 MD300**	LP TURBINE 2	48
2.229	Page: 3009 MD300**	LP TURBINE 2 SECTIONS	48
2.230	Page: 3010 MD300**	TURBINE EXTRACTION LINES (1)	48
2.231	Page: 3011 MD300**	TURBINE EXTRACTION LINES (2)	48
2.232	Page: 3012 MD300**	TURBINE AUXIL SYSTEMS	48
2.233	Page: 3013 MD300**	TURBINE POWER (1)	48
2.234	Page: 3014 MD300**	TURBINE POWER (2)	48
2.235	Page: 3015 MD300**	TURBINE EFFICIENCIES	48
2.236	Page: 3020 MD300**	TURBINE SPEED CONTROL (1)	48
2.237	Page: 3021 MD300**	TURBINE SPEED CONTROL (2)	48
2.238	Page: 3022 MD300**	TURBINE MIN INLET PRESS CONTROL.....	48
2.239	Page: 3023 MD300**	TURBINE CONDENSER VACUUM CONTROL.....	48
2.240	Page: 3030 MD300**	TURBINE TRIP (1)	48
2.241	Page: 3031 MD300**	TURBINE TRIP (2)	48
2.242	Page: 3090 MD30**	CONFIGURABLE PAGE	48
2.243	Page: 3800 MD380**	ELECTRIC GENERATOR (1)	48
2.244	Page: 3801 MD380**	ELECTRIC GENERATOR (2)	48
2.245	Page: 3802 MD380**	MAIN CIRCUIT BREAKERS	48
2.246	Page: 3803 MD380**	AUXIL CIRCUIT BREAKERS	48
2.247	Page: 3804 MD380**	ELECTRIC POWER CONSUMPTION	48
2.248	Page: 3810 MD380**	EXTERNAL ELECTRIC GRID (1).....	48
2.249	Page: 3811 MD380**	EXTERNAL ELECTRIC GRID (2).....	48
2.250	Page: 3830 MD380**	MAIN CIRCUIT BREAKER TRIP.....	48



2.251	Page: 3890 MD38**	CONFIGURABLE PAGE	48
2.252	Page: 4000 MD400**	COLD CONDENSER (1)	48
2.253	Page: 4001 MD400**	COLD CONDENSER (2)	48
2.254	Page: 4002 MD400**	COLD CONDENSER VACUUM PUMPS	48
2.255	Page: 4004 MD400**	COLD CONDENSER MAIN COOLW PUMPS	48
2.256	Page: 4005 MD400**	COLD CONDENSER AUXIL COOLW PUMP	48
2.257	Page: 4006 MD400**	MAIN COLD CONDENSATE PUMPS	48
2.258	Page: 4007 MD400**	AUXIL COLD CONDENSATE PUMPS	48
2.259	Page: 4008 MD400**	LP FEED HEATER 0	48
2.260	Page: 4009 MD400**	COLD CONDENSATE LINE.....	48
2.261	Page: 4020 MD400**	COLD CONDENSER HOTWELL LEVEL CONTROL.....	48
2.262	Page: 4021 MD400**	LP FEED HEATER 0 LEVEL CONTROL	48
2.263	Page: 4030 MD400**	COLD CONDENSER VACUUM BREAKER TRIP	48
2.264	Page: 4040 MD400**	MAIN COOLW PUMP CONTROL DATA.....	48
2.265	Page: 4041 MD400**	COLD CONDENSATE PUMP CONTROL DATA.....	48
2.266	Page: 4042 MD400**	CONDENSER VACUUM PUMP CONTROL DATA	48
2.267	Page: 4090 MD40**	CONFIGURABLE PAGE	48
2.268	Page: 4100 MD410**	CONDENSATE TANK (1)	48
2.269	Page: 4101 MD410**	CONDENSATE TANK (2)	48
2.270	Page: 4102 MD410**	CONDENSATE CLEANING PLANT ++	48
2.271	Page: 4104 MD410**	MAIN CONDENSATE PUMPS (1).....	48
2.272	Page: 4105 MD410**	MAIN CONDENSATE PUMPS (2).....	48
2.273	Page: 4120 MD410**	CONDENSATE TANK LEVEL CONTROL	48
2.274	Page: 4130 MD410**	MAIN CONDENSATE PUMP TRIP	48
2.275	Page: 4140 MD410**	MAIN CONDENSATE PUMP CONTROL DATA.....	48
2.276	Page: 4190 MD41**	CONFIGURABLE PAGE	48
2.277	Page: 4200 MD420**	CONDENSATE FILTER	48
2.278	Page: 4201 MD420**	LP FEED HEATER 1 (1).....	48
2.279	Page: 4202 MD420**	LP FEED HEATER 1 (2).....	48
2.280	Page: 4203 MD420**	LP FEED HEATER 2 (1).....	48
2.281	Page: 4204 MD420**	LP FEED HEATER 2 (2).....	48
2.282	Page: 4205 MD420**	LP FEED HEATER 3 (1).....	48
2.283	Page: 4206 MD420**	LP FEED HEATER 3 (2).....	48
2.284	Page: 4210 MD420**	LP FEED HEATERS MICS PARAMETERS	48
2.285	Page: 4220 MD420**	LP FEED HEATER 1 LEVEL CONTROL	48
2.286	Page: 4221 MD420**	LP FEED HEATER 2 LEVEL CONTROL	48
2.287	Page: 4222 MD420**	LP FEED HEATER 3 LEVEL CONTROL	48
2.288	Page: 4223 MD420**	CONDENSATE FILTER DP CONTROL	48
2.289	Page: 4230 MD420**	LP FEED HEATER TRIP	48
2.290	Page: 4290 MD42**	CONFIGURABLE PAGE	48
2.291	Page: 4300 MD430**	FEEDW DEAERATOR (1).....	48
2.292	Page: 4301 MD430**	FEEDW DEAERATOR (2).....	48
2.293	Page: 4302 MD430**	FEEDW DEAERATOR (3).....	48
2.294	Page: 4303 MD430**	FEEDW DEAERATOR (4).....	48
2.295	Page: 4304 MD430**	FEED WATER LINE	48
2.296	Page: 4310 MD430**	FEEDW PUMP 1 (1)	48
2.297	Page: 4311 MD430**	FEEDW PUMP 1 (2)	48
2.298	Page: 4312 MD430**	FEEDW PUMP 1 (3)	48
2.299	Page: 4313 MD430**	FEEDW PUMP 2 (1)	48
2.300	Page: 4314 MD430**	FEEDW PUMP 2 (2)	48
2.301	Page: 4315 MD430**	FEEDW PUMP 2 (3)	48



2.302	Page: 4316 MD430**	FEEDW PUMP 3 (1).....	48
2.303	Page: 4317 MD430**	FEEDW PUMP 3 (2).....	48
2.304	Page: 4318 MD430**	FEEDW PUMP 3 (3).....	48
2.305	Page: 4320 MD430**	FEEDW DEAERATOR LEVEL CONTROL	48
2.306	Page: 4321 MD430**	FEEDW DEAERATOR PRESSURE CONTROL	48
2.307	Page: 4330 MD430**	FEEDW PUMP 1 TRIP	48
2.308	Page: 4331 MD430**	FEEDW PUMP 2 TRIP	48
2.309	Page: 4332 MD430**	FEEDW PUMP 3 TRIP	48
2.310	Page: 4340 MD430**	FEED WATER PUMP CONTROL DATA	48
2.311	Page: 4390 MD43**	CONFIGURABLE PAGE	48
2.312	Page: 4400 MD440**	FEEDW LINE.....	48
2.313	Page: 4401 MD440**	HP FEED HEATER 1 (1)	48
2.314	Page: 4402 MD440**	HP FEED HEATER 1 (2)	48
2.315	Page: 4403 MD440**	HP FEED HEATER 2 (1)	48
2.316	Page: 4404 MD440**	HP FEED HEATER 2 (2)	48
2.317	Page: 4405 MD440**	HP FEED HEATER 3 (1)	48
2.318	Page: 4406 MD440**	HP FEED HEATER 3 (2)	48
2.319	Page: 4410 MD440**	HP FEED HEATER AREA FACTORS	48
2.320	Page: 4420 MD440**	HP FEED HEATER 1 LEVEL CONTROL	48
2.321	Page: 4421 MD440**	HP FEED HEATER 2 LEVEL CONTROL	48
2.322	Page: 4430 MD440**	HP FEED HEATER 1 TRIP	48
2.323	Page: 4431 MD440**	HP FEED HEATER 2 TRIP	48
2.324	Page: 4432 MD440**	HP FEED HEATER FW BYPASS TRIP.....	48
2.325	Page: 4490 MD44**	CONFIGURABLE PAGE	48
2.326	Page: 5000 MD500**	MAKE UP DEAERATOR (1)	48
2.327	Page: 5001 MD500**	MAKE UP DEAERATOR (2)	48
2.328	Page: 5002 MD500**	MAKE UP DEAERATOR VACUUM PUMPS	48
2.329	Page: 5003 MD500**	CONDENSATE TRANSFER PUMPS (1).....	48
2.330	Page: 5004 MD500**	CONDENSATE TRANSFER PUMPS (2).....	48
2.331	Page: 5006 MD500**	CONDENSATE MAKE UP TANK	48
2.332	Page: 5007 MD500**	CONDENSATE MAKE UP PUMPS (1).....	48
2.333	Page: 5008 MD500**	CONDENSATE MAKE UP PUMPS (2).....	48
2.334	Page: 5020 MD500**	MAKE UP DEAERATOR LEVEL CONTROL	48
2.335	Page: 5021 MD500**	MAKE UP DEAERATOR TEMP CONTROL	48
2.336	Page: 5022 MD500**	MAKE UP TANK LEVEL CONTROL	48
2.337	Page: 5040 MD500**	MAKE UP / TRANSFER PUMP CNTR DATA	48
2.338	Page: 5090 MD50**	CONFIGURABLE PAGE	48
2.339	Page: 6000 MD600**	DHW SUPPLY / RETURN LINES	48
2.340	Page: 6001 MD600**	DHW FLOW CONTROL LINES.....	48
2.341	Page: 6002 MD600**	DHW RETURN PUMP 1.....	48
2.342	Page: 6003 MD600**	DHW RETURN PUMP 2.....	48
2.343	Page: 6004 MD600**	DHW SUPPLY PUMP 1	48
2.344	Page: 6005 MD600**	DHW SUPPLY PUMP 2	48
2.345	Page: 6006 MD600**	HOT CONDENSER 1 (1).....	48
2.346	Page: 6007 MD600**	HOT CONDENSER 1 (2).....	48
2.347	Page: 6008 MD600**	HOT CONDENSER 2 (1).....	48
2.348	Page: 6009 MD600**	HOT CONDENSER 2 (2).....	48
2.349	Page: 6010 MD600**	HOT CONDENSATE PUMPS (1)	48
2.350	Page: 6011 MD600**	HOT CONDENSATE PUMPS (2)	48
2.351	Page: 6020 MD600**	HOT CONDENSER 1 LEVEL CONTROL	48
2.352	Page: 6021 MD600**	HOT CONDENSER 2 LEVEL CONTROL	48



2.353	Page: 6022 MD600**	HOT CONDENSER 2 MIN TEMP CONTROL.....	48
2.354	Page: 6023 MD600**	DHW LINE DIFF PRESS CONTROL.....	48
2.355	Page: 6030 MD600**	HOT CONDENSER 1/2 LEVEL TRIP.....	48
2.356	Page: 6040 MD600**	HOT CONDENSATE PUMP CONTROL DATA.....	48
2.357	Page: 6090 MD60**	CONFIGURABLE PAGE.....	48
2.358	Page: 6100 MD600**	DIRECT HEATER STEAM SUPPLY.....	48
2.359	Page: 6101 MD600**	DIRECT HEATER DHW SUPPLY.....	48
2.360	Page: 6102 MD600**	DIRECT HEATER 1.....	48
2.361	Page: 6103 MD600**	DIRECT HEATER 2.....	48
2.362	Page: 6104 MD600**	CONDENSATE SUBCOOLER 1.....	48
2.363	Page: 6105 MD600**	CONDENSATE SUBCOOLER 2.....	48
2.364	Page: 6120 MD610**	DIRECT HEATER 1 LEVEL CONTROL.....	48
2.365	Page: 6121 MD610**	DIRECT HEATER 2 LEVEL CONTROL.....	48
2.366	Page: 6122 MD610**	DIRECT HEATER 1/2 LEVEL SET POINT.....	48
2.367	Page: 6123 MD610**	SUBCOOLER 1 FLOW CONTROL.....	48
2.368	Page: 6124 MD610**	SUBCOOLER 2 FLOW CONTROL.....	48
2.369	Page: 6130 MD610**	DIRECT HEATER 1 TRIP.....	48
2.370	Page: 6131 MD610**	DIRECT HEATER 2 TRIP.....	48
2.371	Page: 6190 MD61**	CONFIGURABLE PAGE.....	48
2.372	Page: 6200 MD620**	ACCUMULATOR TANK (1).....	48
2.373	Page: 6201 MD620**	ACCUMULATOR TANK (2).....	48
2.374	Page: 6202 MD620**	ACCUMULATOR TANK TEMP DISTRIBUTION.....	48
2.375	Page: 6204 MD620**	FRANCIS TURBINE (1).....	48
2.376	Page: 6205 MD620**	FRANCIS TURBINE (2).....	48
2.377	Page: 6206 MD620**	ACCUMULATOR PUMP (1).....	48
2.378	Page: 6207 MD620**	ACCUMULATOR PUMP (2).....	48
2.379	Page: 6208 MD620**	ACCUMULATOR PUMP MOTOR.....	48
2.380	Page: 6210 MD620**	ACCUMULATOR BLOCK CONNECTION.....	48
2.381	Page: 6212 MD620**	DHW SYSTEM EXPANSION TANK.....	48
2.382	Page: 6215 MD620**	DHW SYSTEM MAKE UP PUMPS.....	48
2.383	Page: 6220 MD620**	DHW SYSTEM EXP TANK LEVEL CONTROL.....	48
2.384	Page: 6221 MD620**	FRANCIS TURBINE TEMP CONTROL.....	48
2.385	Page: 6222 MD620**	EXP TANK LOW LEVEL CONTROL.....	48
2.386	Page: 6223 MD620**	EXP TANK HIGH LEVEL CONTROL.....	48
2.387	Page: 6230 MD620**	FRANCIS TURBINE TRIP SYSTEM.....	48
2.388	Page: 6290 MD62**	CONFIGURABLE PAGE.....	48
2.389	Page: 6300 MD600**	DISTRIC HEAT WATER LOAD CONTROL.....	48
2.390	Page: 6301 MD600**	DISTRIC HEAT WATER CITY GRID.....	48
2.391	Page: 6302 MD600**	DISTRIC HEAT WATER CONSTANTS.....	48
2.392	Page: 6390 MD63**	CONFIGURABLE PAGE.....	48
2.393	Page: 6400 MD900**	SEQ1 INITIAL PREPARATION (1/3).....	48
2.394	Page: 6401 MD900**	SEQ1 INITIAL PREPARATION (2/3).....	48
2.395	Page: 6402 MD900**	SEQ1 INITIAL PREPARATION (3/3).....	48
2.396	Page: 6403 MD900**	SEQ2 CONDENSATE MAKE UP (1/3).....	48
2.397	Page: 6404 MD900**	SEQ2 CONDENSATE MAKE UP (2/3).....	48
2.398	Page: 6405 MD900**	SEQ2 CONDENSATE MAKE UP (3/3).....	48
2.399	Page: 6406 MD900**	SEQ3 SMALL CLEAN UP LOOP (1/3).....	48
2.400	Page: 6407 MD900**	SEQ3 SMALL CLEAN UP LOOP (2/3).....	48
2.401	Page: 6408 MD900**	SEQ3 SMALL CLEAN UP LOOP (3/3).....	48
2.402	Page: 6410 MD900**	SEQ4 FUEL OIL SUPPLY HEATING (1/3).....	48
2.403	Page: 6411 MD900**	SEQ4 FUEL OIL SUPPLY HEATING (2/3).....	48



2.404	Page: 6412 MD900**	SEQ04 FUEL OIL SUPPLY HEATING (3/3)	48
2.405	Page: 6413 MD900**	SEQ05 BIG CLEAN UP LOOP (1/3)	48
2.406	Page: 6414 MD900**	SEQ05 BIG CLEAN UP LOOP (2/3)	48
2.407	Page: 6415 MD900**	SEQ05 BIG CLEAN UP LOOP (3/3)	48
2.408	Page: 6416 MD900**	SEQ06 BOILER IGNITION (1/3)	48
2.409	Page: 6417 MD900**	SEQ06 BOILER IGNITION (2/3)	48
2.410	Page: 6418 MD900**	SEQ06 BOILER IGNITION (3/3)	48
2.411	Page: 6420 MD900**	SEQ07 PRESSURE RISING TO 15 BAR (1/3)	48
2.412	Page: 6421 MD900**	SEQ07 PRESSURE RISING TO 15 BAR (2/3)	48
2.413	Page: 6422 MD900**	SEQ07 PRESSURE RISING TO 15 BAR (3/3)	48
2.414	Page: 6423 MD901**	SEQ08 COLD CONDENSER VACUUM (1/3)	48
2.415	Page: 6424 MD901**	SEQ08 COLD CONDENSER VACUUM (2/3)	48
2.416	Page: 6425 MD901**	SEQ08 COLD CONDENSER VACUUM (3/3)	48
2.417	Page: 6426 MD900**	SEQ09 FEEDW DEAERATOR HEATING (1/3)	48
2.418	Page: 6427 MD900**	SEQ09 FEEDW DEAERATOR HEATING (2/3)	48
2.419	Page: 6428 MD900**	SEQ09 FEEDW DEAERATOR HEATING (3/3)	48
2.420	Page: 6430 MD901**	SEQ10 PRESSURE RISING TO 30 BAR (1/3)	48
2.421	Page: 6431 MD901**	SEQ10 PRESSURE RISING TO 30 BAR (2/3)	48
2.422	Page: 6432 MD901**	SEQ10 PRESSURE RISING TO 30 BAR (3/3)	48
2.423	Page: 6433 MD901**	SEQ11 PREPARING LP FEED HEATERS (1/3)	48
2.424	Page: 6434 MD901**	SEQ11 PREPARING LP FEED HEATERS (2/3)	48
2.425	Page: 6435 MD901**	SEQ11 PREPARING LP FEED HEATERS (3/3)	48
2.426	Page: 6436 MD901**	SEQ12 TURBINE ROLLING UP (1/3)	48
2.427	Page: 6437 MD901**	SEQ12 TURBINE ROLLING UP (2/3)	48
2.428	Page: 6438 MD901**	SEQ12 TURBINE ROLLING UP (3/3)	48
2.429	Page: 6440 MD901**	SEQ13 TURBINE CONNECTION (1/3)	48
2.430	Page: 6441 MD901**	SEQ13 TURBINE CONNECTION (2/3)	48
2.431	Page: 6442 MD901**	SEQ13 TURBINE CONNECTION (3/3)	48
2.432	Page: 6443 MD901**	SEQ14 BLOCK BINDING (1/3)	48
2.433	Page: 6444 MD901**	SEQ14 BLOCK BINDING (2/3)	48
2.434	Page: 6445 MD901**	SEQ14 BLOCK BINDING (3/3)	48
2.435	Page: 6446 MD901**	SEQ15 PREPARING HP FEED HEATERS (1/3)	48
2.436	Page: 6447 MD901**	SEQ15 PREPARING HP FEED HEATERS (2/3)	48
2.437	Page: 6448 MD901**	SEQ15 PREPARING HP FEED HEATERS (3/3)	48
2.438	Page: 6450 MD901**	SEQ16 PRESSURE RISING TO 70 BAR (1/3)	48
2.439	Page: 6451 MD901**	SEQ16 PRESSURE RISING TO 70 BAR (2/3)	48
2.440	Page: 6452 MD901**	SEQ16 PRESSURE RISING TO 70 BAR (3/3)	48
2.441	Page: 6453 MD902**	SEQ17 DISTRICT HEAT WATER SYSTEM (1/3)	48
2.442	Page: 6454 MD902**	SEQ17 DISTRICT HEAT WATER SYSTEM (2/3)	48
2.443	Page: 6455 MD902**	SEQ17 DISTRICT HEAT WATER SYSTEM (3/3)	48
2.444	Page: 6456 MD902**	SEQ18 HOT CONDENSERS (1/3)	48
2.445	Page: 6457 MD902**	SEQ18 HOT CONDENSERS (2/3)	48
2.446	Page: 6458 MD902**	SEQ18 HOT CONDENSERS (3/3)	48
2.447	Page: 6460 MD902**	SEQ19 EL POWER+DHW PRODUCTION (1/3)	48
2.448	Page: 6461 MD902**	SEQ19 EL POWER+DHW PRODUCTION (2/3)	48
2.449	Page: 6462 MD902**	SEQ19 EL POWER+DHW PRODUCTION (3/3)	48
2.450	Page: 6463 MD902**	SEQ20 FULL DHW PRODUCTION/COAL (1/3)	48
2.451	Page: 6464 MD902**	SEQ20 FULL DHW PRODUCTION/COAL (2/3)	48
2.452	Page: 6465 MD901**	SEQ20 FULL DHW PRODUCTION/COAL (3/3)	48
2.453	Page: 6466 MD902**	SEQ21 ACCUMULATOR SYSTEM (1/3)	48
2.454	Page: 6467 MD902**	SEQ21 ACCUMULATOR SYSTEM (2/3)	48



2.455	Page: 6468 MD902**	SEQ21 ACCUMULATOR SYSTEM (3/3)	48
2.456	Page: 6470 MD902**	SEQ22 ACCU DAY/NIGHT OPERATION (1/3)	48
2.457	Page: 6471 MD902**	SEQ22 ACCU DAY/NIGHT OPERATION (2/3)	48
2.458	Page: 6472 MD902**	SEQ22 ACCU DAY/NIGHT OPERATION (3/3)	48
2.459	Page: 6473 MD902**	SEQ23 FULL EL POWER PRODUCTION (1/3)	48
2.460	Page: 6474 MD902**	SEQ23 FULL EL POWER PRODUCTION (2/3)	48
2.461	Page: 6475 MD902**	SEQ23 FULL EL POWER PRODUCTION (3/3)	48
2.462	Page: 6476 MD902**	SEQ24 COLD PLANT TO MAX POWER (1/3)	48
2.463	Page: 6477 MD902**	SEQ24 COLD PLANT TO MAX POWER (2/3)	48
2.464	Page: 6478 MD902**	SEQ24 COLD PLANT TO MAX POWER (3/3)	48
2.465	Page: 6500 MD903**	SEQ25 DESOX PLANT START-UP (1/3)	48
2.466	Page: 6501 MD903**	SEQ25 DESOX PLANT START-UP (2/3)	48
2.467	Page: 6502 MD903**	SEQ25 DESOX PLANT START-UP (3/3)	48
2.468	Page: 6503 MD903**	SEQ26 DESOX PLANT SHUT-DOWN (1/3)	48
2.469	Page: 6504 MD903**	SEQ26 DESOX PLANT SHUT-DOWN (2/3)	48
2.470	Page: 6505 MD903**	SEQ26 DESOX PLANT SHUT-DOWN (3/3)	48
2.471	Page: 6506 MD903**	SEQ27 SPARE (1/3)	48
2.472	Page: 6507 MD903**	SEQ27 SPARE (2/3)	48
2.473	Page: 6508 MD903**	SEQ27 SPARE (3/3)	48
2.474	Page: 6510 MD903**	SEQ28 SPARE (1/3)	48
2.475	Page: 6511 MD903**	SEQ28 SPARE (2/3)	48
2.476	Page: 6512 MD903**	SEQ28 SPARE (3/3)	48
2.477	Page: 6513 MD903**	SEQ29 SPARE (1/3)	48
2.478	Page: 6514 MD903**	SEQ29 SPARE (2/3)	48
2.479	Page: 6515 MD903**	SEQ29 SPARE (3/3)	48
2.480	Page: 6516 MD903**	SEQ30 SPARE (1/3)	48
2.481	Page: 6517 MD903**	SEQ30 SPARE (2/3)	48
2.482	Page: 6518 MD903**	SEQ30 SPARE (3/3)	48
2.483	Page: 6520 MD903**	SEQ31 SPARE (1/3)	48
2.484	Page: 6521 MD903**	SEQ31 SPARE (2/3)	48
2.485	Page: 6522 MD903**	SEQ31 SPARE (3/3)	48
2.486	Page: 6523 MD903**	SEQ32 SPARE (1/3)	48
2.487	Page: 6524 MD903**	SEQ32 SPARE (2/3)	48
2.488	Page: 6525 MD903**	SEQ32 SPARE (3/3)	48
2.489	Page: 7100 MD700**	SCR1 DAMPERS	48
2.490	Page: 7101 MD700**	SCR1 DAMPERS AUTO/MAN	48
2.491	Page: 7102 MD700**	SCR2 DAMPERS	48
2.492	Page: 7103 MD700**	SCR2 DAMPERS AUTO/MAN	48
2.493	Page: 7104 MD700**	SCR1 FANS	48
2.494	Page: 7105 MD700**	SCR2 FANS	48
2.495	Page: 7106 MD700**	COMBUSTION AIR FAN RATIO CONTROLLER	48
2.496	Page: 7107 MD700**	SCR TEMP CONTROLLERS	48
2.497	Page: 7108 MD700**	SCR NH3 CONTROLLERS	48
2.498	Page: 7109 MD700**	SCR1 OPERATIONAL DATA	48
2.499	Page: 7110 MD700**	SCR2 OPERATIONAL DATA	48
2.500	Page: 7111 MD700**	OTHER DENOX PROCESS DATA	48
2.501	Page: 7800 MD700**	BOILER WHEN ISOLATION	48
2.502	Page: 7801 MD700**	BOILER WHEN NORMAL OPERATION	48
2.503	Page: 7802 MD700**	ACTUAL BOILER DATA	48
2.504	Page: 7901 MD700**	SCR 1/2 PURGE SEQUENCE	48
2.505	Page: 7902 MD700**	SCR 1 START/STOP SEQUENCE	48



2.506	Page: 7903 MD700**	SCR 2 START/STOP SEQUENCE.....	48
2.507	Page: 7904 MD700**	SCR 1 HEATING SEQUENCE.....	48
2.508	Page: 7905 MD700**	SCR 2 HEATING SEQUENCE.....	48
2.509	Page: 7906 MD700**	SCR 1 NH3 INJECTION SEQUENCE	48
2.510	Page: 7907 MD700**	SCR 2 NH3 INJECTION SEQUENCE	48
2.511	Page: 7908 MD700**	SCR 1 PRODUCT HANDLING SEQUENCE	48
2.512	Page: 7909 MD700**	SCR 2 PRODUCT HANDLING SEQUENCE	48
2.513	Page: 7910 MD700**	SCR 1 SOOT BLOWING SEQUENCE	48
2.514	Page: 7911 MD700**	SCR 2 SOOT BLOWING SEQUENCE	48
2.515	Page: 7930 MD700**	SETTING OF MAXWAIT FOR SEQUENCES	48
2.516	Page: 7931 MD700**	SETTING OF MINWAIT FOR SEQUENCES	48
2.517	Page: 7932 MD700**	SETTING OF MANACT FOR SEQUENCES.....	48
2.518	Page: 7980 MD700**	SUMMARY OF SEQUENCE ALARMS.....	48
2.519	Page: 7990 MD700**	CONFIGURABLE PAGE.....	48
2.520	Page: 8100 MD800**	LIME SILO.....	48
2.521	Page: 8101 MD800**	LIME DAY SILO.....	48
2.522	Page: 8200 MD800**	SLAKE WATER HEATING.....	48
2.523	Page: 8201 MD800**	SLAKE TANK 1.....	48
2.524	Page: 8202 MD800**	SLAKE TANK 1 CONTROLLERS	48
2.525	Page: 8203 MD800**	SLAKE TANK 2.....	48
2.526	Page: 8204 MD800**	SLAKE TANK 2 CONTROLLERS	48
2.527	Page: 8205 MD800**	SLAKE SUSPENSION TANK	48
2.528	Page: 8206 MD800**	SLAKE SUSPENSION TANK CONTROLLERS.....	48
2.529	Page: 8207 MD800**	SLAKE SUSPENSION PUMPS	48
2.530	Page: 8300 MD800**	FEEDER TANK (1 OF 2)	48
2.531	Page: 8301 MD800**	FEEDER TANK (2 OF 2)	48
2.532	Page: 8302 MD800**	SO2 CONTROLLER.....	48
2.533	Page: 8303 MD800**	SLAKE SUSPENSION FLOW CONTROLLER	48
2.534	Page: 8304 MD800**	PRODUCT SLURRY FLOW CONTROLLERS	48
2.535	Page: 8305 MD800**	SLURRY FEEDER PUMPS.....	48
2.536	Page: 8400 MD800**	ABSORBER.....	48
2.537	Page: 8401 MD800**	ABSORBER OUTLET TEMP CONTROLLER	48
2.538	Page: 8402 MD800**	ABSORBER SLURRY CONTROLLER	48
2.539	Page: 8403 MD800**	ABSORBER SPREADER.....	48
2.540	Page: 8404 MD800**	ABSORBER INPUT DATA.....	48
2.541	Page: 8405 MD800**	ABSORBER OUTPUT DATA	48
2.542	Page: 8450 MD800**	STACK DATA	48
2.543	Page: 8500 MD800**	ABSORBER PRODUCT HANDLING	48
2.544	Page: 8501 MD800**	PRODUCT SILO.....	48
2.545	Page: 8502 MD800**	PRODUCT TRANSPORT.....	48
2.546	Page: 8600 MD800**	MIXER TANK 1 (1 OF 2)	48
2.547	Page: 8601 MD800**	MIXER TANK 1 (2 OF 2)	48
2.548	Page: 8602 MD800**	MIXER TANK 2 (1 OF 2)	48
2.549	Page: 8603 MD800**	MIXER TANK 2 (2 OF 2)	48
2.550	Page: 8604 MD800**	MIXER TANK PUMPS.....	48
2.551	Page: 8605 MD800**	PRODUCT CELL FEEDERS	48
2.552	Page: 8606 MD800**	PRODUCT SLURRY PUMPS	48
2.553	Page: 8901 MD800**	FILLING OF LIME DAY SILO	48
2.554	Page: 8902 MD800**	FILLING OF SLAKE SUSP TANK FROM SLAKE TANK 148	
2.555	Page: 8903 MD800**	FILLING OF SLAKE SUSP TANK FROM SLAKE TANK 248	
2.556	Page: 8904 MD800**	OPERATION OF SLAKE SUSPENSION PUMP 1	48



2.557	Page: 8905 MD800**	OPERATION OF SLAKE SUSPENSION PUMP 2	48
2.558	Page: 8906 MD800**	FILLING OF MIXING TANK 1	48
2.559	Page: 8907 MD800**	OPERATION OF MIXING TANK 1 PUMP	48
2.560	Page: 8908 MD800**	FILLING OF MIXING TANK 2	48
2.561	Page: 8909 MD800**	OPERATION OF MIXING TANK 2 PUMP	48
2.562	Page: 8910 MD800**	FILLING OF FEEDER TANK FROM MIX TANK 1	48
2.563	Page: 8911 MD800**	OPERATION OF FEEDER TANK PUMP 1	48
2.564	Page: 8912 MD800**	OPERATION OF FEEDER TANK PUMP 2	48
2.565	Page: 8913 MD800**	OPERATION OF SPREADER	48
2.566	Page: 8914 MD800**	OPERATION OF ABSORBER.....	48
2.567	Page: 8915 MD800**	DISCHARGE OF ABSORBER PRODUCT	48
2.568	Page: 8916 MD800**	PRODUCT TRANSPORT.....	48
2.569	Page: 8920 MD800**	FILLING OF FEEDER TANK FROM MIX TANK 2	48
2.570	Page: 8930 MD800**	SETTING OF MAXWAIT FOR SEQUENCES.....	48
2.571	Page: 8931 MD800**	SETTING OF MINWAIT FOR SEQUENCES	48
2.572	Page: 8932 MD800**	SETTING OF MANACT FOR SEQUENCES.....	48
2.573	Page: 8980 MD700**	SUMMARY OF SEQUENCE ALARMS.....	48
2.574	Page: 8990 MD800**	CONFIGURABLE PAGE.....	48

1 DIRECTORY LIST

Page:0100	SIM CONTROL : EXTERNAL CONDITIONS
Page:0101	SIM CONTROL : PROCESS OVERRIDE
Page:0102	SIM CONTROL : SEQUENCE OVERRIDE
Page:0110	SIM CONTROL : FUEL DATA
Page:0130	SIM CONTROL : TRIP SURVEY
Page:1000	HFO SUPPLY SYSTEM
Page:1200	SECONDARY STEAM SYSTEM
Page:1400	BOILER BURNER PLANE A
Page:1500	BOILER BURNER PLANE B
Page:1600	BOILER BURNER PLANE C
Page:1700	BOILER BURNER PLANE D
Page:1800	BOILER COMBUSTION CONTROL SYSTEM
Page:1900	BLOCK MASTER CONTROL SYSTEM
Page:2000	COMBUSTION AIR / FLUE GAS SYSTEM
Page:2100	COMBUSTION AIR PREHEATERS
Page:2400	BOILER WATER SYSTEM
Page:2500	BOILER STEAM SYSTEM
Page:2600	MAIN STEAM LINES
Page:3000	STEAM TURBINES
Page:3800	ELECTRIC GENERATOR SYSTEM
Page:4000	COLD CONDENSER SYSTEM
Page:4100	MAIN CONDENSATE SYSTEM
Page:4200	LOW PRESSURE FEED HEATERS
Page:4300	FEED WATER DEAERATOR SYSTEM
Page:4400	HIGH PRESSURE FEED HEATERS
Page:5000	MAKE UP DEAERATOR SYSTEM
Page:6000	HOT CONDENSER / DHW SYSTEM
Page:6100	DIRECT HEATER SYSTEM
Page:6200	ACCUMULATOR SYSTEM
Page:6300	DISTRICT HEAT WATER CONSUMPTION
Page:6400	STEAM PLANT PROCESS SEQUENCES
Page:7100	SCR REACTORS
Page:7800	DENOX/DESOX ISOLATION
Page:7901	DENOX LOGIC SEQUENCES
Page:8100	LIME SILO
Page:8200	SLAKE SYSTEM
Page:8300	FEEDER SYSTEM
Page:8400	ABSORBER
Page:8450	STACK DATA
Page:8500	PRODUCT SYSTEM
Page:8600	MIXING SYSTEM
Page:8901	DESOX LOGIC SEQUENCES



2 VARIABLE LIST PAGES

2.1 Page:0100 MD010** SIM CONTROL : EXTERNAL CONDITIONS

A:			
B:	T00300	dgrC	Ambient air temperature
C:	X00300	%	Ambient air humidity
D:	P00301	mbar	Ambient air pressure
E:			
F:	T00305	dgrC	Ambient water temperature (Lake)
G:			
H:	T00325	dgrC	External DHW supply temperature
I:	T00320	dgrC	Auxil water supply temperature
J:			
K:	P00310	bara	Auxil steam supply : pressure
L:	T00311	dgrC	Auxil steam supply : temperature
M:	H00312	kJ/kg	Auxil steam supply : enthalpy
N:			
O:			
P:	P05001	bara	Condensate make up clean water pressure
Q:	T05003	dgrC	Condensate make up clean water temp
R:			
S:	T00990	dgrC	HFO transfer flow temperature
T:			

2.2 Page:0101 MD010** SIM CONTROL : PROCESS OVERRIDE

A:	X00100	<0-1>	General trip inhibit (all systems)
B:			
C:	X01872	<0-1>	Boiler trip inhibit
D:	X13082	<0-1>	Turbine trip inhibit
E:	X03828	<0-1>	Main circuit breaker trip inhibit
F:	X04044	<0-1>	Cold condenser vacuum breaker trip inhibit
G:	X14132	<0-1>	Main condensate pump trip inhibit
H:	X34256	<0-1>	LP feed heaters trip inhibit
I:	X14453	<0-1>	HP feed heaters trip inhibit
J:	X04396	<0-1>	Feedw pump trip inhibit (all)
K:	X16170	<0-1>	Direct heaters trip inhibit
L:	X16080	<0-1>	Hot condenser 1/2 level trip inhibit
M:	X02672	<0-1>	HP turbine high temp protect trip inhibit
N:	X22651	<0-1>	LP steam dump trip inhibit
O:	X16320	<0-1>	Francis turbine trip inhibit
P:			
Q:	X00151	<0-1>	Boiler isolation (denox/desox bypass)
R:			
S:	X00130	<0-1>	Process noise enable
T:	Z00230	<0-2>	Process noise adjust (sensors ++)

2.3 Page:0102 MD900** SIM CONTROL : SEQUENCE OVERRIDE 1

A:		
B:	A01000 <0-1>	Sequence inhibit (all)
C:		
D:	A01025 <0-1>	Sequence 01 inhibit
E:	A02025 <0-1>	Sequence 02 inhibit
F:	A03025 <0-1>	Sequence 03 inhibit
G:	A04025 <0-1>	Sequence 04 inhibit
H:	A05025 <0-1>	Sequence 05 inhibit
I:	A06025 <0-1>	Sequence 06 inhibit
J:	A07025 <0-1>	Sequence 07 inhibit
K:	A08025 <0-1>	Sequence 08 inhibit
L:	A09025 <0-1>	Sequence 09 inhibit
M:	A10025 <0-1>	Sequence 10 inhibit
N:	A11025 <0-1>	Sequence 11 inhibit
O:	A12025 <0-1>	Sequence 12 inhibit
P:	A13025 <0-1>	Sequence 13 inhibit
Q:	A14025 <0-1>	Sequence 14 inhibit
R:	A15025 <0-1>	Sequence 15 inhibit
S:	A16025 <0-1>	Sequence 16 inhibit
T:		

2.4 Page:0103 MD902** SIM CONTROL : SEQUENCE OVERRIDE 2

A:		
B:	A17025 <0-1>	Sequence 17 inhibit
C:	A18025 <0-1>	Sequence 18 inhibit
D:	A19025 <0-1>	Sequence 19 inhibit
E:	A20025 <0-1>	Sequence 20 inhibit
F:	A21025 <0-1>	Sequence 21 inhibit
G:	A22025 <0-1>	Sequence 22 inhibit
H:	A23025 <0-1>	Sequence 23 inhibit
I:	A24025 <0-1>	Sequence 24 inhibit
J:		
K:	A25025 <0-1>	Sequence 25 inhibit
L:	A26025 <0-1>	Sequence 26 inhibit
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.5 Page:0110 MD010** SIM CONTROL : HFO DATA

A:		
B:	X00800 %	HFO data : carbon content (dry/no ash)
C:	X00801 %	HFO data : hydrogen content (dry/no ash)
D:	X00802 %	HFO data : sulfur content (dry/no ash)
E:	X00803 %	HFO data : oxygen content (dry/no ash)
F:	X00804 %	HFO data : nitrogen content (dry/no ash)
G:		
H:	X00805 %	HFO data : ash content
I:	X00806 %	HFO data : slag content
J:	X00807 %	HFO data : water content
K:		
L:	Z00809 <0-2>	HFO data : heat value adjust factor
M:	Z00815 <0-2>	HFO data : theoretic air adjust factor
N:	Z00816 <0-2>	HFO data : NOX generation adjust factor
O:	Z00817 <0-2>	HFO data : CO generation adjust factor
P:		
Q:	H00810 kJ/kg	HFO heat value
R:	G00811 ncm/kg	HFO theoretic comb air
S:	G00812 ncm/kg	HFO theoretic flue gas
T:		

2.6 Page:0111 MD010** SIM CONTROL : COAL DATA

A:		
B:	X00820 %	Coal data: carbon content (dry/no ash)
C:	X00821 %	Coal data: hydrogen content (dry/no ash)
D:	X00822 %	Coal data: sulfur content (dry/no ash)
E:	X00823 %	Coal data: oxygen content (dry/no ash)
F:	X00824 %	Coal data: nitrogen content (dry/no ash)
G:		
H:	X00825 %	Coal data: ash content
I:	X00826 %	Coal data: slag content
J:	X00827 %	Coal data: water content
K:		
L:	Z00829 <0-2>	Coal data: heat value adjust factor
M:	Z00835 <0-2>	Coal data: theoretic air adjust factor
N:	Z00836 <0-2>	Coal data: NOX generation adjust factor
O:	Z00837 <0-2>	Coal data: CO generation adjust factor
P:		
Q:	H00830 kJ/kg	Coal heat value
R:	G00831 ncm/kg	Coal theoretic comb air
S:	G00832 ncm/kg	Coal theoretic flue gas
T:		

2.7 Page:0112 MD010** SIM CONTROL : PELLET DATA

A:		
B:	X00860 %	Pellet data: carbon content (dry/na)
C:	X00861 %	Pellet data: hydrogen content (dry/na)
D:	X00862 %	Pellet data: sulfur content (dry/na)
E:	X00863 %	Pellet data: oxygen content (dry/na)
F:	X00864 %	Pellet data: nitrogen content (dry/na)
G:		
H:	X00865 %	Pellet data: ash content
I:	X00866 %	Pellet data: slag content
J:	X00867 %	Pellet data: water content
K:		
L:	Z00869 <0-2>	Pellet data: heat value adjust factor
M:	Z00875 <0-2>	Pellet data: theoretic air adjust
N:	Z00876 <0-2>	Pellet data: NOX generation adjust
O:	Z00877 <0-2>	Pellet data: CO generation adjust
P:		
Q:	H00870 kJ/kg	Pellet heat value
R:	G00871 ncm/kg	Pellet theoretic comb air
S:	G00872 ncm/kg	Pellet theoretic flue gas
T:		

2.8 Page:0113 MD010** SIM CONTROL : BIO FUEL SELECTION

A:		
B:	X00880 <0-1>	1= Biofuel Pellets, 0= Coal
C:		
D:	C00880 %	Pellet feeder (mill) capacity
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.9 Page:0130 MD010** SIM CONTROL : TRIP SURVEY (1)

A:					
B:	X01870	<0-1>	L=---	H=0.9	Boiler trip
C:					
D:	X01472	<0-1>	L=---	H=0.9	Plane A coal mill trip
E:	X01572	<0-1>	L=---	H=0.9	Plane B coal mill trip
F:	X01672	<0-1>	L=---	H=0.9	Plane C coal mill trip
G:	X01772	<0-1>	L=---	H=0.9	Plane D coal mill trip
H:					
I:	X13080	<0-1>	L=---	H=0.9	Turbine trip
J:					
K:	X02673	<0-1>	L=---	H=0.9	HP turbine high temp protect trip
L:					
M:	X22650	<0-3>	L=---	H=0.9	LP steam dump trip
N:					
O:	X03831	<0-1>	L=---	H=0.9	Main circuit breaker trip
P:	X04065	<0-1>	L=---	H=0.9	Cold condenser vacuum breaker trip
Q:					
R:					
S:					
T:					

2.10 Page:0131 MD010** SIM CONTROL : TRIP SURVEY (2)

A:					
B:	X14130	<0-1>	L=---	H=0.9	Main condensate pump trip
C:					
D:	X34254	<0-1>	L=---	H=0.9	LP feed heater 3 trip
E:	X14454	<0-1>	L=---	H=0.9	HP feed heater 1 trip
F:	X24454	<0-1>	L=---	H=0.9	HP feed heater 2 trip
G:					
H:	X14456	<0-1>	L=---	H=0.9	HP feed heater FW trip
I:					
J:					
K:	X16171	<0-1>	L=---	H=0.9	Direct heater 1 trip
L:	X26171	<0-1>	L=---	H=0.9	Direct heater 2 trip
M:					
N:	X16300	<0-1>	L=---	H=0.9	Francis turbine trip
O:					
P:					
Q:					
R:					
S:					
T:					

2.11 Page:0190 MD01** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.12 Page:1000 MD100** HFO SERVICE TANK (1)

A:				
B:	T00997	dgrC		HFO return flow temperature
C:	G00998	ton/h		HFO return flow from boiler (total)
D:	G00999	ton/h		HFO service tank return bypass flow
E:				
F:	G01000	ton/h		HFO service tank return flow
G:	G01001	ton/h		HFO service tank recirc flow
H:	G01002	ton/h	L=--- H=0.1	HFO service tank overflow
I:				
J:	X01004	<0-1>		HFO service tank transfer pump auto s/s
K:	V01003	<0-1>		HFO service tank transfer pump suct valve
L:	G01005	ton/h		HFO service tank transfer flow
M:	R01006	<0-1>		HFO service tank transfer pump
N:	V01007	<0-1>		HFO service tank transfer pump disch valve
O:	V01008	<0-1>		HFO service tank transfer inlet valve
P:	E01009	kW		HFO service tank transfer pump power
Q:				
R:	C00991	m		HFO transfer pump start limit
S:	C00992	m		HFO transfer pump stop limit
T:				

**2.13 Page:1001 MD100** HFO SERVICE TANK (2)**

A:				
B:	L01033	m	L=4.0 H=9.0	HFO service tank fuel oil level (total)
C:	T01019	dgrC	L=45.0 H=65.0	HFO service tank fuel oil temperature
D:				
E:	G01014	ton/h		HFO service tank outlet flow
F:	V01015	<0-1>		HFO service tank outlet valve
G:				
H:	V01016	<0-1>		HFO service tank return bypass valve
I:	V01017	<0-1>		HFO service tank recirc shut off valve
J:	V01018	<0-1>		HFO service tank return shut off valve
K:	V01023	<0-1>		HFO service tank sec hotw inlet valve
L:	V01024	<0-1>		HFO service tank sec hotw outlet valve
M:	G01026	ton/h		HFO service tank sec hotw outlet flow
N:	T01027	dgrC		HFO service tank sec hotw outlet temp
O:	Q01030	kW		HFO service tank sec hotw heat power
P:				
Q:				
R:				
S:				
T:				

2.14 Page:1002 MD100 HFO SERVICE TANK (3)**

A:				
B:	L01034	m	L=--- H=0.6	HFO service tank water level (mass)
C:				
D:	X01036	%		HFO service tank outlet flow wtr content
E:				
F:				
G:				
H:	G01011	ton/h		HFO service tank bottom drain flow
I:	V01012	<0-1>		HFO service tank bottom drain valve
J:	X01013	<0-2>		HFO service tank bottom drain index
K:				
L:	C01034	m		HFO service tank outlet pipe position
M:	C01035	m		HFO service tank water in fuel range
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.15 Page:1003 MD100** HFO SUPPLY PUMPS (1)

A:				
B:	R01060	<0-1>		HFO supply pump 1
C:	V01061	<0-1>		HFO supply pump 1 suction valve
D:	V01062	<0-1>		HFO supply pump 1 discharge valve
E:	G01063	ton/h		HFO supply pump 1 flow
F:	E01064	kW		HFO supply pump 1 power
G:				
H:	R01066	<0-1>		HFO supply pump 2
I:	V01067	<0-1>		HFO supply pump 2 suction valve
J:	V01068	<0-1>		HFO supply pump 2 discharge valve
K:	G01069	ton/h		HFO supply pump 2 flow
L:	E01070	kW		HFO supply pump 2 power
M:				
N:	P01072	bar	L=14.0 H=28.0	HFO supply pump discharge pressure
O:	G01073	ton/h		HFO supply pump discharge flow (tot)
P:	T01074	dgrC		HFO supply pump suction temp
Q:				
R:	X01078	<0-2>		HFO supply pump 1 auto
S:	X01079	<0-2>		HFO supply pump 2 auto
T:				

2.16 Page:1004 MD100** HFO SUPPLY PUMPS (2)

A:				
B:	R01180	<0-1>		HFO circulation pump
C:	V01181	<0-1>		HFO circulation pump suction valve
D:	V01182	<0-1>		HFO circulation pump discharge valve
E:	G01183	ton/h		HFO circulation pump flow
F:	E01184	kW		HFO circulation pump power
G:				
H:	G01038	ton/h		HFO supply flow to boiler (total)
I:	P01039	bar	L=5.0 H=26.0	HFO supply flow pressure
J:	T01040	dgrC	L=100.0 H=130.0	HFO supply flow temperature
K:				
L:	V01057	<0-1>		HFO supply final filter 1
M:	V01058	<0-1>		HFO supply final filter 2
N:	P01059	bar	L=--- H=0.5	HFO supply final filter 1/2 dp
O:				
P:	P01055	bar		HFO heater 1/2 press drop
Q:				
R:				
S:				
T:				

**2.17 Page:1005 MD100** HFO SUPPLY HEATERS (1)**

A:				
B:	V01049	<0-1>		HFO heater 1 inlet valve
C:	V01050	<0-1>		HFO heater 1 outlet valve
D:	G01051	ton/h		HFO heater 1 fuel oil flow
E:				
F:	G01084	ton/h		HFO heater 1 steam flow
G:	G01085	ton/h		HFO heater 1 drain flow
H:	T01086	dgrC		HFO heater 1 drain temp
I:	H01087	kJ/kg		HFO heater 1 drain enthalpy
J:	P01088	bara		HFO heater 1 steam pressure
K:	T01089	dgrC		HFO heater 1 water temp
L:	L01090	%		HFO heater 1 water content
M:	Q01091	kW		HFO heater 1 heat power
N:	V01092	<0-1>		HFO heater 1 steam inlet valve
O:	V01093	<0-1>		HFO heater 1 drain outlet valve
P:	T01094	dgrC		HFO heater 1 fuel oil outlet temp
Q:				
R:	P01080	bara	L=6.0 H=16.0	HFO heater steam supply pressure
S:	T01081	dgrC		HFO heater steam supply temp
T:	H01082	kJ/kg		HFO heater steam supply enthalpy

2.18 Page:1006 MD100 HFO SUPPLY HEATERS (2)**

A:				
B:	V01052	<0-1>		HFO heater 2 inlet valve
C:	V01053	<0-1>		HFO heater 2 outlet valve
D:	G01054	ton/h		HFO heater 2 fuel oil flow
E:				
F:	G01096	ton/h		HFO heater 2 steam flow
G:	G01097	ton/h		HFO heater 2 drain flow
H:	T01098	dgrC		HFO heater 2 drain temp
I:	H01099	kJ/kg		HFO heater 2 drain enthalpy
J:	P01100	bara		HFO heater 2 steam pressure
K:	T01101	dgrC		HFO heater 2 water temp
L:	L01102	%		HFO heater 2 water content
M:	Q01103	kW		HFO heater 2 heat power
N:	V01104	<0-1>		HFO heater 2 steam inlet valve
O:	V01105	<0-1>		HFO heater 2 drain outlet valve
P:	T01106	dgrC		HFO heater 2 fuel oil outlet temp
Q:				
R:				
S:				
T:				

2.19 Page:1020 MD100* * HFO SUPPLY PRESSURE CONTROL

A:		
B:	X01110 <0-1>	HFO supply pressure contr auto
C:	P01111 bar	HFO supply pressure contr set point
D:	Z01112 bar	HFO supply pressure contr feedback
E:	Z01113 %	HFO supply pressure contr output
F:	Z01114 bar	HFO supply pressure contr deviation
G:	C01115 %/bar	HFO supply pressure contr gain
H:	C01116 sec	HFO supply pressure contr integr time
I:	C01117 sec	HFO supply pressure contr deriv time
J:	C01118 <0-8>	HFO supply pressure contr deriv range
K:		
L:	V01130 %	HFO recirc valve pos
M:	C01131 sec	HFO recirc valve time const
N:		
O:		
P:	X01160 <0-1>	HFO supply press contr test
Q:	C01161 bar	HFO supply press contr step
R:	C01162 sec	HFO supply press contr periode
S:		
T:		

2.20 Page:1021 MD100* * HFO SUPPLY TEMPERATURE CONTROL

A:		
B:	X01120 <0-1>	HFO supply temp contr auto
C:	T01121 dgrC	HFO supply temp contr set point
D:	Z01122 dgrC	HFO supply temp contr feedback
E:	Z01123 %	HFO supply temp contr output
F:	Z01124 dgrC	HFO supply temp contr deviation
G:	C01125 %/dgrC	HFO supply temp contr gain
H:	C01126 sec	HFO supply temp contr integr time
I:	C01127 sec	HFO supply temp contr deriv time
J:	C01128 <0-8>	HFO supply temp contr deriv range
K:		
L:	V01133 %	HFO heater 1 steam valve pos
M:	C01134 sec	HFO heater 1 steam valve tc
N:		
O:	V01136 %	HFO heater 2 steam valve pos
P:	C01137 sec	HFO heater 2 steam valve tc
Q:		
R:	X01165 <0-1>	HFO supply temp contr test
S:	C01166 dgrC	HFO supply temp contr step
T:	C01167 sec	HFO supply temp contr periode

**2.21 Page:1022 MD100** HFO SERVICE TANK TEMP CONTROL**

A:			
B:	X01140	<0-1>	HFO service tank temp contr auto
C:	T01141	dgrC	HFO service tank temp contr set point
D:	Z01142	dgrC	HFO service tank temp contr feedback
E:	Z01143	%	HFO service tank temp contr output
F:	Z01144	dgrC	HFO service tank temp contr deviation
G:	C01145	%/dgrC	HFO service tank temp contr gain
H:	C01146	sec	HFO service tank temp contr integr time
I:	C01147	sec	HFO service tank temp contr deriv time
J:	C01148	<0-8>	HFO service tank temp contr deriv range
K:			
L:	V01150	%	HFO service tank temp contr valve pos
M:	C01151	sec	HFO service tank temp contr valve tc
N:			
O:			
P:	X01170	<0-1>	HFO service tank temp contr test
Q:	C01171	dgrC	HFO service tank temp contr step
R:	C01172	sec	HFO service tank temp contr periode
S:			
T:			

2.22 Page:1040 MD100 HFO SUPPLY PUMP CONTROL DATA**

A:					
B:					
C:	X13800	<0-2>	L=---	H=1.9	Auto start : FO supply pump 1
D:	X13801	<0-2>	L=---	H=1.9	Auto start : FO supply pump 2
E:					
F:	C13800	sec			Auto start delay
G:	C13801	bar			Auto start pressure limit
H:	C13802	bar			Auto start pressure limit (recirc)
I:					
J:	Y13800	<0-1>			Auto-Auto (only if recirc pump on)
K:	Z13800	%			Auto-Auto command (oil burners on)
L:	K13800	%			Auto-Auto start value
M:	K13801	%			Auto-Auto stop value
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.23 Page:1090 MD10* * CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.24 Page:1200 MD120* * LP STEAM GENERATOR (1)

A:		
B:	P01200	bara LP stgen heating steam supply press
C:	T01201	dgrC LP stgen heating steam supply temp
D:	H01202	kJ/kg LP stgen heating steam supply enthalpy
E:	G01203	ton/h LP stgen heating steam supply flow
F:	P01205	bara LP stgen auxil steam supply press
G:	T01206	dgrC LP stgen auxil steam supply temp
H:	H01207	kJ/kg LP stgen auxil steam supply enthalpy
I:	G01208	ton/h LP stgen auxil steam supply flow
J:	V01209	<0-1> LP stgen auxil steam shut off valve
K:		
L:	P01210	bara LP stgen inlet pipe steam press
M:	T01211	dgrC LP stgen inlet pipe steam temp
N:	H01212	kJ/kg LP stgen inlet pipe steam enthalpy
O:		
P:	X01217	<0-1> LP stgen steam x-over auto
Q:	V01217	<0-1> LP stgen steam x-over valve
R:	G01218	ton/h LP stgen steam x-over flow
S:	C01217	bara LP stgen steam press low (x-over open)
T:	C01218	bara LP stgen steam press hig (x-over closed)

**2.25 Page:1201 MD120** LP STEAM GENERATOR (2)**

A:				
B:	G01220	ton/h		LP stgen primary steam inlet flow
C:	P01221	bara		LP stgen primary steam pressure
D:	P01222	bar		LP stgen primary air press (partial)
E:				
F:	T01223	dgrC		LP stgen primary steam temperature
G:	H01224	kJ/kg		LP stgen primary steam enthalpy
H:	H01225	kJ/kg		LP stgen primary water enthalpy
I:	L01226	m	L=0.4 H=1.0	LP stgen primary water level (drain tank)
J:				
K:	G01227	ton/h		LP stgen primary drain outlet flow
L:	G01228	ton/h		LP stgen primary drain tank vent flow
M:	V01271	<0-1>		LP stgen primary drain tank vent valve
N:				
O:	V01270	<0-1>		LP stgen primary steam shut off valve
P:				
Q:				
R:				
S:				
T:				

2.26 Page:1202 MD120 LP STEAM GENERATOR (3)**

A:				
B:	G01230	ton/h		LP stgen second. steam outlet flow
C:	P01231	bara	L=7.5 H=14.0	LP stgen second. steam pressure
D:	P01232	bar		LP stgen second. air press (partial)
E:	T01233	dgrC		LP stgen second. water temperature
F:	H01234	kJ/kg		LP stgen second. water enthalpy
G:	H01235	kJ/kg		LP stgen second. steam enthalpy
H:	L01236	m	L=0.7 H=1.1	LP stgen second. water level (drum)
I:				
J:	G01237	ton/h		LP stgen second. steam drum vent flow
K:	G01238	ton/h	L=--- H=0.1	LP stgen second. safety valve flow
L:	G01241	ton/h		LP stgen second. make up water flow
M:	G01242	ton/h		LP stgen second. drain flow
N:				
O:	V01272	<0-1>		LP stgen second. water drain valve
P:	V01273	<0-1>		LP stgen second. water make up inlet valve
Q:	V01274	<0-1>		LP stgen second. drain return valve
R:	V01275	<0-1>		LP stgen second. vent valve
S:	V01276	<0-1>		LP stgen second. safety valve
T:	C01238	bara	L=--- H=---	LP stgen second. safety valve pressure

2.27 Page:1203 MD120** LP STEAM GENERATOR (4)

A:				
B:	V01289	<0-1>		Cleaning steam supply valve
C:	P01290	baro	L=8.0 H=16.0	Cleaning steam supply pressure
D:	G01291	ton/h		Cleaning steam supply flow
E:				
F:	C01292	baro		Atomizing steam press reduction set point
G:	P01293	baro	L=6.0 H=11.0	Atomizing steam supply pressure
H:	G01294	ton/h		Atomizing steam supply flow
I:				
J:	G01284	ton/h		LP stgen drain pump flow
K:	E01285	bara		LP stgen drain pump power
L:	P01286	bara		LP stgen drain pump discharge pressure
M:	V01287	<0-1>		LP stgen drain pump discharge valve
N:	R01288	<0-1>		LP stgen drain pump
O:				
P:	G01256	ton/h		LP stgen make up water flow (total)
Q:	T01257	dgrC		LP stgen make up water flow temp
R:	H01258	kJ/kg		LP stgen make up water flow enth
S:	P01259	bara		LP stgen make up water pressure
T:				

2.28 Page:1204 MD120** STEAM COOLING TANK

A:				
B:	G01260	ton/h		Steam cooling tank inlet flow
C:	G01261	ton/h		Steam cooling tank outlet flow
D:	G01262	ton/h		Steam cooling tank make up water flow
E:	G01263	ton/h		Steam cooling tank drain flow
F:	P01264	bara	L=9.0 H=18.0	Steam cooling tank steam pressure
G:	T01265	dgrC		Steam cooling tank water temperature
H:	H01266	kJ/kg		Steam cooling tank water enthalpy
I:	H01267	kJ/kg		Steam cooling tank steam enthalpy
J:	L01268	m	L=0.5 H=1.0	Steam cooling tank water level (drum)
K:	C01268	bara		Steam cooling tank safety valve open
L:	C01269	bara		Steam cooling tank safety valve close
M:				
N:	C01298	m		Steam cooling tank drain valve open
O:	C01299	m		Steam cooling tank drain valve close
P:	X01210	<0-1>		LP stgen auxil steam supply auto
Q:	V01210	<0-1>		LP stgen auxil steam supply auto valve
R:	C01210	bara		LP stgen auxil steam supply on press
S:	C01211	bara		LP stgen auxil steam supply off press
T:				

**2.29 Page:1205 MD120** STEAM DRAIN
INSPECTION TANK**

A:				
B:	G01244	ton/h		LP stgen inspection tank inlet flow
C:	T01245	dgrC		LP stgen inspection tank inlet flow temp
D:	H01246	kJ/kg		LP stgen inspection tank inlet flow enth
E:				
F:	G01248	ton/h		LP stgen inspection tank drain flow
G:	G01249	ton/h		LP stgen inspection tank vent flow
H:				
I:	P01250	bara		LP stgen inspection tank steam pressure
J:	P01251	bar		LP stgen inspection tank air pressure (partial)
K:	T01252	dgrC		LP stgen inspection tank water temperature
L:	H01253	kJ/kg		LP stgen inspection tank water enthalpy
M:	L01254	m	L=0.4 H=1.0	LP stgen inspection tank water level
N:	X01255	ppm	L=--- H=20.0	LP stgen inspection tank oil detector
O:				
P:	X01283	<0-1>		LP stgen inspection tank drain auto
Q:	V01282	<0-1>		LP stgen inspection tank drain valve
R:	C01283	m		LP stgen inspection tank level drain on
S:	C01284	m		LP stgen inspection tank level drain off
T:	G01248	ton/h		LP stgen inspection tank drain flow

2.30 Page:1220 MD120 LP STGEN PRESSURE
CONTROL**

A:				
B:	X11200	<0-1>		LP stgen pressure contr auto
C:	P11201	bara		LP stgen pressure contr set point
D:	Z11202	bara		LP stgen pressure contr feedback
E:	Z11203	%		LP stgen pressure contr output
F:	Z11204	bara		LP stgen pressure contr deviation
G:	C11205	%/bara		LP stgen pressure contr gain
H:	C11206	sec		LP stgen pressure contr integr time
I:	C11207	sec		LP stgen pressure contr deriv time
J:	C11208	<0-8>		LP stgen pressure contr deriv range
K:				
L:	V11214	%		LP stgen pressure contr valve pos
M:	C11215	sec		LP stgen pressure contr valve tc
N:	C11216	sec		LP stgen pressure contr sensor tc
O:				
P:	X11210	<0-1>		LP stgen pressure contr test
Q:	C11211	bar		LP stgen pressure contr step
R:	C11212	sec		LP stgen pressure contr periode
S:				
T:				

2.31 Page:1221 MD120** LP STGEN WATER LEVEL CONTROL

A:		
B:	X11220 <0-1>	LP stgen water level contr auto
C:	L11221 m	LP stgen water level contr set point
D:	Z11222 m	LP stgen water level contr feedback
E:	Z11223 %	LP stgen water level contr output
F:		
G:	C11225 %/m	LP stgen water level contr gain
H:	C11226 sec	LP stgen water level contr integr time
I:		
J:		
K:		
L:	V11234 %	LP stgen water level contr valve pos
M:	C11235 sec	LP stgen water level contr valve tc
N:	C11236 sec	LP stgen water level contr sensor tc
O:		
P:	X11230 <0-1>	LP stgen water level contr test
Q:	C11231 m	LP stgen water level contr step
R:	C11232 sec	LP stgen water level contr periode
S:		
T:		

2.32 Page:1222 MD120** LP STGEN DRAIN TANK LEVEL CONTROL

A:		
B:	X11240 <0-1>	LP stgen drain tank level contr auto
C:	L11241 m	LP stgen drain tank level contr set point
D:	Z11242 m	LP stgen drain tank level contr feedback
E:	Z11243 %	LP stgen drain tank level contr output
F:		
G:	C11245 %/m	LP stgen drain tank level contr gain
H:	C11246 sec	LP stgen drain tank level contr integr time
I:		
J:		
K:		
L:	V11254 %	LP stgen drain tank level contr valve pos
M:	C11255 sec	LP stgen drain tank level contr valve tc
N:	C11256 sec	LP stgen drain tank level contr sensor tc
O:		
P:	X11250 <0-1>	LP stgen drain tank level contr test
Q:	C11251 m	LP stgen drain tank level contr step
R:	C11252 sec	LP stgen drain tank level contr periode
S:		
T:		



2.33 Page:1223 MD120** LP STGEN INSPECTION TANK LEVEL CONTROL

A:		
B:	X11260 <0-1>	LP stgen insp tank level contr auto
C:	L11261 m	LP stgen insp tank level contr set point
D:	Z11262 m	LP stgen insp tank level contr feedback
E:	Z11263 %	LP stgen insp tank level contr output
F:	C11265 %/m	LP stgen insp tank level contr gain
G:	C11266 sec	LP stgen insp tank level contr integr time
H:		
I:	C01236 m	LP stgen second. water level normal
J:	C01237 m	LP stgen second. water level high
K:		
L:	V11274 %	LP stgen insp tank level contr valve pos
M:	C11275 sec	LP stgen insp tank level contr valve tc
N:	C11276 sec	LP stgen insp tank level contr sensor tc
O:		
P:	X11270 <0-1>	LP stgen insp tank level contr test
Q:	C11271 m	LP stgen insp tank level contr step
R:	C11272 sec	LP stgen insp tank level contr periode
S:		
T:		

2.34 Page:1224 MD120** STEAM COOLING TANK PRESSURE CONTROL

A:		
B:	X21200 <0-1>	Steam cooling tank press contr auto
C:	P21201 bara	Steam cooling tank press contr set point
D:	Z21202 bara	Steam cooling tank press contr feedback
E:	Z21203 %	Steam cooling tank press contr output
F:		
G:	C21205 %/bara	Steam cooling tank press contr gain
H:	C21206 sec	Steam cooling tank press contr integr time
I:		
J:		
K:		
L:	V21214 %	Steam cooling tank press contr valve pos
M:	C21215 sec	Steam cooling tank press contr valve tc
N:	C21216 sec	Steam cooling tank press contr sensor tc
O:		
P:	X21210 <0-1>	Steam cooling tank press contr test
Q:	C21211 bar	Steam cooling tank press contr step
R:	C21212 sec	Steam cooling tank press contr periode
S:		
T:		

2.35 Page:1225 MD120* * STEAM COOLING TANK LEVEL CONTROL

A:		
B:	X21220	<0-1> Steam cooling tank level contr auto
C:	L21221	m Steam cooling tank level contr set point
D:	Z21222	m Steam cooling tank level contr feedback
E:	Z21223	% Steam cooling tank level contr output
F:		
G:	C21225	%/m Steam cooling tank level contr gain
H:	C21226	sec Steam cooling tank level contr integr time
I:		
J:		
K:		
L:	V21234	% Steam cooling tank level contr valve pos
M:	C21235	sec Steam cooling tank level contr valve tc
N:	C21236	sec Steam cooling tank level contr sensor tc
O:		
P:	X21230	<0-1> Steam cooling tank level contr test
Q:	C21231	m Steam cooling tank level contr step
R:	C21232	sec Steam cooling tank level contr periode
S:		
T:		

2.36 Page:1290 MD12* * CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:



2.37 Page:1400 MD140** PLANE A PRIMARY AIR SUPPLY

A:			
B:	P01400	mmH2O	Plane A prim air supply pressure
C:	T01401	dgrC	Plane A prim air supply temperature
D:	G01402	ton/h	Plane A prim air flow from ring channel
E:	G01403	ton/h	Plane A prim air flow from cold air box
F:			
G:			
H:			
I:			
J:			
K:	T01410	dgrC	Plane A prim air fan inlet temp
L:			
M:	G01413	ton/h	L=17.0 H=---
N:	E01414	kW	Plane A prim air fan power
O:	N01415	rmp	Plane A prim air fan speed
P:	R01417	<0-1>	Plane A prim air fan s/s
Q:	Z01416	<0-99>	Plane A prim air fan stall indication
R:			
S:	V01420	<0-1>	Plane A prim air fan shut off valve
T:			

2.38 Page:1401 MD140** PLANE A COAL MILL (1)

A:			
B:	X01460	<0-1>	Plane A coal mill ready
C:	X01461	<0-1>	Plane A coal mill start
D:	X01462	<0-1>	Plane A coal mill stop
E:	X01463	<0-1>	Plane A coal mill run (in oper.)
F:	X01465	<0-14>	Plane A coal mill logic state
G:			
H:			
I:	R01465	<0-1>	Plane A coal mill lub oil pump
J:	R01466	<0-1>	Plane A coal mill seal air fan
K:	R01467	<0-1>	Plane A coal mill table run
L:	R01468	<0-1>	Plane A coal mill roller run
M:	R01469	<0-1>	Plane A coal mill feeder run
N:	R01470	<0-1>	Plane A coal mill rotating sieve
O:			
P:	X01471	<0-1>	Plane A coal mill emergency stop
Q:			
R:			
S:			
T:			

2.39 Page:1402 MD140* * PLANE A COAL MILL (2)

A:				
B:	P01422	mmH2O	L=250.0 H=1200.0	Plane A prim air fan discharge pressure
C:	T01423	dgrC		Plane A prim air fan discharge temp
D:				
E:	P01427	mmH2O		Plane A prim air press outlet coal mill
F:	T01426	dgrC	L=70.0 H=100.0	Plane A prim air temp outlet coal mill
G:				
H:				
I:	N01430	%		Plane A coal mill feeder speed
J:	G01431	ton/h		Plane A coal mill coal flow (total)
K:	G01432	ton/h		Plane A coal mill air flow (total)
L:				
M:	E01433	kW		Plane A coal mill electric power
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.40 Page:1405 MD140* * PLANE A FUEL SUPPLY

A:				
B:	P01438	bar		Plane A fuel oil press at control valve
C:	T01439	dgrC		Plane A fuel oil temp at control valve
D:				
E:	P01440	bar	L=2.9 H=22.0	Plane A fuel oil press at burners
F:	G01441	ton/h		Plane A fuel oil flow to burners
G:	G01442	ton/h		Plane A sec air flow to burners
H:				
I:				
J:	G01449	ton/h		Plane A fuel oil supply flow
K:	G01450	ton/h		Plane A fuel oil return flow
L:	V01451	<0-1>		Plane A fuel oil return valve
M:				
N:	G61400	ton/h		Plane A fuel oil flow (total)
O:	G61401	ton/h		Plane A coal mass flow (total)
P:				
Q:	G61402	ton/h		Plane A prim air flow (total)
R:	G61403	ton/h		Plane A sec. air flow (total)
S:				
T:				



2.41 Page:1408 MD140** PLANE A BURNER STATES

A:		
B:	X11478 <0-7>	Plane A burner 1 logic state
C:	X21478 <0-7>	Plane A burner 2 logic state
D:	X31478 <0-7>	Plane A burner 3 logic state
E:	X41478 <0-7>	Plane A burner 4 logic state
F:		
G:		
H:		
I:	Y11480 <0-1>	Plane A burner 1 off
J:	S11481 <0-1>	Plane A burner 1 on/oil
K:	S11482 <0-1>	Plane A burner 1 inserting fuel lance
L:	S11483 <0-1>	Plane A burner 1 preheating fuel lance
M:	S11484 <0-1>	Plane A burner 1 waiting for flame
N:	S11485 <0-1>	Plane A burner 1 shutting down
O:	S11486 <0-1>	Plane A burner 1 cleaning fuel lance
P:	S11487 <0-1>	Plane A burner 1 retracting fuel lance
Q:	S11488 <0-1>	Plane A burner 1 on/coal
R:		
S:		
T:		

2.42 Page:1409 MD140** PLANE A BURNER READY LIMITS

A:		
B:		
C:		
D:	C01460 bar	Plane A ready limit: FO pressure
E:	C01461 dgrC	Plane A ready limit: FO temperature
F:	C01462 bar	Plane A ready limit: atomizing stm press
G:	C01463 bar	Plane A ready limit: cleaning stm press
H:		
I:	C01464 ton/h	Plane A ready limit: FW low limit
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.43 Page:1410 MD140** PLANE A BURNER 1 SYSTEM (1)

A:		
B:	X11473 <0-1>	Plane A burner 1 ready
C:	X11474 <0-1>	Plane A burner 1 start
D:	X11475 <0-1>	Plane A burner 1 stop
E:	X11476 <0-1>	Plane A burner 1 on
F:	X11478 <0-7>	Plane A burner 1 logic state
G:		
H:	Z11470 <0-1>	Plane A burner 1 flame detector (UV+IR)
I:		
J:	V11462 <0-1>	Plane A burner 1 atomizing steam valve
K:	V11463 <0-1>	Plane A burner 1 cleaning steam valve
L:	G11460 kg/h	Plane A burner 1 atomizing steam flow
M:	G11461 kg/h	Plane A burner 1 cleaning steam flow
N:		
O:	G11446 ton/h	Plane A burner 1 fuel oil flow
P:	V11447 <0-1>	Plane A burner 1 fuel shut off valves
Q:	V11448 <0-1>	Plane A burner 1 fuel supply valve
R:	X11449 <0-1>	Plane A burner 1 fuel oil lance
S:	V11471 <0-1>	Plane A burner 1 ignitor
T:		

2.44 Page:1411 MD140** PLANE A BURNER 1 SYSTEM (2)

A:		
B:		
C:	G11440 ton/h	Plane A burner 1 coal flow
D:	G11441 ton/h	Plane A burner 1 prim air flow
E:	V11442 <0-1>	Plane A burner 1 prim air shut off damper
F:		
G:		
H:	G11450 ton/h	Plane A burner 1 sec air flow
I:	V11451 <0-1>	Plane A burner 1 sec air shut off damper
J:	V11452 <0-1>	Plane A burner 1 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.45 Page:1412 MD140** PLANE A BURNER 2 SYSTEM (1)

A:		
B:	X21473 <0-1>	Plane A burner 2 ready
C:	X21474 <0-1>	Plane A burner 2 start
D:	X21475 <0-1>	Plane A burner 2 stop
E:	X21476 <0-1>	Plane A burner 2 on
F:	X21478 <0-7>	Plane A burner 2 logic state
G:		
H:	Z21470 <0-1>	Plane A burner 2 flame detector (UV+IR)
I:		
J:	V21462 <0-1>	Plane A burner 2 atomizing steam valve
K:	V21463 <0-1>	Plane A burner 2 cleaning steam valve
L:	G21460 kg/h	Plane A burner 2 atomizing steam flow
M:	G21461 kg/h	Plane A burner 2 cleaning steam flow
N:		
O:	G21446 ton/h	Plane A burner 2 fuel oil flow
P:	V21447 <0-1>	Plane A burner 2 fuel shut off valves
Q:	V21448 <0-1>	Plane A burner 2 fuel supply valve
R:	X21449 <0-1>	Plane A burner 2 fuel oil lance
S:	V21471 <0-1>	Plane A burner 2 ignitor
T:		

2.46 Page:1413 MD140** PLANE A BURNER 2 SYSTEM (2)

A:		
B:		
C:	G21440 ton/h	Plane A burner 2 coal flow
D:	G21441 ton/h	Plane A burner 2 prim air flow
E:	V21442 <0-1>	Plane A burner 2 prim air shut off damper
F:		
G:		
H:	G21450 ton/h	Plane A burner 2 sec air flow
I:	V21451 <0-1>	Plane A burner 2 sec air shut off damper
J:	V21452 <0-1>	Plane A burner 2 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.47 Page:1414 MD140** PLANE A BURNER 3 SYSTEM (1)

A:		
B:	X31473 <0-1>	Plane A burner 3 ready
C:	X31474 <0-1>	Plane A burner 3 start
D:	X31475 <0-1>	Plane A burner 3 stop
E:	X31476 <0-1>	Plane A burner 3 on
F:	X31478 <0-7>	Plane A burner 3 logic state
G:		
H:	Z31470 <0-1>	Plane A burner 3 flame detector (UV+IR)
I:		
J:	V31462 <0-1>	Plane A burner 3 atomizing steam valve
K:	V31463 <0-1>	Plane A burner 3 cleaning steam valve
L:	G31460 kg/h	Plane A burner 3 atomizing steam flow
M:	G31461 kg/h	Plane A burner 3 cleaning steam flow
N:		
O:	G31446 ton/h	Plane A burner 3 fuel oil flow
P:	V31447 <0-1>	Plane A burner 3 fuel shut off valves
Q:	V31448 <0-1>	Plane A burner 3 fuel supply valve
R:	X31449 <0-1>	Plane A burner 3 fuel oil lance
S:	V31471 <0-1>	Plane A burner 3 ignitor
T:		

2.48 Page:1415 MD140** PLANE A BURNER 3 SYSTEM (2)

A:		
B:		
C:	G31440 ton/h	Plane A burner 3 coal flow
D:	G31441 ton/h	Plane A burner 3 prim air flow
E:	V31442 <0-1>	Plane A burner 3 prim air shut off damper
F:		
G:		
H:	G31450 ton/h	Plane A burner 3 sec air flow
I:	V31451 <0-1>	Plane A burner 3 sec air shut off damper
J:	V31452 <0-1>	Plane A burner 3 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.49 Page:1416 MD140** PLANE A BURNER 4 SYSTEM (1)

A:		
B:	X41473 <0-1>	Plane A burner 4 ready
C:	X41474 <0-1>	Plane A burner 4 start
D:	X41475 <0-1>	Plane A burner 4 stop
E:	X41476 <0-1>	Plane A burner 4 on
F:	X41478 <0-7>	Plane A burner 4 logic state
G:		
H:	Z41470 <0-1>	Plane A burner 4 flame detector (UV+IR)
I:		
J:	V41462 <0-1>	Plane A burner 4 atomizing steam valve
K:	V41463 <0-1>	Plane A burner 4 cleaning steam valve
L:	G41460 kg/h	Plane A burner 4 atomizing steam flow
M:	G41461 kg/h	Plane A burner 4 cleaning steam flow
N:		
O:	G41446 ton/h	Plane A burner 4 fuel oil flow
P:	V41447 <0-1>	Plane A burner 4 fuel shut off valves
Q:	V41448 <0-1>	Plane A burner 4 fuel supply valve
R:	X41449 <0-1>	Plane A burner 4 fuel oil lance
S:	V41471 <0-1>	Plane A burner 4 ignitor
T:		

2.50 Page:1417 MD140** PLANE A BURNER 4 SYSTEM (2)

A:		
B:		
C:	G41440 ton/h	Plane A burner 4 coal flow
D:	G41441 ton/h	Plane A burner 4 prim air flow
E:	V41442 <0-1>	Plane A burner 4 prim air shut off damper
F:		
G:		
H:	G41450 ton/h	Plane A burner 4 sec air flow
I:	V41451 <0-1>	Plane A burner 4 sec air shut off damper
J:	V41452 <0-1>	Plane A burner 4 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.51 Page:1420 MD140** PLANE A FUEL OIL FLOW CONTROL

A:		
B:	X51400 <0-1>	Plane A fuel oil flow contr auto
C:	G51401 ton/h	Plane A fuel oil flow contr set point
D:	Z51409 ton/h	Plane A fuel oil flow contr feed back
E:	Z51403 %	Plane A fuel oil flow contr output
F:	Z51404 ton/h	Plane A fuel oil flow contr deviation
G:	C51405 %/ton/h	Plane A fuel oil flow contr gain
H:	C51406 sec	Plane A fuel oil flow contr integr time
I:	C51407 sec	Plane A fuel oil flow contr deriv time
J:	C51408 <0-8>	Plane A fuel oil flow contr deriv range
K:		
L:	V51414 %	Plane A fuel oil flow contr valve pos
M:	C51415 sec	Plane A fuel oil flow contr valve tc
N:	C51416 sec	Plane A fuel oil flow contr sensor tc
O:		
P:	X51410 <0-1>	Plane A fuel oil flow contr test
Q:	C51411 ton/h	Plane A fuel oil flow contr step
R:	C51412 sec	Plane A fuel oil flow contr periode
S:		
T:		

2.52 Page:1421 MD140** PLANE A SEC. AIR FLOW CONTROL

A:		
B:	X51420 <0-1>	Plane A sec. air flow contr auto
C:	G51421 ton/h	Plane A sec. air flow contr set point
D:	Z51429 ton/h	Plane A sec. air flow contr feed back
E:	Z51423 %	Plane A sec. air flow contr output
F:	Z51424 ton/h	Plane A sec. air flow contr deviation
G:	C51425 %/ton/h	Plane A sec. air flow contr gain
H:	C51426 sec	Plane A sec. air flow contr integr time
I:	C51427 sec	Plane A sec. air flow contr deriv time
J:	C51428 <0-8>	Plane A sec. air flow contr deriv range
K:		
L:	V51434 %	Plane A sec. air flow contr damper pos
M:	C51435 sec	Plane A sec. air flow contr damper tc
N:	C51436 sec	Plane A sec. air flow contr sensor tc
O:		
P:	X51430 <0-1>	Plane A sec. air flow contr test
Q:	C51431 ton/h	Plane A sec. air flow contr step
R:	C51432 sec	Plane A sec. air flow contr periode
S:		
T:		



2.53 Page:1422 MD140** PLANE A COAL FEEDER SPEED CONTROL

A:		
B:	X51440 <0-1>	Plane A coal feeder speed contr auto
C:	N51441 rpm	Plane A coal feeder speed contr setp
D:	Z51449 rpm	Plane A coal feeder speed contr fb
E:	Z51443 %	Plane A coal feeder speed contr output
F:	Z51444 rpm	Plane A coal feeder speed contr deviation
G:	C51445 %/rpm	Plane A coal feeder speed contr gain
H:	C51446 sec	Plane A coal feeder speed contr integr time
I:	C51447 sec	Plane A coal feeder speed contr deriv time
J:	C51448 <0-8>	Plane A coal feeder speed contr deriv range
K:		
L:	V51454 %	Plane A coal feeder speed contr actu pos
M:	C51455 sec	Plane A coal feeder speed contr actu tc
N:	C51456 sec	Plane A coal feeder speed contr sens tc
O:		
P:	X51450 <0-1>	Plane A coal feeder speed contr test
Q:	C51451 rpm	Plane A coal feeder speed contr step
R:	C51452 sec	Plane A coal feeder speed contr periode
S:		
T:		

2.54 Page:1423 MD140** PLANE A PRIM. AIR FLOW CONTROL

A:		
B:	X51460 <0-1>	Plane A prim air flow contr auto
C:	G51461 ton/h	Plane A prim air flow contr set point
D:	Z51469 ton/h	Plane A prim air flow contr feed back
E:	Z51463 %	Plane A prim air flow contr output
F:	Z51464 ton/h	Plane A prim air flow contr deviation
G:	C51465 %/ton/h	Plane A prim air flow contr gain
H:	C51466 sec	Plane A prim air flow contr integr time
I:	C51467 sec	Plane A prim air flow contr deriv time
J:	C51468 <0-8>	Plane A prim air flow contr deriv range
K:		
L:	V51474 %	Plane A prim air flow contr damper pos
M:	C51475 sec	Plane A prim air flow contr damper tc
N:	C51476 sec	Plane A prim air flow contr sensor tc
O:		
P:	X51470 <0-1>	Plane A prim air flow contr test
Q:	C51471 ton/h	Plane A prim air flow contr step
R:	C51472 sec	Plane A prim air flow contr periode
S:		
T:		

2.55 Page:1424 MD140* * PLANE A PRIM. AIR TEMP CONTROL

A:		
B:	X51480 <0-1>	Plane A prim air temp contr auto
C:	T51481 dgrC	Plane A prim air temp contr set point
D:	Z51489 dgrC	Plane A prim air temp contr feed back
E:	Z51483 %	Plane A prim air temp contr output
F:	Z51484 dgrC	Plane A prim air temp contr deviation
G:	C51485 %/dgrC	Plane A prim air temp contr gain
H:	C51486 sec	Plane A prim air temp contr integr time
I:	C51487 sec	Plane A prim air temp contr deriv time
J:	C51488 <0-8>	Plane A prim air temp contr deriv range
K:		
L:	V51493 %	Plane A prim air temp damper pos (cold air)
M:	C51494 sec	Plane A prim air temp damper tc (cold air)
N:	V51495 %	Plane A prim air temp damper pos (hot air)
O:	C51496 sec	Plane A prim air temp damper tc (hot air)
P:		
Q:	X51490 <0-1>	Plane A prim air temp contr test
R:	C51491 dgrC	Plane A prim air temp contr step
S:	C51492 sec	Plane A prim air temp contr periode
T:		

2.56 Page:1425 MD140* * PLANE A MISC. CONTROL

A:		
B:		
C:	C61411 <0-2>	Plane A oil air ratio adjust
D:	C61412 <0-2>	Plane A coal air ratio adjust
E:		
F:	C51480 dgrC	Plane A prim air temp setp (running)
G:	C51481 dgrC	Plane A prim air temp setp (stopping)
H:	C51482 dgrC	Plane A prim air temp setp (starting)
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.57 Page:1430 MD140** PLANE A COAL MILL TRIP**

A:				
B:				
C:	X01472	<0-1>	L=--- H=0.9	Plane A coal mill trip
D:	S01473	<0-3>		Plane A coal mill trip code
E:				
F:	S01474	<0-1>		Plane A trip 1 : high outlet air temp
G:	S01475	<0-1>		Plane A trip 2 : low primary air flow
H:	S01476	<0-1>		Plane A trip 3 : two or more flame fails
I:				
J:				
K:	C01480	dgrC		Plane A trip 1 : high outlet air temp
L:	C01481	ton/h		Plane A trip 2 : low primary air flow
M:				
N:				
O:	C01485	dgrC		Plane A start limit: outlet air temp
P:				
Q:				
R:				
S:				
T:				

2.58 Page:1431 MD140 PLANE A COAL MILL SEQUENCES**

A:				
B:	X01465	<0-14>		Plane A coal mill logic state
C:				
D:	Y01450	<0-1>		Plane A mill stopped
E:	S01451	<0-1>		Plane A mill in operation
F:	S01452	<0-1>		Plane A mill preparing auxiliaries
G:	S01453	<0-1>		Plane A mill preparing prim air flow
H:	S01454	<0-1>		Plane A mill waiting for outlet temp
I:	S01455	<0-1>		Plane A mill starting mill table
J:	S01456	<0-1>		Plane A mill starting mill rollers
K:	S01457	<0-1>		Plane A mill starting rotating sieve
L:	S01458	<0-1>		Plane A mill starting coal feeder
M:				
N:	S01460	<0-1>		Plane A mill stopping coal feeder
O:	S01461	<0-1>		Plane A mill waiting to empty grinder
P:	S01462	<0-1>		Plane A mill waiting to empty pipes
Q:	S01463	<0-1>		Plane A mill stopping auxiliaries
R:	S01464	<0-1>		Plane A mill emerg cooling down
S:				
T:				

2.59 Page:1490 MD14** CONFIGURABLE PAGE

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.60 Page:1500 MD150** PLANE B PRIMARY AIR SUPPLY

A:			
B:	P01500	mmH2O	Plane B prim air supply pressure
C:	T01501	dgrC	Plane B prim air supply temperature
D:	G01502	ton/h	Plane B prim air flow from ring channel
E:	G01503	ton/h	Plane B prim air flow from cold air box
F:			
G:			
H:			
I:			
J:			
K:	T01510	dgrC	Plane B prim air fan inlet temp
L:			
M:	G01513	ton/h	L=17.0 H=---
N:	E01514	kW	Plane B prim air fan power
O:	N01515	rmp	Plane B prim air fan speed
P:	R01517	<0-1>	Plane B prim air fan s/s
Q:	Z01516	<0-99>	Plane B prim air fan stall indication
R:			
S:	V01520	<0-1>	Plane B prim air fan shut off valve
T:			

**2.61 Page:1501 MD150** PLANE B COAL MILL (1)**

A:		
B:	X01560 <0-1>	Plane B coal mill ready
C:	X01561 <0-1>	Plane B coal mill start
D:	X01562 <0-1>	Plane B coal mill stop
E:	X01563 <0-1>	Plane B coal mill run (in oper.)
F:	X01565 <0-14>	Plane B coal mill logic state
G:		
H:		
I:	R01565 <0-1>	Plane B coal mill lub oil pump
J:	R01566 <0-1>	Plane B coal mill seal air fan
K:	R01567 <0-1>	Plane B coal mill table run
L:	R01568 <0-1>	Plane B coal mill roller run
M:	R01569 <0-1>	Plane B coal mill feeder run
N:	R01570 <0-1>	Plane B coal mill rotating sieve
O:		
P:	X01571 <0-1>	Plane B coal mill emergency stop
Q:		
R:		
S:		
T:		

2.62 Page:1502 MD150 PLANE B COAL MILL (2)**

A:					
B:	P01522	mmH2O	L=250.0	H=1200.0	Plane B prim air fan discharge pressure
C:	T01523	dgrC			Plane B prim air fan discharge temp
D:					
E:	P01527	mmH2O			Plane B prim air press outlet coal mill
F:	T01526	dgrC	L=70.0	H=100.0	Plane B prim air temp outlet coal mill
G:					
H:					
I:	N01530	%			Plane B coal mill feeder speed
J:	G01531	ton/h			Plane B coal mill coal flow (total)
K:	G01532	ton/h			Plane B coal mill air flow (total)
L:					
M:	E01533	kW			Plane B coal mill electric power
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.63 Page:1505 MD150* * PLANE B FUEL SUPPLY

A:				
B:	P01538	bar		Plane B fuel oil press at control valve
C:	T01539	dgrC		Plane B fuel oil temp at control valve
D:				
E:	P01540	bar	L=2.9 H=22.0	Plane B fuel oil press at burners
F:	G01541	ton/h		Plane B fuel oil flow to burners
G:	G01542	ton/h		Plane B sec air flow to burners
H:				
I:				
J:	G01549	ton/h		Plane B fuel oil supply flow
K:	G01550	ton/h		Plane B fuel oil return flow
L:	V01551	<0-1>		Plane B fuel oil return valve
M:				
N:	G61500	ton/h		Plane B fuel oil flow (total)
O:	G61501	ton/h		Plane B coal mass flow (total)
P:				
Q:	G61502	ton/h		Plane B prim air flow (total)
R:	G61503	ton/h		Plane B sec. air flow (total)
S:				
T:				

2.64 Page:1508 MD150* * PLANE B BURNER STATES

A:				
B:	X11578	<0-7>		Plane B burner 1 logic state
C:	X21578	<0-7>		Plane B burner 2 logic state
D:	X31578	<0-7>		Plane B burner 3 logic state
E:	X41578	<0-7>		Plane B burner 4 logic state
F:				
G:				
H:				
I:	Y11580	<0-1>		Plane B burner 1 off
J:	S11581	<0-1>		Plane B burner 1 on/oil
K:	S11582	<0-1>		Plane B burner 1 inserting fuel lance
L:	S11583	<0-1>		Plane B burner 1 preheating fuel lance
M:	S11584	<0-1>		Plane B burner 1 waiting for flame
N:	S11585	<0-1>		Plane B burner 1 shutting down
O:	S11586	<0-1>		Plane B burner 1 cleaning fuel lance
P:	S11587	<0-1>		Plane B burner 1 retracting fuel lance
Q:	S11588	<0-1>		Plane B burner 1 on/coal
R:				
S:				
T:				

**2.65 Page:1509 MD150** PLANE B BURNER READY LIMITS**

A:		
B:		
C:		
D:	C01560 bar	Plane B ready limit: FO pressure
E:	C01561 dgrC	Plane B ready limit: FO temperature
F:	C01562 bar	Plane B ready limit: atomizing stm press
G:	C01563 bar	Plane B ready limit: cleaning stm press
H:		
I:	C01564 ton/h	Plane B ready limit: FW low limit
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.66 Page:1510 MD150 PLANE B BURNER 1 SYSTEM (1)**

A:		
B:	X11573 <0-1>	Plane B burner 1 ready
C:	X11574 <0-1>	Plane B burner 1 start
D:	X11575 <0-1>	Plane B burner 1 stop
E:	X11576 <0-1>	Plane B burner 1 on
F:	X11578 <0-7>	Plane B burner 1 logic state
G:		
H:	Z11570 <0-1>	Plane B burner 1 flame detector (UV+IR)
I:		
J:	V11562 <0-1>	Plane B burner 1 atomizing steam valve
K:	V11563 <0-1>	Plane B burner 1 cleaning steam valve
L:	G11560 kg/h	Plane B burner 1 atomizing steam flow
M:	G11561 kg/h	Plane B burner 1 cleaning steam flow
N:		
O:	G11546 ton/h	Plane B burner 1 fuel oil flow
P:	V11547 <0-1>	Plane B burner 1 fuel shut off valves
Q:	V11548 <0-1>	Plane B burner 1 fuel supply valve
R:	X11549 <0-1>	Plane B burner 1 fuel oil lance
S:	V11571 <0-1>	Plane B burner 1 ignitor
T:		

2.67 Page:1511 MD150** PLANE B BURNER 1 SYSTEM (2)

A:		
B:		
C:	G11540 ton/h	Plane B burner 1 coal flow
D:	G11541 ton/h	Plane B burner 1 prim air flow
E:	V11542 <0-1>	Plane B burner 1 prim air shut off damper
F:		
G:		
H:	G11550 ton/h	Plane B burner 1 sec air flow
I:	V11551 <0-1>	Plane B burner 1 sec air shut off damper
J:	V11552 <0-1>	Plane B burner 1 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.68 Page:1512 MD150** PLANE B BURNER 2 SYSTEM (1)

A:		
B:	X21573 <0-1>	Plane B burner 2 ready
C:	X21574 <0-1>	Plane B burner 2 start
D:	X21575 <0-1>	Plane B burner 2 stop
E:	X21576 <0-1>	Plane B burner 2 on
F:	X21578 <0-7>	Plane B burner 2 logic state
G:		
H:	Z21570 <0-1>	Plane B burner 2 flame detector (UV+IR)
I:		
J:	V21562 <0-1>	Plane B burner 2 atomizing steam valve
K:	V21563 <0-1>	Plane B burner 2 cleaning steam valve
L:	G21560 kg/h	Plane B burner 2 atomizing steam flow
M:	G21561 kg/h	Plane B burner 2 cleaning steam flow
N:		
O:	G21546 ton/h	Plane B burner 2 fuel oil flow
P:	V21547 <0-1>	Plane B burner 2 fuel shut off valves
Q:	V21548 <0-1>	Plane B burner 2 fuel supply valve
R:	X21549 <0-1>	Plane B burner 2 fuel oil lance
S:	V21571 <0-1>	Plane B burner 2 ignitor
T:		



2.69 Page:1513 MD150** PLANE B BURNER 2 SYSTEM (2)

A:		
B:		
C:	G21540 ton/h	Plane B burner 2 coal flow
D:	G21541 ton/h	Plane B burner 2 prim air flow
E:	V21542 <0-1>	Plane B burner 2 prim air shut off damper
F:		
G:		
H:	G21550 ton/h	Plane B burner 2 sec air flow
I:	V21551 <0-1>	Plane B burner 2 sec air shut off damper
J:	V21552 <0-1>	Plane B burner 2 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.70 Page:1514 MD140** PLANE B BURNER 3 SYSTEM (1)

A:		
B:	X31573 <0-1>	Plane B burner 3 ready
C:	X31574 <0-1>	Plane B burner 3 start
D:	X31575 <0-1>	Plane B burner 3 stop
E:	X31576 <0-1>	Plane B burner 3 on
F:	X31578 <0-7>	Plane B burner 3 logic state
G:		
H:	Z31570 <0-1>	Plane B burner 3 flame detector (UV+IR)
I:		
J:	V31562 <0-1>	Plane B burner 3 atomizing steam valve
K:	V31563 <0-1>	Plane B burner 3 cleaning steam valve
L:	G31560 kg/h	Plane B burner 3 atomizing steam flow
M:	G31561 kg/h	Plane B burner 3 cleaning steam flow
N:		
O:	G31546 ton/h	Plane B burner 3 fuel oil flow
P:	V31547 <0-1>	Plane B burner 3 fuel shut off valves
Q:	V31548 <0-1>	Plane B burner 3 fuel supply valve
R:	X31549 <0-1>	Plane B burner 3 fuel oil lance
S:	V31571 <0-1>	Plane B burner 3 ignitor
T:		

2.71 Page:1515 MD150** PLANE B BURNER 3 SYSTEM (2)

A:		
B:		
C:	G31540 ton/h	Plane B burner 3 coal flow
D:	G31541 ton/h	Plane B burner 3 prim air flow
E:	V31542 <0-1>	Plane B burner 3 prim air shut off damper
F:		
G:		
H:	G31550 ton/h	Plane B burner 3 sec air flow
I:	V31551 <0-1>	Plane B burner 3 sec air shut off damper
J:	V31552 <0-1>	Plane B burner 3 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.72 Page:1516 MD150** PLANE B BURNER 4 SYSTEM (1)

A:		
B:	X41573 <0-1>	Plane B burner 4 ready
C:	X41574 <0-1>	Plane B burner 4 start
D:	X41575 <0-1>	Plane B burner 4 stop
E:	X41576 <0-1>	Plane B burner 4 on
F:	X41578 <0-7>	Plane B burner 4 logic state
G:		
H:	Z41570 <0-1>	Plane B burner 4 flame detector (UV+IR)
I:		
J:	V41562 <0-1>	Plane B burner 4 atomizing steam valve
K:	V41563 <0-1>	Plane B burner 4 cleaning steam valve
L:	G41560 kg/h	Plane B burner 4 atomizing steam flow
M:	G41561 kg/h	Plane B burner 4 cleaning steam flow
N:		
O:	G41546 ton/h	Plane B burner 4 fuel oil flow
P:	V41547 <0-1>	Plane B burner 4 fuel shut off valves
Q:	V41548 <0-1>	Plane B burner 4 fuel supply valve
R:	X41549 <0-1>	Plane B burner 4 fuel oil lance
S:	V41571 <0-1>	Plane B burner 4 ignitor
T:		



2.73 Page:1517 MD150** PLANE B BURNER 4 SYSTEM (2)

A:		
B:		
C:	G41540 ton/h	Plane B burner 4 coal flow
D:	G41541 ton/h	Plane B burner 4 prim air flow
E:	V41542 <0-1>	Plane B burner 4 prim air shut off damper
F:		
G:		
H:	G41550 ton/h	Plane B burner 4 sec air flow
I:	V41551 <0-1>	Plane B burner 4 sec air shut off damper
J:	V41552 <0-1>	Plane B burner 4 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.74 Page:1520 MD150** PLANE B FUEL OIL FLOW CONTROL

A:		
B:	X51500 <0-1>	Plane B fuel oil flow contr auto
C:	G51501 ton/h	Plane B fuel oil flow contr set point
D:	Z51509 ton/h	Plane B fuel oil flow contr feed back
E:	Z51503 %	Plane B fuel oil flow contr output
F:	Z51504 ton/h	Plane B fuel oil flow contr deviation
G:	C51505 %/ton/h	Plane B fuel oil flow contr gain
H:	C51506 sec	Plane B fuel oil flow contr integr time
I:	C51507 sec	Plane B fuel oil flow contr deriv time
J:	C51508 <0-8>	Plane B fuel oil flow contr deriv range
K:		
L:	V51514 %	Plane B fuel oil flow contr valve pos
M:	C51515 sec	Plane B fuel oil flow contr valve tc
N:	C51516 sec	Plane B fuel oil flow contr sensor tc
O:		
P:	X51510 <0-1>	Plane B fuel oil flow contr test
Q:	C51511 ton/h	Plane B fuel oil flow contr step
R:	C51512 sec	Plane B fuel oil flow contr periode
S:		
T:		

2.75 Page:1521 MD150** PLANE B SEC. AIR FLOW CONTROL

A:		
B:	X51520 <0-1>	Plane B sec. air flow contr auto
C:	G51521 ton/h	Plane B sec. air flow contr set point
D:	Z51529 ton/h	Plane B sec. air flow contr feed back
E:	Z51523 %	Plane B sec. air flow contr output
F:	Z51524 ton/h	Plane B sec. air flow contr deviation
G:	C51525 %/ton/h	Plane B sec. air flow contr gain
H:	C51526 sec	Plane B sec. air flow contr integr time
I:	C51527 sec	Plane B sec. air flow contr deriv time
J:	C51528 <0-8>	Plane B sec. air flow contr deriv range
K:		
L:	V51534 %	Plane B sec. air flow contr damper pos
M:	C51535 sec	Plane B sec. air flow contr damper tc
N:	C51536 sec	Plane B sec. air flow contr sensor tc
O:		
P:	X51530 <0-1>	Plane B sec. air flow contr test
Q:	C51531 ton/h	Plane B sec. air flow contr step
R:	C51532 sec	Plane B sec. air flow contr periode
S:		
T:		

2.76 Page:1522 MD150** PLANE B COAL FEEDER SPEED CONTROL

A:		
B:	X51540 <0-1>	Plane B coal feeder speed contr auto
C:	N51541 rpm	Plane B coal feeder speed contr setp
D:	Z51549 rpm	Plane B coal feeder speed contr fb
E:	Z51543 %	Plane B coal feeder speed contr output
F:	Z51544 rpm	Plane B coal feeder speed contr deviation
G:	C51545 %/rpm	Plane B coal feeder speed contr gain
H:	C51546 sec	Plane B coal feeder speed contr integr time
I:	C51547 sec	Plane B coal feeder speed contr deriv time
J:	C51548 <0-8>	Plane B coal feeder speed contr deriv range
K:		
L:	V51554 %	Plane B coal feeder speed contr actu pos
M:	C51555 sec	Plane B coal feeder speed contr actu tc
N:	C51556 sec	Plane B coal feeder speed contr sens tc
O:		
P:	X51550 <0-1>	Plane B coal feeder speed contr test
Q:	C51551 rpm	Plane B coal feeder speed contr step
R:	C51552 sec	Plane B coal feeder speed contr periode
S:		
T:		

**2.77 Page:1523 MD150** PLANE B PRIM. AIR FLOW CONTROL**

A:		
B:	X51560 <0-1>	Plane B prim air flow contr auto
C:	G51561 ton/h	Plane B prim air flow contr set point
D:	Z51569 ton/h	Plane B prim air flow contr feed back
E:	Z51563 %	Plane B prim air flow contr output
F:	Z51564 ton/h	Plane B prim air flow contr deviation
G:	C51565 %/ton/h	Plane B prim air flow contr gain
H:	C51566 sec	Plane B prim air flow contr integr time
I:	C51567 sec	Plane B prim air flow contr deriv time
J:	C51568 <0-8>	Plane B prim air flow contr deriv range
K:		
L:	V51574 %	Plane B prim air flow contr damper pos
M:	C51575 sec	Plane B prim air flow contr damper tc
N:	C51576 sec	Plane B prim air flow contr sensor tc
O:		
P:	X51570 <0-1>	Plane B prim air flow contr test
Q:	C51571 ton/h	Plane B prim air flow contr step
R:	C51572 sec	Plane B prim air flow contr periode
S:		
T:		

2.78 Page:1524 MD150 PLANE B PRIM. AIR TEMP CONTROL**

A:		
B:	X51580 <0-1>	Plane B prim air temp contr auto
C:	T51581 dgrC	Plane B prim air temp contr set point
D:	Z51589 dgrC	Plane B prim air temp contr feed back
E:	Z51583 %	Plane B prim air temp contr output
F:	Z51584 dgrC	Plane B prim air temp contr deviation
G:	C51585 %/dgrC	Plane B prim air temp contr gain
H:	C51586 sec	Plane B prim air temp contr integr time
I:	C51587 sec	Plane B prim air temp contr deriv time
J:	C51588 <0-8>	Plane B prim air temp contr deriv range
K:		
L:	V51593 %	Plane B prim air temp damper pos (cold air)
M:	C51594 sec	Plane B prim air temp damper tc (cold air)
N:	V51595 %	Plane B prim air temp damper pos (hot air)
O:	C51596 sec	Plane B prim air temp damper tc (hot air)
P:		
Q:	X51590 <0-1>	Plane B prim air temp contr test
R:	C51591 dgrC	Plane B prim air temp contr step
S:	C51592 sec	Plane B prim air temp contr periode
T:		

2.79 Page:1525 MD150* * PLANE B MISC. CONTROL

A:			
B:			
C:	C61511	<0-2>	Plane B oil air ratio adjust
D:	C61512	<0-2>	Plane B coal air ratio adjust
E:			
F:	C51580	dgrC	Plane B prim air temp setp (running)
G:	C51581	dgrC	Plane B prim air temp setp (stopping)
H:	C51582	dgrC	Plane B prim air temp setp (starting)
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.80 Page:1530 MD150* * PLANE B COAL MILL TRIP

A:					
B:					
C:	X01572	<0-1>	L=---	H=0.9	Plane B coal mill trip
D:	S01573	<0-3>			Plane B coal mill trip code
E:					
F:	S01574	<0-1>			Plane B trip 1 : high outlet air temp
G:	S01575	<0-1>			Plane B trip 2 : low primary air flow
H:	S01576	<0-1>			Plane B trip 3 : two or more flame fails
I:					
J:					
K:	C01580	dgrC			Plane B trip 1 : high outlet air temp
L:	C01581	ton/h			Plane B trip 2 : low primary air flow
M:					
N:					
O:	C01585	dgrC			Plane B start limit: outlet air temp
P:					
R:					
S:					
T:					



2.81 Page:1531 MD150** PLANE B COAL MILL SEQUENCES

A:		
B:	X01565 <0-14>	Plane B coal mill logic state
C:		
D:	Y01550 <0-1>	Plane B mill stopped
E:	S01551 <0-1>	Plane B mill in operation
F:	S01552 <0-1>	Plane B mill preparing auxiliaries
G:	S01553 <0-1>	Plane B mill preparing prim air flow
H:	S01554 <0-1>	Plane B mill waiting for outlet temp
I:	S01555 <0-1>	Plane B mill starting mill table
J:	S01556 <0-1>	Plane B mill starting mill rollers
K:	S01557 <0-1>	Plane B mill starting rotating sieve
L:	S01558 <0-1>	Plane B mill starting coal feeder
M:		
N:	S01560 <0-1>	Plane B mill stopping coal feeder
O:	S01561 <0-1>	Plane B mill waiting to empty grinder
P:	S01562 <0-1>	Plane B mill waiting to empty pipes
Q:	S01563 <0-1>	Plane B mill stopping auxiliaries
R:	S01564 <0-1>	Plane B mill emerg cooling down
S:		
T:		

2.82 Page:1590 MD15** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.83 Page:1600 MD160* * PLANE C PRIMARY AIR SUPPLY

A:			
B:	P01600	mmH2O	Plane C prim air supply pressure
C:	T01601	dgrC	Plane C prim air supply temperature
D:	G01602	ton/h	Plane C prim air flow from ring channel
E:	G01603	ton/h	Plane C prim air flow from cold air box
F:			
G:	X01606	<0-1>	Plane C electric air heater on
H:	E01607	kW	Plane C electric air heater kw
I:			
J:			
K:	T01610	dgrC	Plane C prim air fan inlet temp
L:			
M:	G01613	ton/h	Plane C prim air fan flow
N:	E01614	kW	Plane C prim air fan power
O:	N01615	rmp	Plane C prim air fan speed
P:	R01617	<0-1>	Plane C prim air fan s/s
Q:	Z01616	<0-99>	Plane C prim air fan stall indication
R:			
S:	V01620	<0-1>	Plane C prim air fan shut off valve
T:			

2.84 Page:1601 MD160* * PLANE C COAL MILL (1)

A:			
B:	X01660	<0-1>	Plane C coal mill ready
C:	X01661	<0-1>	Plane C coal mill start
D:	X01662	<0-1>	Plane C coal mill stop
E:	X01663	<0-1>	Plane C coal mill run (in oper.)
F:	X01665	<0-14>	Plane C coal mill logic state
G:			
H:			
I:	R01665	<0-1>	Plane C coal mill lub oil pump
J:	R01666	<0-1>	Plane C coal mill seal air fan
K:	R01667	<0-1>	Plane C coal mill table run
L:	R01668	<0-1>	Plane C coal mill roller run
M:	R01669	<0-1>	Plane C coal mill feeder run
N:	R01670	<0-1>	Plane C coal mill rotating sieve
O:			
P:	X01671	<0-1>	Plane C coal mill emergency stop
Q:			
R:			
S:			
T:			

**2.85 Page:1602 MD160** PLANE C COAL MILL (2)**

A:				
B:	P01622	mmH2O	L=250.0 H=1200.0	Plane C prim air fan discharge pressure
C:	T01623	dgrC		Plane C prim air fan discharge temp
D:				
E:	P01627	mmH2O		Plane C prim air press outlet coal mill
F:	T01626	dgrC	L=70.0 H=100.0	Plane C prim air temp outlet coal mill
G:				
H:				
I:	N01630	%		Plane C coal mill feeder speed
J:	G01631	ton/h		Plane C coal mill coal flow (total)
K:	G01632	ton/h		Plane C coal mill air flow (total)
L:				
M:	E01633	kW		Plane C coal mill electric power
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.86 Page:1605 MD160 PLANE C FUEL SUPPLY**

A:				
B:	P01638	bar		Plane C fuel oil press at control valve
C:	T01639	dgrC		Plane C fuel oil temp at control valve
D:				
E:	P01640	bar	L=2.9 H=22.0	Plane C fuel oil press at burners
F:	G01641	ton/h		Plane C fuel oil flow to burners
G:	G01642	ton/h		Plane C sec air flow to burners
H:				
I:				
J:	G01649	ton/h		Plane C fuel oil supply flow
K:	G01650	ton/h		Plane C fuel oil return flow
L:	V01651	<0-1>		Plane C fuel oil return valve
M:				
N:	G61600	ton/h		Plane C fuel oil flow (total)
O:	G61601	ton/h		Plane C coal mass flow (total)
P:				
Q:	G61602	ton/h		Plane C prim air flow (total)
R:	G61603	ton/h		Plane C sec. air flow (total)
S:				
T:				

2.87 Page:1608 MD160** PLANE C BURNER STATES

A:		
B:	X11678 <0-7>	Plane C burner 1 logic state
C:	X21678 <0-7>	Plane C burner 2 logic state
D:	X31678 <0-7>	Plane C burner 3 logic state
E:	X41678 <0-7>	Plane C burner 4 logic state
F:		
G:		
H:		
I:	Y11680 <0-1>	Plane C burner 1 off
J:	S11681 <0-1>	Plane C burner 1 on/oil
K:	S11682 <0-1>	Plane C burner 1 inserting fuel lance
L:	S11683 <0-1>	Plane C burner 1 preheating fuel lance
M:	S11684 <0-1>	Plane C burner 1 waiting for flame
N:	S11685 <0-1>	Plane C burner 1 shutting down
O:	S11686 <0-1>	Plane C burner 1 cleaning fuel lance
P:	S11687 <0-1>	Plane C burner 1 retracting fuel lance
Q:	S11688 <0-1>	Plane C burner 1 on/coal
R:		
S:		
T:		

2.88 Page:1609 MD160** PLANE C BURNER READY LIMITS

A:		
B:		
C:		
D:	C01660 bar	Plane C ready limit: FO pressure
E:	C01661 dgrC	Plane C ready limit: FO temperature
F:	C01662 bar	Plane C ready limit: atomizing stm press
G:	C01663 bar	Plane C ready limit: cleaning stm press
H:		
I:	C01664 ton/h	Plane C ready limit: FW low limit
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.89 Page:1610 MD160** PLANE C BURNER 1 SYSTEM (1)

A:		
B:	X11673 <0-1>	Plane C burner 1 ready
C:	X11674 <0-1>	Plane C burner 1 start
D:	X11675 <0-1>	Plane C burner 1 stop
E:	X11676 <0-1>	Plane C burner 1 on
F:	X11678 <0-7>	Plane C burner 1 logic state
G:		
H:	Z11670 <0-1>	Plane C burner 1 flame detector (UV+IR)
I:		
J:	V11662 <0-1>	Plane C burner 1 atomizing steam valve
K:	V11663 <0-1>	Plane C burner 1 cleaning steam valve
L:	G11660 kg/h	Plane C burner 1 atomizing steam flow
M:	G11661 kg/h	Plane C burner 1 cleaning steam flow
N:		
O:	G11646 ton/h	Plane C burner 1 fuel oil flow
P:	V11647 <0-1>	Plane C burner 1 fuel shut off valves
Q:	V11648 <0-1>	Plane C burner 1 fuel supply valve
R:	X11649 <0-1>	Plane C burner 1 fuel oil lance
S:	V11671 <0-1>	Plane C burner 1 ignitor
T:		

2.90 Page:1611 MD160** PLANE C BURNER 1 SYSTEM (2)

A:		
B:		
C:	G11640 ton/h	Plane C burner 1 coal flow
D:	G11641 ton/h	Plane C burner 1 prim air flow
E:	V11642 <0-1>	Plane C burner 1 prim air shut off damper
F:		
G:		
H:	G11650 ton/h	Plane C burner 1 sec air flow
I:	V11651 <0-1>	Plane C burner 1 sec air shut off damper
J:	V11652 <0-1>	Plane C burner 1 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.91 Page:1612 MD160** PLANE C BURNER 2 SYSTEM (1)

A:		
B:	X21673 <0-1>	Plane C burner 2 ready
C:	X21674 <0-1>	Plane C burner 2 start
D:	X21675 <0-1>	Plane C burner 2 stop
E:	X21676 <0-1>	Plane C burner 2 on
F:	X21678 <0-7>	Plane C burner 2 logic state
G:		
H:	Z21670 <0-1>	Plane C burner 2 flame detector (UV+IR)
I:		
J:	V21662 <0-1>	Plane C burner 2 atomizing steam valve
K:	V21663 <0-1>	Plane C burner 2 cleaning steam valve
L:	G21660 kg/h	Plane C burner 2 atomizing steam flow
M:	G21661 kg/h	Plane C burner 2 cleaning steam flow
N:		
O:	G21646 ton/h	Plane C burner 2 fuel oil flow
P:	V21647 <0-1>	Plane C burner 2 fuel shut off valves
Q:	V21648 <0-1>	Plane C burner 2 fuel supply valve
R:	X21649 <0-1>	Plane C burner 2 fuel oil lance
S:	V21671 <0-1>	Plane C burner 2 ignitor
T:		

2.92 Page:1613 MD160** PLANE C BURNER 2 SYSTEM (2)

A:		
B:		
C:	G21640 ton/h	Plane C burner 2 coal flow
D:	G21641 ton/h	Plane C burner 2 prim air flow
E:	V21642 <0-1>	Plane C burner 2 prim air shut off damper
F:		
G:		
H:	G21650 ton/h	Plane C burner 2 sec air flow
I:	V21651 <0-1>	Plane C burner 2 sec air shut off damper
J:	V21652 <0-1>	Plane C burner 2 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.93 Page:1614 MD160** PLANE C BURNER 3 SYSTEM (1)

A:		
B:	X31673 <0-1>	Plane C burner 3 ready
C:	X31674 <0-1>	Plane C burner 3 start
D:	X31675 <0-1>	Plane C burner 3 stop
E:	X31676 <0-1>	Plane C burner 3 on
F:	X31678 <0-7>	Plane C burner 3 logic state
G:		
H:	Z31670 <0-1>	Plane C burner 3 flame detector (UV+IR)
I:		
J:	V31662 <0-1>	Plane C burner 3 atomizing steam valve
K:	V31663 <0-1>	Plane C burner 3 cleaning steam valve
L:	G31660 kg/h	Plane C burner 3 atomizing steam flow
M:	G31661 kg/h	Plane C burner 3 cleaning steam flow
N:		
O:	G31646 ton/h	Plane C burner 3 fuel oil flow
P:	V31647 <0-1>	Plane C burner 3 fuel shut off valves
Q:	V31648 <0-1>	Plane C burner 3 fuel supply valve
R:	X31649 <0-1>	Plane C burner 3 fuel oil lance
S:	V31671 <0-1>	Plane C burner 3 ignitor
T:		

2.94 Page:1615 MD160** PLANE C BURNER 3 SYSTEM (2)

A:		
B:		
C:	G31640 ton/h	Plane C burner 3 coal flow
D:	G31641 ton/h	Plane C burner 3 prim air flow
E:	V31642 <0-1>	Plane C burner 3 prim air shut off damper
F:		
G:		
H:	G31650 ton/h	Plane C burner 3 sec air flow
I:	V31651 <0-1>	Plane C burner 3 sec air shut off damper
J:	V31652 <0-1>	Plane C burner 3 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.95 Page:1616 MD160** PLANE C BURNER 4 SYSTEM (1)

A:		
B:	X41673 <0-1>	Plane C burner 4 ready
C:	X41674 <0-1>	Plane C burner 4 start
D:	X41675 <0-1>	Plane C burner 4 stop
E:	X41676 <0-1>	Plane C burner 4 on
F:	X41678 <0-7>	Plane C burner 4 logic state
G:		
H:	Z41670 <0-1>	Plane C burner 4 flame detector (UV+IR)
I:		
J:	V41662 <0-1>	Plane C burner 4 atomizing steam valve
K:	V41663 <0-1>	Plane C burner 4 cleaning steam valve
L:	G41660 kg/h	Plane C burner 4 atomizing steam flow
M:	G41661 kg/h	Plane C burner 4 cleaning steam flow
N:		
O:	G41646 ton/h	Plane C burner 4 fuel oil flow
P:	V41647 <0-1>	Plane C burner 4 fuel shut off valves
Q:	V41648 <0-1>	Plane C burner 4 fuel supply valve
R:	X41649 <0-1>	Plane C burner 4 fuel oil lance
S:	V41671 <0-1>	Plane C burner 4 ignitor
T:		

2.96 Page:1617 MD160** PLANE C BURNER 4 SYSTEM (2)

A:		
B:		
C:	G41640 ton/h	Plane C burner 4 coal flow
D:	G41641 ton/h	Plane C burner 4 prim air flow
E:	V41642 <0-1>	Plane C burner 4 prim air shut off damper
F:		
G:		
H:	G41650 ton/h	Plane C burner 4 sec air flow
I:	V41651 <0-1>	Plane C burner 4 sec air shut off damper
J:	V41652 <0-1>	Plane C burner 4 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		



2.97 Page:1620 MD160** PLANE C FUEL OIL FLOW CONTROL

A:		
B:	X51600 <0-1>	Plane C fuel oil flow contr auto
C:	G51601 ton/h	Plane C fuel oil flow contr set point
D:	Z51609 ton/h	Plane C fuel oil flow contr feed back
E:	Z51603 %	Plane C fuel oil flow contr output
F:	Z51604 ton/h	Plane C fuel oil flow contr deviation
G:	C51605 %/ton/h	Plane C fuel oil flow contr gain
H:	C51606 sec	Plane C fuel oil flow contr integr time
I:	C51607 sec	Plane C fuel oil flow contr deriv time
J:	C51608 <0-8>	Plane C fuel oil flow contr deriv range
K:		
L:	V51614 %	Plane C fuel oil flow contr valve pos
M:	C51615 sec	Plane C fuel oil flow contr valve tc
N:	C51616 sec	Plane C fuel oil flow contr sensor tc
O:		
P:	X51610 <0-1>	Plane C fuel oil flow contr test
Q:	C51611 ton/h	Plane C fuel oil flow contr step
R:	C51612 sec	Plane C fuel oil flow contr periode
S:		
T:		

2.98 Page:1621 MD160** PLANE C SEC. AIR FLOW CONTROL

A:		
B:	X51620 <0-1>	Plane C sec. air flow contr auto
C:	G51621 ton/h	Plane C sec. air flow contr set point
D:	Z51629 ton/h	Plane C sec. air flow contr feed back
E:	Z51623 %	Plane C sec. air flow contr output
F:	Z51624 ton/h	Plane C sec. air flow contr deviation
G:	C51625 %/ton/h	Plane C sec. air flow contr gain
H:	C51626 sec	Plane C sec. air flow contr integr time
I:	C51627 sec	Plane C sec. air flow contr deriv time
J:	C51628 <0-8>	Plane C sec. air flow contr deriv range
K:		
L:	V51634 %	Plane C sec. air flow contr damper pos
M:	C51635 sec	Plane C sec. air flow contr damper tc
N:	C51636 sec	Plane C sec. air flow contr sensor tc
O:		
P:	X51630 <0-1>	Plane C sec. air flow contr test
Q:	C51631 ton/h	Plane C sec. air flow contr step
R:	C51632 sec	Plane C sec. air flow contr periode
S:		
T:		

2.99 Page:1622 MD160* * PLANE C COAL FEEDER SPEED CONTROL

A:		
B:	X51640 <0-1>	Plane C coal feeder speed contr auto
C:	N51641 rpm	Plane C coal feeder speed contr setp
D:	Z51649 rpm	Plane C coal feeder speed contr fb
E:	Z51643 %	Plane C coal feeder speed contr output
F:	Z51644 rpm	Plane C coal feeder speed contr deviation
G:	C51645 %/rpm	Plane C coal feeder speed contr gain
H:	C51646 sec	Plane C coal feeder speed contr integr time
I:	C51647 sec	Plane C coal feeder speed contr deriv time
J:	C51648 <0-8>	Plane C coal feeder speed contr deriv range
K:		
L:	V51654 %	Plane C coal feeder speed contr actu pos
M:	C51655 sec	Plane C coal feeder speed contr actu tc
N:	C51656 sec	Plane C coal feeder speed contr sens tc
O:		
P:	X51650 <0-1>	Plane C coal feeder speed contr test
Q:	C51651 rpm	Plane C coal feeder speed contr step
R:	C51652 sec	Plane C coal feeder speed contr periode
S:		
T:		

2.100 Page:1623 MD160* * PLANE C PRIM. AIR FLOW CONTROL

A:		
B:	X51660 <0-1>	Plane C prim air flow contr auto
C:	G51661 ton/h	Plane C prim air flow contr set point
D:	Z51669 ton/h	Plane C prim air flow contr feed back
E:	Z51663 %	Plane C prim air flow contr output
F:	Z51664 ton/h	Plane C prim air flow contr deviation
G:	C51665 %/ton/h	Plane C prim air flow contr gain
H:	C51666 sec	Plane C prim air flow contr integr time
I:	C51667 sec	Plane C prim air flow contr deriv time
J:	C51668 <0-8>	Plane C prim air flow contr deriv range
K:		
L:	V51674 %	Plane C prim air flow contr damper pos
M:	C51675 sec	Plane C prim air flow contr damper tc
N:	C51676 sec	Plane C prim air flow contr sensor tc
O:		
P:	X51670 <0-1>	Plane C prim air flow contr test
Q:	C51671 ton/h	Plane C prim air flow contr step
R:	C51672 sec	Plane C prim air flow contr periode
S:		
T:		

**2.101 Page:1624 MD160** PLANE C PRIM. AIR TEMP CONTROL**

A:		
B:	X51680 <0-1>	Plane C prim air temp contr auto
C:	T51681 dgrC	Plane C prim air temp contr set point
D:	Z51689 dgrC	Plane C prim air temp contr feed back
E:	Z51683 %	Plane C prim air temp contr output
F:	Z51684 dgrC	Plane C prim air temp contr deviation
G:	C51685 %/dgrC	Plane C prim air temp contr gain
H:	C51686 sec	Plane C prim air temp contr integr time
I:	C51687 sec	Plane C prim air temp contr deriv time
J:	C51688 <0-8>	Plane C prim air temp contr deriv range
K:		
L:	V51693 %	Plane C prim air temp damper pos (cold air)
M:	C51694 sec	Plane C prim air temp damper tc (cold air)
N:	V51695 %	Plane C prim air temp damper pos (hot air)
O:	C51696 sec	Plane C prim air temp damper tc (hot air)
P:		
Q:	X51690 <0-1>	Plane C prim air temp contr test
R:	C51691 dgrC	Plane C prim air temp contr step
S:	C51692 sec	Plane C prim air temp contr periode
T:		

2.102 Page:1625 MD160 PLANE C MISC. CONTROL**

A:		
B:		
C:	C61611 <0-2>	Plane C oil air ratio adjust
D:	C61612 <0-2>	Plane C coal air ratio adjust
E:		
F:	C51680 dgrC	Plane C prim air temp setp (running)
G:	C51681 dgrC	Plane C prim air temp setp (stopping)
H:	C51682 dgrC	Plane C prim air temp setp (starting)
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.103 Page:1630 MD160* * PLANE C COAL MILL TRIP

A:				
B:				
C:	X01672	<0-1>	L=--- H=0.9	Plane C coal mill trip
D:	S01673	<0-3>		Plane C coal mill trip code
E:				
F:	S01674	<0-1>		Plane C trip 1 : high outlet air temp
G:	S01675	<0-1>		Plane C trip 2 : low primary air flow
H:	S01676	<0-1>		Plane C trip 3 : two or more flame fails
I:				
J:				
K:	C01680	dgrC		Plane C trip 1 : high outlet air temp
L:	C01681	ton/h		Plane C trip 2 : low primary air flow
M:				
N:				
O:	C01685	dgrC		Plane C start limit: outlet air temp
P:				
Q:				
R:				
S:				
T:				

2.104 Page:1631 MD160* * PLANE C COAL MILL SEQUENCES

A:				
B:	X01665	<0-14>		Plane C coal mill logic state
C:				
D:	Y01650	<0-1>		Plane C mill stopped
E:	S01651	<0-1>		Plane C mill in operation
F:	S01652	<0-1>		Plane C mill preparing auxiliaries
G:	S01653	<0-1>		Plane C mill preparing prim air flow
H:	S01654	<0-1>		Plane C mill waiting for outlet temp
I:	S01655	<0-1>		Plane C mill starting mill table
J:	S01656	<0-1>		Plane C mill starting mill rollers
K:	S01657	<0-1>		Plane C mill starting rotating sieve
L:	S01658	<0-1>		Plane C mill starting coal feeder
M:				
N:	S01660	<0-1>		Plane C mill stopping coal feeder
O:	S01661	<0-1>		Plane C mill waiting to empty grinder
P:	S01662	<0-1>		Plane C mill waiting to empty pipes
Q:	S01663	<0-1>		Plane C mill stopping auxiliaries
R:	S01664	<0-1>		Plane C mill emerg cooling down
S:				
T:				

**2.105 Page:1690 MD16** CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.106 Page:1700 MD170 PLANE D PRIMARY AIR SUPPLY**

A:			
B:	P01700	mmH2O	Plane D prim air supply pressure
C:	T01701	dgrC	Plane D prim air supply temperature
D:	G01702	ton/h	Plane D prim air flow from ring channel
E:	G01703	ton/h	Plane D prim air flow from cold air box
F:			
G:	X01706	<0-1>	Plane D electric air heater on
H:	E01707	kW	Plane D electric air heater kw
I:			
J:			
K:	T01710	dgrC	Plane D prim air fan inlet temp
L:			
M:	G01713	ton/h	Plane D prim air fan flow
N:	E01714	kW	Plane D prim air fan power
O:	N01715	rmp	Plane D prim air fan speed
P:	R01717	<0-1>	Plane D prim air fan s/s
Q:	Z01716	<0-99>	Plane D prim air fan stall indication
R:			
S:	V01720	<0-1>	Plane D prim air fan shut off valve
T:			

2.107 Page:1701 MD170** PLANE D COAL MILL (1)

A:		
B:	X01760 <0-1>	Plane D coal mill ready
C:	X01761 <0-1>	Plane D coal mill start
D:	X01762 <0-1>	Plane D coal mill stop
E:	X01763 <0-1>	Plane D coal mill run (in oper.)
F:	X01765 <0-14>	Plane D coal mill logic state
G:		
H:		
I:	R01765 <0-1>	Plane D coal mill lub oil pump
J:	R01766 <0-1>	Plane D coal mill seal air fan
K:	R01767 <0-1>	Plane D coal mill table run
L:	R01768 <0-1>	Plane D coal mill roller run
M:	R01769 <0-1>	Plane D coal mill feeder run
N:	R01770 <0-1>	Plane D coal mill rotating sieve
O:		
P:	X01771 <0-1>	Plane D coal mill emergency stop
Q:		
R:		
S:		
T:		

2.108 Page:1702 MD170** PLANE D COAL MILL (2)

A:					
B:	P01722	mmH2O	L=250.0	H=1200.0	Plane D prim air fan discharge pressure
C:	T01723	dgrC			Plane D prim air fan discharge temp
D:					
E:	P01727	mmH2O			Plane D prim air press outlet coal mill
F:	T01726	dgrC	L=70.0	H=100.0	Plane D prim air temp outlet coal mill
G:					
H:					
I:	N01730	%			Plane D coal mill feeder speed
J:	G01731	ton/h			Plane D coal mill coal flow (total)
K:	G01732	ton/h			Plane D coal mill air flow (total)
L:					
M:	E01733	kW			Plane D coal mill electric power
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.109 Page:1705 MD170** PLANE D FUEL SUPPLY**

A:				
B:	P01738	bar		Plane D fuel oil press at control valve
C:	T01739	dgrC		Plane D fuel oil temp at control valve
D:				
E:	P01740	bar	L=2.9 H=22.0	Plane D fuel oil press at burners
F:	G01741	ton/h		Plane D fuel oil flow to burners
G:	G01742	ton/h		Plane D sec air flow to burners
H:				
I:				
J:	G01749	ton/h		Plane D fuel oil supply flow
K:	G01750	ton/h		Plane D fuel oil return flow
L:	V01751	<0-1>		Plane D fuel oil return valve
M:				
N:	G61700	ton/h		Plane D fuel oil flow (total)
O:	G61701	ton/h		Plane D coal mass flow (total)
P:				
Q:	G61702	ton/h		Plane D prim air flow (total)
R:	G61703	ton/h		Plane D sec. air flow (total)
S:				
T:				

2.110 Page:1708 MD170 PLANE D BURNER STATES**

A:				
B:	X11778	<0-7>		Plane D burner 1 logic state
C:	X21778	<0-7>		Plane D burner 2 logic state
D:	X31778	<0-7>		Plane D burner 3 logic state
E:	X41778	<0-7>		Plane D burner 4 logic state
F:				
G:				
H:				
I:	Y11780	<0-1>		Plane D burner 1 off
J:	S11781	<0-1>		Plane D burner 1 on/oil
K:	S11782	<0-1>		Plane D burner 1 inserting fuel lance
L:	S11783	<0-1>		Plane D burner 1 preheating fuel lance
M:	S11784	<0-1>		Plane D burner 1 waiting for flame
N:	S11785	<0-1>		Plane D burner 1 shutting down
O:	S11786	<0-1>		Plane D burner 1 cleaning fuel lance
P:	S11787	<0-1>		Plane D burner 1 retracting fuel lance
Q:	S11788	<0-1>		Plane D burner 1 on/coal
R:				
S:				
T:				

2.111 Page:1709 MD170* * PLANE D BURNER READY LIMITS

A:		
B:		
C:		
D:	C01760 bar	Plane D ready limit: FO pressure
E:	C01761 dgrC	Plane D ready limit: FO temperature
F:	C01762 bar	Plane D ready limit: atomizing stm press
G:	C01763 bar	Plane D ready limit: cleaning stm press
H:		
I:	C01764 ton/h	Plane D ready limit: FW low limit
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.112 Page:1710 MD170* * PLANE D BURNER 1 SYSTEM (1)

A:		
B:	X11773 <0-1>	Plane D burner 1 ready
C:	X11774 <0-1>	Plane D burner 1 start
D:	X11775 <0-1>	Plane D burner 1 stop
E:	X11776 <0-1>	Plane D burner 1 on
F:	X11778 <0-7>	Plane D burner 1 logic state
G:		
H:	Z11770 <0-1>	Plane D burner 1 flame detector (UV+IR)
I:		
J:	V11762 <0-1>	Plane D burner 1 atomizing steam valve
K:	V11763 <0-1>	Plane D burner 1 cleaning steam valve
L:	G11760 kg/h	Plane D burner 1 atomizing steam flow
M:	G11761 kg/h	Plane D burner 1 cleaning steam flow
N:		
O:	G11746 ton/h	Plane D burner 1 fuel oil flow
P:	V11747 <0-1>	Plane D burner 1 fuel shut off valves
Q:	V11748 <0-1>	Plane D burner 1 fuel supply valve
R:	X11749 <0-1>	Plane D burner 1 fuel oil lance
S:	V11771 <0-1>	Plane D burner 1 ignitor
T:		



2.113 Page:1711 MD170** PLANE D BURNER 1 SYSTEM (2)

A:		
B:		
C:	G11740 ton/h	Plane D burner 1 coal flow
D:	G11741 ton/h	Plane D burner 1 prim air flow
E:	V11742 <0-1>	Plane D burner 1 prim air shut off damper
F:		
G:		
H:	G11750 ton/h	Plane D burner 1 sec air flow
I:	V11751 <0-1>	Plane D burner 1 sec air shut off damper
J:	V11752 <0-1>	Plane D burner 1 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.114 Page:1712 MD170** PLANE D BURNER 2 SYSTEM (1)

A:		
B:	X21773 <0-1>	Plane D burner 2 ready
C:	X21774 <0-1>	Plane D burner 2 start
D:	X21775 <0-1>	Plane D burner 2 stop
E:	X21776 <0-1>	Plane D burner 2 on
F:	X21778 <0-7>	Plane D burner 2 logic state
G:		
H:	Z21770 <0-1>	Plane D burner 2 flame detector (UV+IR)
I:		
J:	V21762 <0-1>	Plane D burner 2 atomizing steam valve
K:	V21763 <0-1>	Plane D burner 2 cleaning steam valve
L:	G21760 kg/h	Plane D burner 2 atomizing steam flow
M:	G21761 kg/h	Plane D burner 2 cleaning steam flow
N:		
O:	G21746 ton/h	Plane D burner 2 fuel oil flow
P:	V21747 <0-1>	Plane D burner 2 fuel shut off valves
Q:	V21748 <0-1>	Plane D burner 2 fuel supply valve
R:	X21749 <0-1>	Plane D burner 2 fuel oil lance
S:	V21771 <0-1>	Plane D burner 2 ignitor
T:		

2.115 Page:1713 MD170** PLANE D BURNER 2 SYSTEM (2)

A:		
B:		
C:	G21740 ton/h	Plane D burner 2 coal flow
D:	G21741 ton/h	Plane D burner 2 prim air flow
E:	V21742 <0-1>	Plane D burner 2 prim air shut off damper
F:		
G:		
H:	G21750 ton/h	Plane D burner 2 sec air flow
I:	V21751 <0-1>	Plane D burner 2 sec air shut off damper
J:	V21752 <0-1>	Plane D burner 2 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.116 Page:1714 MD170** PLANE D BURNER 3 SYSTEM (1)

A:		
B:	X31773 <0-1>	Plane D burner 3 ready
C:	X31774 <0-1>	Plane D burner 3 start
D:	X31775 <0-1>	Plane D burner 3 stop
E:	X31776 <0-1>	Plane D burner 3 on
F:	X31778 <0-7>	Plane D burner 3 logic state
G:		
H:	Z31770 <0-1>	Plane D burner 3 flame detector (UV+IR)
I:		
J:	V31762 <0-1>	Plane D burner 3 atomizing steam valve
K:	V31763 <0-1>	Plane D burner 3 cleaning steam valve
L:	G31760 kg/h	Plane D burner 3 atomizing steam flow
M:	G31761 kg/h	Plane D burner 3 cleaning steam flow
N:		
O:	G31746 ton/h	Plane D burner 3 fuel oil flow
P:	V31747 <0-1>	Plane D burner 3 fuel shut off valves
Q:	V31748 <0-1>	Plane D burner 3 fuel supply valve
R:	X31749 <0-1>	Plane D burner 3 fuel oil lance
S:	V31771 <0-1>	Plane D burner 3 ignitor
T:		

**2.117 Page:1715 MD170** PLANE D BURNER 3
SYSTEM (2)**

A:		
B:		
C:	G31740 ton/h	Plane D burner 3 coal flow
D:	G31741 ton/h	Plane D burner 3 prim air flow
E:	V31742 <0-1>	Plane D burner 3 prim air shut off damper
F:		
G:		
H:	G31750 ton/h	Plane D burner 3 sec air flow
I:	V31751 <0-1>	Plane D burner 3 sec air shut off damper
J:	V31752 <0-1>	Plane D burner 3 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.118 Page:1716 MD170 PLANE D BURNER 4
SYSTEM (1)**

A:		
B:	X41773 <0-1>	Plane D burner 4 ready
C:	X41774 <0-1>	Plane D burner 4 start
D:	X41775 <0-1>	Plane D burner 4 stop
E:	X41776 <0-1>	Plane D burner 4 on
F:	X41778 <0-7>	Plane D burner 4 logic state
G:		
H:	Z41770 <0-1>	Plane D burner 4 flame detector (UV+IR)
I:		
J:	V41762 <0-1>	Plane D burner 4 atomizing steam valve
K:	V41763 <0-1>	Plane D burner 4 cleaning steam valve
L:	G41760 kg/h	Plane D burner 4 atomizing steam flow
M:	G41761 kg/h	Plane D burner 4 cleaning steam flow
N:		
O:	G41746 ton/h	Plane D burner 4 fuel oil flow
P:	V41747 <0-1>	Plane D burner 4 fuel shut off valves
Q:	V41748 <0-1>	Plane D burner 4 fuel supply valve
R:	X41749 <0-1>	Plane D burner 4 fuel oil lance
S:	V41771 <0-1>	Plane D burner 4 ignitor
T:		

2.119 Page:1717 MD170** PLANE D BURNER 4 SYSTEM (2)

A:		
B:		
C:	G41740 ton/h	Plane D burner 4 coal flow
D:	G41741 ton/h	Plane D burner 4 prim air flow
E:	V41742 <0-1>	Plane D burner 4 prim air shut off damper
F:		
G:		
H:	G41750 ton/h	Plane D burner 4 sec air flow
I:	V41751 <0-1>	Plane D burner 4 sec air shut off damper
J:	V41752 <0-1>	Plane D burner 4 sec air OBA damper
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.120 Page:1720 MD170** PLANE D FUEL OIL FLOW CONTROL

A:		
B:	X51700 <0-1>	Plane D fuel oil flow contr auto
C:	G51701 ton/h	Plane D fuel oil flow contr set point
D:	Z51709 ton/h	Plane D fuel oil flow contr feed back
E:	Z51703 %	Plane D fuel oil flow contr output
F:	Z51704 ton/h	Plane D fuel oil flow contr deviation
G:	C51705 %/ton/h	Plane D fuel oil flow contr gain
H:	C51706 sec	Plane D fuel oil flow contr integr time
I:	C51707 sec	Plane D fuel oil flow contr deriv time
J:	C51708 <0-8>	Plane D fuel oil flow contr deriv range
K:		
L:	V51714 %	Plane D fuel oil flow contr valve pos
M:	C51715 sec	Plane D fuel oil flow contr valve tc
N:	C51716 sec	Plane D fuel oil flow contr sensor tc
O:		
P:	X51710 <0-1>	Plane D fuel oil flow contr test
Q:	C51711 ton/h	Plane D fuel oil flow contr step
R:	C51712 sec	Plane D fuel oil flow contr periode
S:		
T:		

**2.121 Page:1721 MD170** PLANE D SEC. AIR FLOW CONTROL**

A:		
B:	X51720 <0-1>	Plane D sec. air flow contr auto
C:	G51721 ton/h	Plane D sec. air flow contr set point
D:	Z51729 ton/h	Plane D sec. air flow contr feed back
E:	Z51723 %	Plane D sec. air flow contr output
F:	Z51724 ton/h	Plane D sec. air flow contr deviation
G:	C51725 %/ton/h	Plane D sec. air flow contr gain
H:	C51726 sec	Plane D sec. air flow contr integr time
I:	C51727 sec	Plane D sec. air flow contr deriv time
J:	C51728 <0-8>	Plane D sec. air flow contr deriv range
K:		
L:	V51734 %	Plane D sec. air flow contr damper pos
M:	C51735 sec	Plane D sec. air flow contr damper tc
N:	C51736 sec	Plane D sec. air flow contr sensor tc
O:		
P:	X51730 <0-1>	Plane D sec. air flow contr test
Q:	C51731 ton/h	Plane D sec. air flow contr step
R:	C51732 sec	Plane D sec. air flow contr periode
S:		
T:		

2.122 Page:1722 MD170 PLANE D COAL FEEDER SPEED CONTROL**

A:		
B:	X51740 <0-1>	Plane D coal feeder speed contr auto
C:	N51741 rpm	Plane D coal feeder speed contr setp
D:	Z51749 rpm	Plane D coal feeder speed contr fb
E:	Z51743 %	Plane D coal feeder speed contr output
F:	Z51744 rpm	Plane D coal feeder speed contr deviation
G:	C51745 %/rpm	Plane D coal feeder speed contr gain
H:	C51746 sec	Plane D coal feeder speed contr integr time
I:	C51747 sec	Plane D coal feeder speed contr deriv time
J:	C51748 <0-8>	Plane D coal feeder speed contr deriv range
K:		
L:	V51754 %	Plane D coal feeder speed contr actu pos
M:	C51755 sec	Plane D coal feeder speed contr actu tc
N:	C51756 sec	Plane D coal feeder speed contr sens tc
O:		
P:	X51750 <0-1>	Plane D coal feeder speed contr test
Q:	C51751 rpm	Plane D coal feeder speed contr step
R:	C51752 sec	Plane D coal feeder speed contr periode
S:		
T:		

2.123 Page:1723 MD170* * PLANE D PRIM. AIR FLOW CONTROL

A:		
B:	X51760	<0-1> Plane D prim air flow contr auto
C:	G51761	ton/h Plane D prim air flow contr set point
D:	Z51769	ton/h Plane D prim air flow contr feed back
E:	Z51763	% Plane D prim air flow contr output
F:	Z51764	ton/h Plane D prim air flow contr deviation
G:	C51765	%/ton/h Plane D prim air flow contr gain
H:	C51766	sec Plane D prim air flow contr integr time
I:	C51767	sec Plane D prim air flow contr deriv time
J:	C51768	<0-8> Plane D prim air flow contr deriv range
K:		
L:	V51774	% Plane D prim air flow contr damper pos
M:	C51775	sec Plane D prim air flow contr damper tc
N:	C51776	sec Plane D prim air flow contr sensor tc
O:		
P:	X51770	<0-1> Plane D prim air flow contr test
Q:	C51771	ton/h Plane D prim air flow contr step
R:	C51772	sec Plane D prim air flow contr periode
S:		
T:		

2.124 Page:1724 MD170* * PLANE D PRIM. AIR TEMP CONTROL

A:		
B:	X51780	<0-1> Plane D prim air temp contr auto
C:	T51781	dgrC Plane D prim air temp contr set point
D:	Z51789	dgrC Plane D prim air temp contr feed back
E:	Z51783	% Plane D prim air temp contr output
F:	Z51784	dgrC Plane D prim air temp contr deviation
G:	C51785	%/dgrC Plane D prim air temp contr gain
H:	C51786	sec Plane D prim air temp contr integr time
I:	C51787	sec Plane D prim air temp contr deriv time
J:	C51788	<0-8> Plane D prim air temp contr deriv range
K:		
L:	V51793	% Plane D prim air temp damper pos (cold air)
M:	C51794	sec Plane D prim air temp damper tc (cold air)
N:	V51795	% Plane D prim air temp damper pos (hot air)
O:	C51796	sec Plane D prim air temp damper tc (hot air)
P:		
Q:	X51790	<0-1> Plane D prim air temp contr test
R:	C51791	dgrC Plane D prim air temp contr step
S:	C51792	sec Plane D prim air temp contr periode
T:		

**2.125 Page:1725 MD170** PLANE D MISC. CONTROL**

A:			
B:			
C:	C61711	<0-2>	Plane D oil air ratio adjust
D:	C61712	<0-2>	Plane D coal air ratio adjust
E:			
F:	C51780	dgrC	Plane D prim air temp setp (running)
G:	C51781	dgrC	Plane D prim air temp setp (stopping)
H:	C51782	dgrC	Plane D prim air temp setp (starting)
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.126 Page:1730 MD170 PLANE D COAL MILL TRIP**

A:					
B:					
C:	X01772	<0-1>	L=---	H=0.9	Plane D coal mill trip
D:	S01773	<0-3>			Plane D coal mill trip code
E:					
F:	S01774	<0-1>			Plane D trip 1 : high outlet air temp
G:	S01775	<0-1>			Plane D trip 2 : low primary air flow
H:	S01776	<0-1>			Plane D trip 3 : two or more flame fails
I:					
J:					
K:	C01780	dgrC			Plane D trip 1 : high outlet air temp
L:	C01781	ton/h			Plane D trip 2 : low primary air flow
M:					
N:					
O:	C01785	dgrC			Plane D start limit: outlet air temp
P::					
R:					
S:					
T:					

2.127 Page:1731 MD170** PLANE D COAL MILL SEQUENCES

A:		
B:	X01765 <0-14>	Plane D coal mill logic state
C:		
D:	Y01750 <0-1>	Plane D mill stopped
E:	S01751 <0-1>	Plane D mill in operation
F:	S01752 <0-1>	Plane D mill preparing auxiliaries
G:	S01753 <0-1>	Plane D mill preparing prim air flow
H:	S01754 <0-1>	Plane D mill waiting for outlet temp
I:	S01755 <0-1>	Plane D mill starting mill table
J:	S01756 <0-1>	Plane D mill starting mill rollers
K:	S01757 <0-1>	Plane D mill starting rotating sieve
L:	S01758 <0-1>	Plane D mill starting coal feeder
M:		
N:	S01760 <0-1>	Plane D mill stopping coal feeder
O:	S01761 <0-1>	Plane D mill waiting to empty grinder
P:	S01762 <0-1>	Plane D mill waiting to empty pipes
Q:	S01763 <0-1>	Plane D mill stopping auxiliaries
R:	S01764 <0-1>	Plane D mill emerg cooling down
S:		
T:		

2.128 Page:1790 MD17** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.129 Page:1800 MD180** BOILER PURGE SYSTEM**

A:		
B:	X01860 <0-1>	Purge required
C:	X01861 <0-1>	Purge in progress
D:	X01862 <0-1>	Purge complete
E:	X01863 <0-1>	Purge ready
F:	X01864 <0-1>	Purge start (command)
G:		
H:	Z01865 <0-10>	Purge air shifts (display)
I:	Z01866 sec	Purge complete time (display)
J:		
K:	C01867 <0-10>	Purge air shifts limit
L:	C01868 sec	Purge complete time limit
M:		
N:		
O:		
P:	G01854 ton/h	Prim air flow (total)
Q:	G01855 ton/h	Sec. air flow (total)
R:		
S:		
T:		

2.130 Page:1801 MD180 BURNER DISPLAY SELECT**

A:		
B:	X01840 <0-1>	Burner plane A select
C:	X01841 <0-1>	Burner plane B select
D:	X01842 <0-1>	Burner plane C select
E:	X01843 <0-1>	Burner plane D select
F:		
G:	G01850 ton/h	Fuel oil flow (total)
H:	G01851 ton/h	Coal flow (total)
I:	G01852 ton/h	Comb air flow (total)
J:		
K:	X01853 vol%	Oxygen content in flue gas
L:		
M:		
N:	Z01890 %	Flue gas oxygen low limit (alarm)
O:	Z01891 %	Flue gas oxygen high limit (alarm)
P:	Z01892 %	Flue gas oxygen low limit (optimal)
Q:	Z01893 %	Flue gas oxygen high limit (optimal)
R:		
S:		
T:		

2.131 Page:1802 MD180* * BURNER 1/2 DISPLAY

A:		
B:	G01801 ton/h	Burner 1 fuel oil flow display
C:	G01802 ton/h	Burner 1 coal flow display
D:	G01803 ton/h	Burner 1 prim air flow display
E:	G01804 ton/h	Burner 1 sec. air flow display
F:		
G:	X01806 <0-1>	Burner 1 main flame on display
H:	X01807 <0-1>	Burner 1 OBA flame on display
I:		
J:		
K:	G01811 ton/h	Burner 2 fuel oil flow display
L:	G01812 ton/h	Burner 2 coal flow display
M:	G01812 ton/h	Burner 2 coal flow display
N:	G01812 ton/h	Burner 2 coal flow display
O:		
P:	X01816 <0-1>	Burner 2 main flame on display
Q:	X01817 <0-1>	Burner 2 OBA flame on display
R:		
S:		
T:		

2.132 Page:1803 MD180* * BURNER 3/4 DISPLAY

A:		
B:	G01821 ton/h	Burner 3 fuel oil flow display
C:	G01822 ton/h	Burner 3 coal flow display
D:	G01823 ton/h	Burner 3 prim air flow display
E:	G01824 ton/h	Burner 3 sec. air flow display
F:		
G:	X01826 <0-1>	Burner 3 main flame on display
H:	X01827 <0-1>	Burner 3 OBA flame on display
I:		
J:		
K:	G01831 ton/h	Burner 4 fuel oil flow display
L:	G01832 ton/h	Burner 4 coal flow display
M:	G01833 ton/h	Burner 4 prim air flow display
N:	G01834 ton/h	Burner 4 sec. air flow display
O:		
P:	X01836 <0-1>	Burner 4 main flame on display
Q:	X01837 <0-1>	Burner 4 OBA flame on display
R:		
S:		
T:		

**2.133 Page:1820 MD180** FUEL MASTER CONTROL**

A:		
B:	X11800 <0-1>	Fuel master controller auto
C:	G11801 ton/h	Fuel master controller set point
D:	Z11809 ton/h	Fuel master controller feed back
E:	Z11803 %	Fuel master controller output
F:	Z11804 ton/h	Fuel master controller deviation
G:	C11805 %/ton/h	Fuel master controller gain
H:	C11806 sec	Fuel master controller integr time
I:	C11807 sec	Fuel master controller deriv time
J:	C11808 <0-8>	Fuel master controller deriv range
K:		
L:	G11880 ton/h	Total fuel flow (all planes) (normalized)
M:		
N:	C11816 sec	Fuel master controller sensor tc
O:		
P:	X11810 <0-1>	Fuel master controller test
Q:	C11811 ton/h	Fuel master controller step
R:	C11812 sec	Fuel master controller periode
S:		
T:		

2.134 Page:1821 MD180 FLUE GAS OXYGEN CONTROL**

A:		
B:	X11820 <0-1>	Oxygen controller auto
C:	X11821 vol%	Oxygen controller set point
D:	Z11829 vol%	Oxygen controller feed back
E:	Z11823 %	Oxygen controller output
F:	Z11824 vol%	Oxygen controller deviation
G:	C11825 %/vol%	Oxygen controller gain
H:	C11826 sec	Oxygen controller integr time
I:	C11827 sec	Oxygen controller deriv time
J:	C11828 <0-8>	Oxygen controller deriv range
K:	X11825 <0-1>	Oxygen contr auto set point on
L:	Z11825 vol%	Oxygen contr auto set point
M:		
N:	C11836 sec	Oxygen controller sensor tc
O:		
P:	X11830 <0-1>	Oxygen controller test
Q:	C11831 vol%	Oxygen controller step
R:	C11832 sec	Oxygen controller periode
S:		
T:		

2.135 Page:1822 MD180** FUEL DISTRIBUTION CONTROL (1)

A:		
B:	Z11840 %	Plane A fuel/air master command adjust
C:	Z11841 %	Plane B fuel/air master command adjust
D:	Z11842 %	Plane C fuel/air master command adjust
E:	Z11843 %	Plane D fuel/air master command adjust
F:		
G:	Z11850 ton/h	Plane A fuel master command (normalized)
H:	Z11851 ton/h	Plane B fuel master command (normalized)
I:	Z11852 ton/h	Plane C fuel master command (normalized)
J:	Z11853 ton/h	Plane D fuel master command (normalized)
K:		
L:	Z11860 ton/h	Plane A comb. air master command
M:	Z11861 ton/h	Plane B comb. air master command
N:	Z11862 ton/h	Plane C comb. air master command
O:	Z11863 ton/h	Plane D comb. air master command
P:		
Q:		
R:		
S:		
T:		

2.136 Page:1823 MD180** FUEL DISTRIBUTION CONTROL (2)

A:		
B:	G11870 ton/h	Plane A fuel flow (total) (normalized)
C:	G11871 ton/h	Plane B fuel flow (total) (normalized)
D:	G11872 ton/h	Plane C fuel flow (total) (normalized)
E:	G11873 ton/h	Plane D fuel flow (total) (normalized)
F:	G11875 ton/h	Plane A comb. air flow (total)
G:	G11876 ton/h	Plane B comb. air flow (total)
H:	G11877 ton/h	Plane C comb. air flow (total)
I:	G11878 ton/h	Plane D comb. air flow (total)
J:		
K:	C11844 kJ/kg	Heat value setting - Fuel oil
L:	C11845 kJ/kg	Heat value setting - Coal
M:	C11843 kJ/kg	Heat value setting - Biofuel
N:		
O:	C11846 ton/h	Oxygen controller adjust range
P:		
Q:	C11847 ton/h	Master air constant 1 (bias)
R:	C11848 ton/h	Master air constant 2 (range)
S:		
T:		

**2.137 Page:1830 MD180** BOILER TRIP SYSTEM (1)**

A:					
B:	X01870	<0-1>	L=---	H=0.9	Boiler trip
C:	S01871	<0-20>			Boiler trip code
D:	X01872	<0-1>			Boiler trip inhibit
E:					
F:	C01874	ton/h			Boiler trip 1 : feedw flow
G:	C01875	dgrC			Boiler trip 2 : steam temp outlet EVA
H:	C01876	dgrC			Boiler trip 3 : steam temp outlet SEP
I:	C01877	dgrC			Boiler trip 4 : steam temp outlet SH2
J:	C01878	dgrC			Boiler trip 5 : steam temp outlet SH3
K:	C01879	dgrC			Boiler trip 6 : steam temp outlet RH1
L:	C01880	dgrC			Boiler trip 7 : steam temp outlet RH2
M:	C01881	dgrC			Boiler trip 8 : metal tube temp EVA
N:	C01882	dgrC			Boiler trip 9 : water saturation ECO
O:	C01883	mmH2O			Boiler trip 10 : furnace press deviation
P:	C01884	m			Boiler trip 11 : separator water level
Q:	C01885	mmH2O			Boiler trip 12 : ring channel press
R:	C01886	t/h			Boiler trip 13 : fuel flow low
S:	C01887	rpm			Boiler trip 14 : air preheater speed
T:	C01888	rpm			Boiler trip 15 : comb. air fan speed

2.138 Page:1831 MD180 BOILER TRIP SYSTEM (2)**

A:					
B:	Z01873	%			Boiler trip simulator action signal
C:					
D:	C11892	%			Boiler trip 19 : simulator action
E:					
F:	K01874	sec			Boiler trip 1 tc : feedw flow
G:	K01875	sec			Boiler trip 2 tc : steam temp outlet EVA
H:	K01876	sec			Boiler trip 3 tc : steam temp outlet SEP
I:	K01877	sec			Boiler trip 4 tc : steam temp outlet SH2
J:	K01878	sec			Boiler trip 5 tc : steam temp outlet SH3
K:	K01879	sec			Boiler trip 6 tc : steam temp outlet RH1
L:	K01880	sec			Boiler trip 7 tc : steam temp outlet RH2
M:	K01881	sec			Boiler trip 8 tc : metal tube temp EVA
N:	K01882	sec			Boiler trip 9 tc : water saturation ECO
O:					
P:					
Q:					
R:					
S:					
T:					

2.139 Page:1890 MD18** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.140 Page:1900 MD190** BLOCK ENERGY SET POINTS (1)

A:		
B:	E01900 MW	BLE : electric power set point
C:	E01901 MW	BLE : power estimation
D:	E01902 MW	BLE : power correction
E:	G01903 ton/h	BLE : steam flow request
F:		
G:	C01906 MW	BLE : power correction range
H:	C01907 ton/h	BLE : steam flow constant 1
I:	C01908 ton/h	BLE : steam flow constant 2
J:		
K:		
L:	T01920 dgrC	BLW : final water temp set point
M:	E01921 MW	BLW : power estimation
N:	E01922 MW	BLW : power correction
O:	G01923 ton/h	BLW : steam flow request
P:		
Q:	C01926 MW	BLW : power correction range
R:	C01927 ton/h	BLW : steam flow constant 1
S:	C01928 ton/h	BLW : steam flow constant 2
T:		

**2.141 Page:1901 MD190** BLOCK ENERGY SET POINTS (2)**

A:		
B:	X01940 <0-1>	BLM : auto steam flow set point from BLE
C:	X01941 <0-1>	BLM : auto steam flow set point from BLW
D:	G01942 ton/h	BLM : steam flow set point (combined)
E:		
F:	G01950 ton/h	BLR : fuel flow set point (input)
G:	G01951 ton/h	BLR : fuel flow set point (output)
H:	G01952 ton/h	BLR : fuel flow set point limit
I:		
J:	X01960 <0-1>	BLR : block load reduction auto
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.142 Page:1920 MD190 BLOCK ELECTRIC ENERGY CONTROL - BLE**

A:		
B:	X11900 <0-1>	Block el energy controller auto
C:	E11901 MW	Block el energy controller set point
D:	Z11909 MW	Block el energy controller feed back
E:	Z11903 %	Block el energy controller output
F:	Z11904 MW	Block el energy controller deviation
G:	C11905 %/%	Block el energy controller gain
H:	C11906 sec	Block el energy controller integr time
I:	C11907 sec	Block el energy controller deriv time
J:	C11908 <0-8>	Block el energy controller deriv range
K:	X11913 <0-1>	Block el energy contr freq support
L:	C11915 MW/Hz	Block el energy contr freq support gain
M:		
N:		
O:		
P:	X11910 <0-1>	Block el energy controller test
Q:	C11911 MW	Block el energy controller step
R:	C11912 sec	Block el energy controller periode
S:		
T:		

2.143 Page:1921 MD190* * BLOCK WATER ENERGY CONTROL - BLW

A:		
B:	X11920	<0-1> Block water energy controller auto
C:	T11921	dgrC Block water energy controller set point
D:	Z11929	dgrC Block water energy controller feed back
E:	Z11923	% Block water energy controller output
F:	Z11924	dgrC Block water energy controller deviation
G:	C11925	%/dgrC Block water energy controller gain
H:	C11926	sec Block water energy controller integr time
I:	C11927	sec Block water energy controller deriv time
J:	C11928	<0-8> Block water energy controller deriv range
K:		
L:	E01930	MW District heat water power (to city)
M:	E01931	MW Hot Condenser/DH heat production
N:	E01932	MW Accumulator heat transfer
O:		
P:	X11930	<0-1> Block water energy controller test
Q:	C11931	dgrC Block water energy controller step
R:	C11932	sec Block water energy controller periode
S:		
T:		

2.144 Page:1922 MD190* * BLOCK LOAD MASTER CONTROL - BLM

A:		
B:	X11940	<0-1> Block load master controller auto
C:	G11941	ton/h Block load master controller set point
D:	Z11949	ton/h Block load master controller feed back
E:	Z11943	% Block load master controller output
F:	Z11944	ton/h Block load master controller deviation
G:	C11945	%/% Block load master controller gain
H:	C11946	sec Block load master controller integr time
I:	C11947	sec Block load master controller deriv time
J:	C11948	<0-8> Block load master controller deriv range
K:	C11949	% Block load master controller max output
L:		
M:		
N:		
O:		
P:	X11950	<0-1> Block load master controller test
Q:	C11951	ton/h Block load master controller step
R:	C11952	sec Block load master controller periode
S:		
T:		

**2.145 Page:1923 MD190** WATER TEMP MASTER CONTROL - TMC**

A:		
B:	X11960 <0-1>	Water temp master controller auto
C:	T11961 dgrC	Water temp master controller set point
D:	Z11969 dgrC	Water temp master controller feed back
E:	Z11963 %	Water temp master controller output
F:	Z11964 dgrC	Water temp master controller deviation
G:	C11965 %/dgrC	Water temp master controller gain
H:	C11966 sec	Water temp master controller integr time
I:	C11967 sec	Water temp master controller deriv time
J:	C11968 <0-8>	Water temp master controller deriv range
K:	Z11978 %	Water temp master balance signal
L:	C11977 <0-8>	Water temp master balance gain
M:	C11978 %	Water temp master balance setpoint
N:		
O:	Z11974 %	Water temp master contr LP damper command
P:	Z11975 m	Water temp master contr DH level command
Q:		
R:	X11970 <0-1>	Water temp master controller test
S:	C11971 dgrC	Water temp master controller step
T:	C11972 sec	Water temp master controller periode

2.146 Page:1930 MD190 BLOCK LOAD REDUCTION SYSTEM**

A:				
B:	X01960 <0-1>		BLR : block load reduction auto	
C:				
D:	X01963 <0-1>	L=---	H=0.9	BLR : block load reduction
E:	S01964 <0-6>			BLR : block load reduction code
F:				
G:				
H:				
I:				
J:				
K:	C01970 ton/h			BLR : load limit 1 - one comb air fan
L:	C01971 ton/h			BLR : load limit 2 - one flue gas fan
M:	C01972 ton/h			BLR : load limit 3 - one feed wtr pump
N:	C01973 ton/h			BLR : load limit 4 - main circ breaker
O:	C01974 ton/h			BLR : load limit 5 - turbine trip
P:	C01975 ton/h			BLR : load limit 6 - coal firing
Q:	C01976 ton/h			BLR : load limit 6 - coal firing (Bio)
R:				
S:				
T:				

2.147 Page:1940 MD190** BURNER MANAGEMENT SYSTEM (1)

A:		
B:		
C:	X11980 <0-1>	Burner Management auto
D:	X11981 <0-1>	Burner Management fault
E:		
F:	X01990 <0-4>	Burner Management state
G:	X01991 <0-4>	No of burner planes required
H:	X01992 <0-4>	No of burner planes on
I:		
J:	K01981 %	BM state 1 limit - start plane 2
K:	K01982 %	BM state 2 limit - stop plane 2
L:	K01983 %	BM state 2 limit - start plane 3
M:	K01984 %	BM state 3 limit - stop plane 3
N:	K01985 %	BM state 3 limit - start plane 4
O:	K01986 %	BM state 4 limit - stop plane 4
P:		
Q:	Z01990 %	BM load control signal (FMC fuel com)
R:	K01991 %	BM load control signal min limit
S:	K01992 %	BM load control signal max limit
T:		

2.148 Page:1941 MD190** BURNER MANAGEMENT SYSTEM (2)

A:		
B:	C01992 sec	BM starting wait limit
C:	C01993 sec	BM stopping wait limit
D:	X01994 sec	BM wait counter
E:		
F:	C01981 sec	Plane incr+incr blocking time
G:	C01982 sec	Plane incr+decr blocking time
H:	C01983 sec	Plane decr+incr blocking time
I:	C01984 sec	Plane decr+decr blocking time
J:		
K:	X01985 sec	Plane blocking timer
L:	C01985 sec	Plane blocking limit (active)
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.149 Page:1990 MD19** CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.150 Page:2000 MD200 COMBUSTION AIR
CONDITION**

A:
B:
C:
D: T02004 dgrC Comb. air fan air inlet temp (boiler top)
E: H02005 kJ/kg Comb. air fan air inlet enth
F:
G: X00841 % Combustion air humidity (relative)
H: X00842 g/kg Combustion air water content
I:
J:
K: T02006 dgrC Turbine hall air temperature
L:
M: T00300 dgrC Ambient air temperature
N: X00300 % Ambient air humidity
O:
P:
Q:
R:
S:
T:

2.151 Page:2001 MD200* * BOILER COMB. AIR FANS

A:		
B:	R02010 <0-1>	Comb. air fan 1 s/s
C:	N02011 rpm	Comb. air fan 1 speed
D:	E02012 kW	Comb. air fan 1 el power
E:	G02013 ton/h	Comb. air fan 1 air flow
F:	P02014 mmH2O	Comb. air fan 1 outlet pressure
G:	T02015 dgrC	Comb. air fan 1 outlet air temp
H:	H02016 kJ/kg	Comb. air fan 1 outlet air enth
I:	Z02018 <0-99>	Comb. air fan 1 stall indication
J:		
K:	R02020 <0-1>	Comb. air fan 2 s/s
L:	N02021 rpm	Comb. air fan 2 speed
M:	E02022 kW	Comb. air fan 2 el power
N:	G02023 ton/h	Comb. air fan 2 air flow
O:	P02024 mmH2O	Comb. air fan 2 outlet pressure
P:	T02025 dgrC	Comb. air fan 2 outlet air temp
Q:	H02026 kJ/kg	Comb. air fan 2 outlet air enth
R:	Z02028 <0-99>	Comb. air fan 2 stall indication
S:		
T:		

2.152 Page:2002 MD200* * BOILER FLUE GAS FANS

A:		
B:	R02250 <0-1>	Flue gas fan 1 s/s
C:	N02251 rpm	Flue gas fan 1 speed
D:	E02252 kW	Flue gas fan 1 el power
E:	G02253 ton/h	Flue gas fan 1 gas flow
F:	T02255 dgrC	Flue gas fan 1 outlet gas temp
G:	H02256 kJ/kg	Flue gas fan 1 outlet gas enth
H:	V02258 <0-1>	Flue gas fan 1 inlet valve
I:	V02259 <0-1>	Flue gas fan 1 outlet valve
J:		
K:	R02260 <0-1>	Flue gas fan 2 s/s
L:	N02261 rpm	Flue gas fan 2 speed
M:	E02262 kW	Flue gas fan 2 el power
N:	G02263 ton/h	Flue gas fan 2 gas flow
O:	T02265 dgrC	Flue gas fan 2 outlet gas temp
P:	H02266 kJ/kg	Flue gas fan 2 outlet gas enth
Q:	V02268 <0-1>	Flue gas fan 2 inlet valve
R:	V02269 <0-1>	Flue gas fan 2 outlet valve
S:		
T:		

**2.153 Page:2003 MD200** BOILER COMB. AIR COLD BOX**

A:				
B:				
C:	P02210	mmH2O	L=150.0 H=---	Cold air box air pressure
D:	T02211	dgrC		Cold air box air temperature
E:	H02212	kJ/kg		Cold air box air enthalpy
F:				
G:	G02214	ton/h		Cold air box inlet from comb. air fans
H:	G02215	ton/h		Cold air box outlet to coal mills
I:				
J:				
K:	V02231	<0-1>		Comb. air fan 1 cold air box supply valve
L:	V02232	<0-1>		Comb. air fan 2 cold air box supply valve
M:				
N:	G02233	ton/h		Comb. air fan 1 cold air box supply flow
O:	G02234	ton/h		Comb. air fan 2 cold air box supply flow
P:				
Q:				
R:				
S:				
T:				

2.154 Page:2004 MD200 BOILER COMB. AIR RING CHANNEL**

A:				
B:				
C:	P02200	mmH2O	L=150.0 H=500.0	Ring channel air pressure
D:	T02201	dgrC	L=80.0 H=400.0	Ring channel air temp
E:	H02202	kJ/kg		Ring channel air enth
F:				
G:	G02204	ton/h		Ring channel inlet from air preheaters
H:	G02205	ton/h		Ring channel outlet to coal mills (A-D)
I:	G02206	ton/h		Ring channel outlet to burners (sec air)
J:	G02207	ton/h		Ring channel outlet to OFA manifold
K:				
L:				
M:	V02237	<0-1>		Rotary air heater 1 outlet shut off valve
N:	V02238	<0-1>		Rotary air heater 2 outlet shut off valve
O:				
P:				
Q:	G02195	ton/h	L=5.0 H=100.0	Furnace OFA flow
R:				
S:				
T:				

2.155 Page:2005 MD200* * BOILER FURNACE (1)

A:			
B:	G02300	ton/h	Furnace : fuel inlet flow (total)
C:	H02301	kJ/kg	Furnace : fuel heat value (mean)
D:			
E:	G02304	ton/h	Furnace : comb air inlet flow (total)
F:	T02305	dgrC	Furnace : comb air inlet temp (mean)
G:	H02306	kJ/kg	Furnace : comb air inlet enth (mean)
H:			
I:	D02308	kg/ncm	Furnace : flue gas density
J:	Z02310	kg/kg	Furnace : air/ fuel ratio
K:			
L:	Q02317	MW	Furnace : heat supplied in fuel
M:	Q02311	MW	Furnace : heat release from combustion
N:	Q02312	MW	Furnace : heat radiation from gas
O:	Q02313	MW	Furnace : heat convection from gas
P:			
Q:			
R:	T02318	dgrC	Flue gas temp in furnace
S:	H02319	kJ/kg	Flue gas enth in furnace
T:			

2.156 Page:2006 MD200* * BOILER FURNACE (2)

A:					
B:	X02419	vol%	L=0.7	H=8.0	Oxygen content in flue gas
C:	X12419	vol%			CO2 content in flue gas
D:	X32419	ppm	L=---	H=75.0	CO content in flue gas
E:					
F:	G02198	kg/h			Furnace outlet CO flow
G:	G02197	kg/h			Furnace outlet NOX flow (NO2)
H:	G02196	kg/h			Furnace outlet SOX flow (SO2)
I:					
J:	G02315	ton/h			Furnace outlet flue gas flow (total)
K:	G02314	ton/h			Furnace : slag flow to water seal
L:					
M:					
N:	G00850	ton/h			Furnace flue gas flow : CO2
O:	G00851	ton/h			Furnace flue gas flow : H2O
P:	G00852	ton/h			Furnace flue gas flow : SO2
Q:	G00853	ton/h			Furnace flue gas flow : O2
R:	G00854	ton/h			Furnace flue gas flow : N2 ++
S:	G00855	ton/h			Furnace flue gas flow : fly ash
T:					

**2.157 Page:2007 MD200** BOILER FLUE GAS FLOW**

A:		
B:	G02160 ton/h	Flue gas flow outlet economizer (1)
C:	G02161 ton/h	Flue gas flow bypass economizer (1)
D:		
E:	G02162 ton/h	Flue gas flow inlet denox unit 1
F:	G02163 ton/h	Flue gas flow outlet denox unit 1
G:	G02164 ton/h	Flue gas flow outlet air preheater 1
H:		
I:	G02165 ton/h	Flue gas flow outlet economizer (2)
J:	G02166 ton/h	Flue gas flow bypass economizer (2)
K:		
L:	G02167 ton/h	Flue gas flow inlet denox unit 2
M:	G02168 ton/h	Flue gas flow outlet denox unit 2
N:	G02169 ton/h	Flue gas flow outlet air preheater 2
O:		
P:		
Q:	G02171 ton/h	Flue gas flow inlet desox plant
R:	G02172 ton/h	Flue gas flow outlet desox plant
S:	G02177 ton/h	Flue gas flow outlet filter
T:		

2.158 Page:2008 MD200 BOILER FLUE GAS TEMPERATURE**

A:		
B:	T02173 dgrC	Flue gas temp inlet denox unit 1
C:	T02174 dgrC	Flue gas temp outlet denox unit 1
D:		
E:	T02175 dgrC	Flue gas temp inlet denox unit 2
F:	T02176 dgrC	Flue gas temp outlet denox unit 2
G:		
H:		
I:	T02178 dgrC	Flue gas temp inlet desox plant
J:	T02179 dgrC	Flue gas temp outlet desox plant
K:		
L:		
M:	P02240 mmH2O L=-670.0 H=---	Flue gas fan suction pressure
N:	T02241 dgrC	Flue gas fan suction gas temp
O:	H02242 kJ/kg	Flue gas fan suction gas enth
P:		
Q:		
R:		
S:		
T:		

2.159 Page:2009 MD200* * BOILER FLUE GAS PRESSURE

A:				
B:	P02180	mmH2O	L=-45.0 H=40.0	Flue gas press in furnace
C:				
D:	P02181	mmH2O		Flue gas press inlet economizer
E:				
F:	P02182	mmH2O		Flue gas press inlet denox unit 1
G:	P02183	mmH2O		Flue gas press outlet denox unit 1
H:				
I:	P02185	mmH2O		Flue gas press inlet denox unit 2
J:	P02186	mmH2O		Flue gas press outlet denox unit 2
K:				
L:				
M:	P02188	mmH2O		Flue gas press inlet desox plant
N:	P02189	mmH2O		Flue gas press inlet filter
O:				
P:	P02190	mmH2O		Flue gas press inlet flue gas fans
Q:	P02191	mmH2O		Flue gas press outlet flue gas fans
R:				
S:				
T:				

2.160 Page:2010 MD200* * BOILER HEAT TRANSFER AREA FACTORS

A:				
B:	X02000	<0-1>		Automatic area factor adjustment
C:				
D:				
E:	C02001	<0-2>		Boiler heat transfer area factor
F:	C02002	<0-2>		Superheater 2 area factor
G:	C02003	<0-2>		Superheater 3 area factor
H:				
I:	C02004	<0-2>		Reheater 2 area factor
J:	C02005	<0-2>		Reheater 1 area factor
K:	C02006	<0-2>		Economizer area factor
L:				
M:				
N:	C02007	<0-2>		Air preheater 1 area factor
O:	C02008	<0-2>		Air preheater 2 area factor
P:				
Q:				
R:				
S:				
T:				

**2.161 Page:2020 MD200** RING CHANNEL AIR PRESSURE CONTROL**

A:		
B:	X12030 <0-1>	Ring channel air press contr auto
C:	P12031 mmH2O	Ring channel air press contr set point
D:	Z12039 mmH2O	Ring channel air press contr feed back
E:	Z12033 %	Ring channel air press contr output
F:	Z12034 mmH2O	Ring channel air press contr deviation
G:	C12035 %/mm	Ring channel air press contr gain
H:	C12036 sec	Ring channel air press contr integr time
I:	C12037 sec	Ring channel air press contr deriv time
J:	C12038 <0-8>	Ring channel air press contr deriv range
K:		
L:	C12022 mmH2O	Ring channel air press sp bias
M:	C12023 mmH2O	Ring channel air press sp range 1 (load)
N:	C12024 mmH2O	Ring channel air press sp range 2 (damp)
O:		
P:	X12040 <0-1>	Ring channel air press contr test
Q:	C12041 mmH2O	Ring channel air press contr step
R:	C12042 sec	Ring channel air press contr periode
S:		
T:		

2.162 Page:2021 MD200 RING CHANNEL AIR PRESS SP CONTROL**

A:		
B:	X12000 <0-1>	Ring channel air press sp contr auto
C:	V12001 %	Ring channel air press sp contr set point
D:	Z12009 %	Ring channel air press sp contr feed back
E:	Z12003 %	Ring channel air press sp contr output
F:	Z12004 %	Ring channel air press sp contr deviation
G:	C12005 %/%	Ring channel air press sp contr gain
H:	C12006 sec	Ring channel air press sp contr integr time
I:	C12007 sec	Ring channel air press sp contr deriv time
J:	C12008 <0-8>	Ring channel air press sp contr deriv range
K:		
L:		
M:		
N:		
O:		
P:	X12010 <0-1>	Ring channel air press sp contr test
Q:	C12011 %	Ring channel air press sp contr step
R:	C12012 sec	Ring channel air press sp contr periode
S:		
T:		

2.163 Page:2022 MD200* * COMB. AIR FAN LOAD BALANCE CONTROL

A:		
B:	X12046 <0-1>	Comb. air fan 1/2 auto balance
C:	Z12049 %	Comb. air fan 1/2 auto balance signal
D:		
E:	Z12050 %	Comb. air fan 1/2 load balance adjust
F:		
G:		
H:	Z12051 %	Comb. air fan 1 prop vane pos command
I:	Z12052 %	Comb. air fan 2 prop vane pos command
J:		
K:	V12053 dgr	Comb. air fan 1 prop vane position
L:	V12054 dgr	Comb. air fan 2 prop vane position
M:		
N:		
O:		
P:	C12055 sec	Comb. air fan 1 prop vane actuator tc
Q:	C12056 sec	Comb. air fan 2 prop vane actuator tc
R:		
S:		
T:		

2.164 Page:2023 MD200* * FURNACE PRESSURE CONTROL

A:		
B:	X12070 <0-1>	Furnace pressure contr auto
C:	P12071 mmH2O	Furnace pressure contr set point
D:	Z12079 mmH2O	Furnace pressure contr feed back
E:	Z12073 %	Furnace pressure contr output
F:	Z12074 mmH2O	Furnace pressure contr deviation
G:	C12075 %/mm	Furnace pressure contr gain
H:	C12076 sec	Furnace pressure contr integr time
I:	C12077 sec	Furnace pressure contr deriv time
J:	C12078 <0-8>	Furnace pressure contr deriv range
K:		
L:		
M:		
N:		
O:		
P:	X12080 <0-1>	Furnace pressure contr test
Q:	C12081 mmH2O	Furnace pressure contr step
R:	C12082 sec	Furnace pressure contr periode
S:		
T:		

**2.165 Page:2024 MD200** FLUE GAS FAN LOAD
BALANCE CONTROL**

A:		
B:		
C:		
D:		
E:	Z12090	% Flue gas fan 1/2 load balance adjust
F:		
G:		
H:	Z12091	% Flue gas fan 1 prop vane pos command
I:	Z12092	% Flue gas fan 2 prop vane pos command
J:		
K:	V12093	dgr Flue gas fan 1 prop vane position
L:	V12094	dgr Flue gas fan 2 prop vane position
M:		
N:		
O:		
P:	C12095	sec Flue gas fan 1 prop vane actuator tc
Q:	C12096	sec Flue gas fan 2 prop vane actuator tc
R:		
S:		
T:		

2.166 Page:2025 MD200 FURNACE OFA FLOW
CONTROL**

A:		
B:	X12110	<0-1> Furnace OFA flow contr auto
C:	G12111	ton/h Furnace OFA flow contr set point
D:	Z12119	ton/h Furnace OFA flow contr feed back
E:	Z12113	% Furnace OFA flow contr output
F:	Z12114	ton/h Furnace OFA flow contr deviation
G:	C12115	%/ton/h Furnace OFA flow contr gain
H:	C12116	sec Furnace OFA flow contr integr time
I:	C12117	sec Furnace OFA flow contr deriv time
J:	C12118	<0-8> Furnace OFA flow contr deriv range
K:		
L:	V12124	% Furnace OFA flow contr damper pos
M:	C12125	sec Furnace OFA flow contr damper tc
N:	C12126	sec Furnace OFA flow contr sensor tc
O:		
P:	C12102	%/% Furnace OFA flow ratio constant (sp)
Q:		
R:	X12120	<0-1> Furnace OFA flow contr test
S:	C12121	ton/h Furnace OFA flow contr step
T:	C12122	sec Furnace OFA flow contr periode

2.167 Page:2090 MD20** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.168 Page:2100 MD210** WATER AIR PREHEATER 1

A:			
B:	G02030	ton/h	Water air preheater 1 air inlet flow
C:	T02031	dgrC	Water air preheater 1 air inlet temp
D:	H02032	kJ/kg	Water air preheater 1 air inlet enth
E:	T02033	dgrC	Water air preheater 1 air outlet temp
F:	H02034	kJ/kg	Water air preheater 1 air outlet enth
G:			
H:	Q02036	MW	Water air preheater 1 transfered heat
I:			
J:	G02040	ton/h	Water air preheater 1 water inlet flow
K:	T02041	dgrC	Water air preheater 1 water inlet temp
L:	H02042	kJ/kg	Water air preheater 1 water inlet enth
M:	T02043	dgrC	Water air preheater 1 water outlet temp
N:	H02044	kJ/kg	Water air preheater 1 water outlet enth
O:			
P:			
Q:	V02047	<0-1>	Water air preheater 1/2 water supply valve
R:	T02048	dgrC	Water air preheater 1/2 water supply temp
S:			
T:			

**2.169 Page:2101 MD210** WATER AIR PREHEATER 2**

A:			
B:	G02050	ton/h	Water air preheater 2 air inlet flow
C:	T02051	dgrC	Water air preheater 2 air inlet temp
D:	H02052	kJ/kg	Water air preheater 2 air inlet enth
E:	T02053	dgrC	Water air preheater 2 air outlet temp
F:	H02054	kJ/kg	Water air preheater 2 air outlet enth
G:			
H:	Q02056	MW	Water air preheater 2 transfered heat
I:			
J:	G02060	ton/h	Water air preheater 2 water inlet flow
K:	T02061	dgrC	Water air preheater 2 water inlet temp
L:	H02062	kJ/kg	Water air preheater 2 water inlet enth
M:	T02063	dgrC	Water air preheater 2 water outlet temp
N:	H02064	kJ/kg	Water air preheater 2 water outlet enth
O:			
P:			
Q:	G02067	ton/h	Water air preheater 1/2 return flow
R:	T02068	dgrC	Water air preheater 1/2 return flow temp
S:			
T:			

2.170 Page:2102 MD210 STEAM AIR PREHEATERS**

A:					
B:	V02070	<0-1>		Steam air preheater 1 steam shut off valve	
C:	G02071	ton/h		Steam air preheater 1 steam inlet flow	
D:	T02072	dgrC	L=---	H=150.0	Steam air preheater 1 air outlet temp
E:	H02073	kJ/kg			Steam air preheater 1 air outlet enth
F:	Q02074	MW			Steam air preheater 1 transfered heat
G:					
H:	V02080	<0-1>			Steam air preheater 2 steam shut off valve
I:	G02081	ton/h			Steam air preheater 2 steam inlet flow
J:	T02082	dgrC	L=---	H=150.0	Steam air preheater 2 air outlet temp
K:	H02083	kJ/kg			Steam air preheater 2 air outlet enth
L:	Q02084	MW			Steam air preheater 2 transfered heat
M:					
N:	G02085	ton/h			Steam air preheater 1/2 return flow
O:					
P:	V02086	<0-1>			Steam air preheater 1/2 steam supply valve
Q:	P02087	bara			Steam air preheater 1/2 steam supply press
R:	T02088	dgrC			Steam air preheater 1/2 steam supply temp
S:	H02089	kJ/kg			Steam air preheater 1/2 steam supply enth
T:					

2.171 Page:2103 MD210* * AIR PREHEATERS PRESSURE DROP

A:			
B:			
C:	P02090	mmH2O	Water air preheater 1 air inlet pressure
D:	P02091	mmH2O	Steam air preheater 1 air inlet pressure
E:	P02092	mmH2O	Rotary air preheater 1 air inlet pressure
F:			
G:			
H:	P02094	mmH2O	Water air preheater 2 air inlet pressure
I:	P02095	mmH2O	Steam air preheater 2 air inlet pressure
J:	P02096	mmH2O	Rotary air preheater 2 air inlet pressure
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.172 Page:2105 MD210* * ROTARY AIR PREHEATER 1 (1)

A:			
B:	G02100	ton/h	Rotary air preheater 1 air inlet flow
C:	T02101	dgrC	Rotary air preheater 1 air inlet temp
D:	H02102	kJ/kg	Rotary air preheater 1 air inlet enth
E:			
F:	G02103	ton/h	Rotary air preheater 1 air outlet flow
G:	T02104	dgrC	L=--- H=350.0 Rotary air preheater 1 air outlet temp
H:	H02105	kJ/kg	Rotary air preheater 1 air outlet enth
I:			
J:	Q02107	MW	Rotary air preheater 1 transfered heat
K:			
L:	G02110	ton/h	Rotary air preheater 1 gas inlet flow
M:	T02111	dgrC	Rotary air preheater 1 gas inlet temp
N:	H02112	kJ/kg	Rotary air preheater 1 gas inlet enth
O:			
P:	G02113	ton/h	Rotary air preheater 1 gas outlet flow
Q:	T02114	dgrC	L=100.0 H=200.0 Rotary air preheater 1 gas outlet temp
R:	H02115	kJ/kg	Rotary air preheater 1 gas outlet enth
S:			
T:			

**2.173 Page:2106 MD210** ROTARY AIR PREHEATER
1 (2)**

A:				
B:	R02120	<0-1>		Rotary air preheater 1 s/s
C:	N02121	rpm	L=4.0 H=---	Rotary air preheater 1 rotor speed
D:	E02122	kW		Rotary air preheater 1 rotor power
E:	T02123	dgrC	L=--- H=85.0	Rotary air preheater 1 bearing temp
F:	G02124	ton/h		Rotary air preheater 1 air leakage
G:	Z02125	%		Rotary air preheater 1 temp efficiency
H:				
I:	X02116	vol%		Rotary air preheater 1 gas oxygen inlet
J:	X02115	vol%		Rotary air preheater 1 gas oxygen outlet
K:	T02126	dgrC		Rotary air htr 1 metal temp (air/cold)
L:	T02127	dgrC		Rotary air htr 1 metal temp (gas/cold)
M:				
N:	T02128	dgrC		Rotary air htr 1 metal temp (air/hot)
O:	T02129	dgrC		Rotary air htr 1 metal temp (gas/hot)
P:				
Q:				
R:	R02098	<0-1>		Rotary air preheater LO coolw pump 1
S:				
T:				

2.174 Page:2107 MD210 ROTARY AIR PREHEATER
2 (1)**

A:				
B:	G02130	ton/h		Rotary air preheater 2 air inlet flow
C:	T02131	dgrC		Rotary air preheater 2 air inlet temp
D:	H02132	kJ/kg		Rotary air preheater 2 air inlet enth
E:				
F:	G02133	ton/h		Rotary air preheater 2 air outlet flow
G:	T02134	dgrC	L=--- H=350.0	Rotary air preheater 2 air outlet temp
H:	H02135	kJ/kg		Rotary air preheater 2 air outlet enth
I:				
J:	Q02137	MW		Rotary air preheater 2 transfered heat
K:				
L:	G02140	ton/h		Rotary air preheater 2 gas inlet flow
M:	T02141	dgrC		Rotary air preheater 2 gas inlet temp
N:	H02142	kJ/kg		Rotary air preheater 2 gas inlet enth
O:				
P:	G02143	ton/h		Rotary air preheater 2 gas outlet flow
Q:	T02144	dgrC	L=100.0 H=200.0	Rotary air preheater 2 gas outlet temp
R:	H02145	kJ/kg		Rotary air preheater 2 gas outlet enth
S:				
T:				

2.175 Page:2108 MD210* * ROTARY AIR PREHEATER 2 (2)

A:				
B:	R02150	<0-1>		Rotary air preheater 2 s/s
C:	N02151	rpm	L=4.0 H=---	Rotary air preheater 2 rotor speed
D:	E02152	kW		Rotary air preheater 2 rotor power
E:	T02153	dgrC	L=--- H=85.0	Rotary air preheater 2 bearing temp
F:	G02154	ton/h		Rotary air preheater 2 air leakage
G:	Z02155	%		Rotary air preheater 2 temp efficiency
H:				
I:	X02146	vol%		Rotary air preheater 2 gas oxygen inlet
J:	X02145	vol%		Rotary air preheater 2 gas oxygen outlet
K:	T02156	dgrC		Rotary air htr 2 metal temp (air/cold)
L:	T02157	dgrC		Rotary air htr 2 metal temp (gas/cold)
M:				
N:	T02158	dgrC		Rotary air htr 2 metal temp (air/hot)
O:	T02159	dgrC		Rotary air htr 2 metal temp (gas/hot)
P:				
Q:				
R:	R02099	<0-1>		Rotary air preheater LO coolw pump 2
S:				
T:				

2.176 Page:2120 MD210* * AIR PREHEATER 1 TEMP CONTROL

A:				
B:	X12140	<0-1>		Air preheaters 1 temp contr auto
C:	T12141	dgrC		Air preheaters 1 temp contr set point
D:	Z12142	dgrC		Air preheaters 1 temp contr feed back
E:	Z12143	%		Air preheaters 1 temp contr output
F:	Z12144	dgrC		Air preheaters 1 temp contr deviation
G:	C12145	%/dgrC		Air preheaters 1 temp contr gain
H:	C12146	sec		Air preheaters 1 temp contr integr time
I:	C12147	sec		Air preheaters 1 temp contr deriv time
J:	C12148	<0-8>		Air preheaters 1 temp contr deriv range
K:				
L:	V12153	%		Air preheaters 1 temp contr v pos (water)
M:	V12154	%		Air preheaters 1 temp contr v pos (steam)
N:				
O:	C12155	sec		Air preheaters 1 temp contr v tc (water)
P:	C12156	sec		Air preheaters 1 temp contr v tc (steam)
Q:				
R:	X12150	<0-1>		Air preheaters 1 temp contr test
S:	C12151	dgrC		Air preheaters 1 temp contr step
T:	C12152	sec		Air preheaters 1 temp contr periode

**2.177 Page:2121 MD210** AIR PREHEATER 2 TEMP CONTROL**

A:		
B:	X12160 <0-1>	Air preheaters 2 temp contr auto
C:	T12161 dgrC	Air preheaters 2 temp contr set point
D:	Z12162 dgrC	Air preheaters 2 temp contr feed back
E:	Z12163 %	Air preheaters 2 temp contr output
F:	Z12164 dgrC	Air preheaters 2 temp contr deviation
G:	C12165 %/dgrC	Air preheaters 2 temp contr gain
H:	C12166 sec	Air preheaters 2 temp contr integr time
I:	C12167 sec	Air preheaters 2 temp contr deriv time
J:	C12168 <0-8>	Air preheaters 2 temp contr deriv range
K:		
L:	V12173 %	Air preheaters 2 temp contr v pos (water)
M:	V12174 %	Air preheaters 2 temp contr v pos (steam)
N:		
O:	C12175 sec	Air preheaters 2 temp contr v tc (water)
P:	C12176 sec	Air preheaters 2 temp contr v tc (steam)
Q:		
R:	X12170 <0-1>	Air preheaters 2 temp contr test
S:	C12171 dgrC	Air preheaters 2 temp contr step
T:	C12172 sec	Air preheaters 2 temp contr periode

2.178 Page:2190 MD21 CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.179 Page:2400 MD240* * BOILER FEED / FILLING WATER

A:			
B:	V02420	%	Filling line flow control valve
C:	G02421	ton/h	Filling line flow (start up)
D:			
E:	V02422	<0-1>	Boiler bottom drain shut off valve
F:	V02423	%	Boiler bottom drain flow valve
G:	G02424	ton/h	Boiler bottom drain flow
H:			
I:	P02425	bara	Filling line supply pressure
J:	T02426	dgrC	Filling line supply temp
K:			
L:	T02427	dgrC	Boiler feedw control valve inlet temp
M:	P02428	bara	Boiler feedw control valve inlet press
N:	P02429	bara	Boiler feedw control valve outlet press
O:	V02430	%	Boiler feedw control valve position
P:	G02431	ton/h	L=190.0 H=920.0 Boiler feedw control valve flow
Q:			
R:	G02450	ton/h	Boiler feedw inlet flow (net)
S:	T02451	dgrC	Boiler feedw inlet flow temp
T:	H02452	kJ/kg	Boiler feedw inlet flow enth

2.180 Page:2401 MD240* * BOILER START UP HEAT EXCHANGER

A:			
B:	P02434	bara	Start up heat exchanger inlet press
C:	P02435	bara	Start up heat exchanger outlet press
D:			
E:	G02440	ton/h	Start up heat exchanger drain flow
F:	T02441	dgrC	Start up heat exchanger drain inlet temp
G:	H02442	kJ/kg	Start up heat exchanger drain inlet enth
H:	T02443	dgrC	Start up heat exchanger drain outlet temp
I:	H02444	kJ/kg	Start up heat exchanger drain outlet enth
J:			
K:	T02445	dgrC	Start up heat exchanger feedw inlet temp
L:	H02446	kJ/kg	Start up heat exchanger feedw inlet enth
M:	T02447	dgrC	Start up heat exchanger feedw outlet temp
N:	H02448	kJ/kg	Start up heat exchanger feedw outlet enth
O:			
P:	Q02449	MW	Start up heat exchanger transfered heat
Q:			
R:			
S:			
T:			

**2.181 Page:2402 MD240** BOILER EVAPORATOR / SUPERHEATER 1**

A:					
B:	G02455	ton/h			Boiler steam flow (outlet SH1)
C:	T02456	dgrC	L=---	H=480.0	Boiler steam temperature (outlet SH1)
D:	H02457	kJ/kg			Boiler steam enthalpy (outlet SH1)
E:	X02458	<0-1>			Boiler steam quality (outlet SH1)
F:					
G:	P02460	bara			Boiler steam pressure (outlet EVA)
H:	T02461	dgrC			Boiler steam temperature (outlet EVA)
I:	H02462	kJ/kg			Boiler steam enthalpy (outlet EVA)
J:	H02463	kJ/kg			Boiler water enthalpy (outlet EVA)
K:					
L:	L02466	%			Boiler water content (EVA/SH1)
M:	P02467	bara			Boiler water pressure (bottom)
N:					
O:	Q02470	MW			Boiler EVA section transfered heat (net)
P:	Q02471	MW			Boiler SH1 section transfered heat (net)
Q:					
R:	T02474	dgrC	L=---	H=410.0	Boiler EVA section mean tube metal temp
S:	T02475	dgrC	L=---	H=440.0	Boiler SH1 section mean tube metal temp
T:					

2.182 Page:2403 MD240 STEAM SEPARATOR**

A:					
B:	G02480	ton/h			Separator steam inlet flow
C:	T02481	dgrC	L=---	H=45.0	Separator steam inlet super temp
D:	H02482	kJ/kg			Separator steam inlet super enth
E:					
F:	T02483	dgrC			Separator steam saturation temp
G:	H02484	kJ/kg			Separator steam saturation enth
H:					
I:	G02489	ton/h			Separator steam outlet flow
J:					
K:	P02490	bara	L=---	H=210.0	Separator steam pressure
L:	P02491	bara			Separator air pressure (partial)
M:	T02492	dgrC	L=---	H=430.0	Separator steam temp
N:	H02493	kJ/kg			Separator steam enth
O:	H02494	kJ/kg			Separator water enth
P:	L02495	m	L=---	H=9.0	Separator water level
Q:					
R:	V02498	<0-1>			Separator vent valve
S:	G02499	ton/h	L=---	H=5.0	Separator vent flow
T:					

2.183 Page:2404 MD240** STEAM SEPARATOR DRAIN

A:			
B:	G02500	ton/h	Separator feedw inlet flow (x-over)
C:	T02501	dgrC	Separator feedw inlet temp (x-over)
D:	H02502	kJ/kg	Separator feedw inlet enth (x-over)
E:			
F:	V02503	<0-1>	Separator feedw x-over valve (start up)
G:			
H:	G02510	ton/h	Separator drain flow to FD - total
I:	G02511	ton/h	Separator drain flow to FD - main valve
J:	G02512	ton/h	Separator drain flow to FD - auxil valve
K:	G02513	ton/h	Separator drain flow to BBT
L:			
M:	V02520	<0-1>	Separator drain to BBT shut off valve
N:	V02521	<0-1>	Separator drain to FD shut off valve
O:			
P:			
Q:	G02530	ton/h	Clean-up line flow (from FD to BBT)
R:	V02531	%	Clean-up line flow adjust valve
S:			
T:			

2.184 Page:2406 MD240** BOTTUM BLOW TANK

A:			
B:	G02540	ton/h	Bottom blow tank inlet flow
C:	G02541	ton/h	Bottom blow tank outlet flow
D:	G02542	ton/h	Bottom blow tank over flow
E:	G02543	ton/h	Bottom blow tank boil off flow
F:			
G:	L02544	m	Bottom blow tank level
H:	T02545	dgrC	Bottom blow tank water temp
I:	H02546	kJ/kg	Bottom blow tank water enth
J:	H02547	kJ/kg	Bottom blow tank steam enth
K:			
L:	P02548	bara	Bottom blow tank steam pressure (partial)
M:	P02549	bara	Bottom blow tank air pressure (partial)
N:			
O:	G02554	ton/h	Bottom blow tank flow to MD
P:	G02555	ton/h	Bottom blow tank flow to Lake
Q:			
R:	V02557	<0-1>	Bottom blow tank to MD discharge valve
S:	V02558	<0-1>	Bottom blow tank to Lake discharge valve
T:			

**2.185 Page:2420 MD240** BOILER FEEDW FLOW CONTROL**

A:		
B:	X12500 <0-1>	Boiler feedw flow contr auto
C:	G12501 ton/h	Boiler feedw flow contr set point
D:	Z12509 ton/h	Boiler feedw flow contr feed back
E:	Z12503 %	Boiler feedw flow contr output
F:	Z12504 ton/h	Boiler feedw flow contr deviation
G:	C12505 %/%	Boiler feedw flow contr gain
H:	C12506 sec	Boiler feedw flow contr integr time
I:	C12507 sec	Boiler feedw flow contr deriv time
J:	C12508 <0-8>	Boiler feedw flow contr deriv range
K:		
L:	V12515 %	Boiler feedw flow control valve pos
M:	C12516 %	Boiler feedw flow control valve tc
N:	C12517 sec	Boiler feedw flow control sensor tc
O:		
P:		
Q:	X12510 <0-1>	Boiler feedw flow contr test
R:	C12511 ton/h	Boiler feedw flow contr step
S:	C12512 sec	Boiler feedw flow contr periode
T:		

2.186 Page:2421 MD240 BOILER FEEDW PUMP SPEED CONTROL**

A:		
B:	X12520 <0-1>	Boiler feedw valve pos contr auto
C:	V12521 %	Boiler feedw valve pos contr set point
D:	Z12529 %	Boiler feedw valve pos contr feed back
E:	Z12523 %	Boiler feedw valve pos contr output
F:	Z12524 %	Boiler feedw valve pos contr deviation
G:	C12525 %/%	Boiler feedw valve pos contr gain
H:	C12526 sec	Boiler feedw valve pos contr integr time
I:	C12527 sec	Boiler feedw valve pos contr deriv time
J:	C12528 <0-8>	Boiler feedw valve pos contr deriv range
K:		
L:		
M:		
N:		
O:		
P:	X12530 <0-1>	Boiler feedw valve pos contr test
Q:	C12531 %	Boiler feedw valve pos contr step
R:	C12532 sec	Boiler feedw valve pos contr periode
S:		
T:		

2.187 Page:2422 MD240* * BOILER FEEDW VALVE POS SET POINT

A:		
B:	X12537 <0-1>	Boiler feedw valve set point auto
C:		
D:	K12538 ton/h	Boiler steam flow low
E:	K12539 ton/h	Boiler steam flow high
F:	C12538 %	Boiler feedw valve set point low
G:	C12539 %	Boiler feedw valve set point high
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.188 Page:2423 MD240* * BOILER FEEDW MASTER CONTROL (DT)

A:		
B:	X12540 <0-1>	Boiler feedw master contr auto
C:	T12541 dgrC	Boiler feedw master contr set point
D:	Z12549 dgrC	Boiler feedw master contr feed back
E:	Z12543 %	Boiler feedw master contr output
F:	Z12544 dgrC	Boiler feedw master contr deviation
G:	C12545 %/dgrC	Boiler feedw master contr gain
H:	C12546 sec	Boiler feedw master contr integr time
I:	C12547 sec	Boiler feedw master contr deriv time
J:	C12548 <0-8>	Boiler feedw master contr deriv range
K:		
L:	C12565 %/ton/h	Boiler feedw master ff gain 1 (fuel)
M:	C12567 %/%	Boiler feedw master ff gain 2 (level)
N:	C12569 %/%	Boiler feedw master ff gain 3 (flow dev)
O:		
P:		
Q:	X12550 <0-1>	Boiler feedw master contr test
R:	C12551 dgrC	Boiler feedw master contr step
S:	C12552 sec	Boiler feedw master contr periode
T:		



2.189 Page:2425 MD240** SEPARATOR LEVEL CONTROL 1

A:		
B:	X12400 <0-1>	Separator level controller 1 auto
C:	L12401 m	Separator level controller 1 set point
D:	Z12402 m	Separator level controller 1 feed back
E:	Z12403 %	Separator level controller 1 output
F:	Z12404 m	Separator level controller 1 deviation
G:	C12405 %/m	Separator level controller 1 gain
H:	C12406 sec	Separator level controller 1 integr time
I:	C12407 sec	Separator level controller 1 deriv time
J:	C12408 <0-8>	Separator level controller 1 deriv range
K:		
L:	V12415 %	Separator level controller 1 valve pos
M:	C12416 sec	Separator level controller 1 valve tc
N:		
O:	C12417 sec	Separator level sensor tc (common)
P:		
Q:	X12410 <0-1>	Separator level controller 1 test
R:	C12411 m	Separator level controller 1 step
S:	C12412 sec	Separator level controller 1 periode
T:		

2.190 Page:2426 MD240** SEPARATOR LEVEL CONTROL 2

A:		
B:	X12420 <0-1>	Separator level controller 2 auto
C:	L12421 m	Separator level controller 2 set point
D:	Z12422 m	Separator level controller 2 feed back
E:	Z12423 %	Separator level controller 2 output
F:	Z12424 m	Separator level controller 2 deviation
G:	C12425 %/m	Separator level controller 2 gain
H:	C12426 sec	Separator level controller 2 integr time
I:	C12427 sec	Separator level controller 2 deriv time
J:	C12428 <0-8>	Separator level controller 2 deriv range
K:		
L:	V12435 %	Separator level controller 2 valve pos
M:	C12436 sec	Separator level controller 2 valve tc
N:		
O:		
P:		
Q:	X12430 <0-1>	Separator level controller 2 test
R:	C12431 m	Separator level controller 2 step
S:	C12432 sec	Separator level controller 2 periode
T:		

2.191 Page:2427 MD240* * SEPARATOR LEVEL CONTROL 3

A:		
B:	X12440	<0-1> Separator level controller 3 auto
C:	L12441	m Separator level controller 3 set point
D:	Z12442	m Separator level controller 3 feed back
E:	Z12443	% Separator level controller 3 output
F:	Z12444	m Separator level controller 3 deviation
G:	C12445	%/m Separator level controller 3 gain
H:	C12446	sec Separator level controller 3 integr time
I:	C12447	sec Separator level controller 3 deriv time
J:	C12448	<0-8> Separator level controller 3 deriv range
K:	V12455	% Separator level controller 3 valve pos
L:	C12456	sec Separator level controller 3 valve tc
M:		
N:	C02520	bara Separator drain to BBT close pressure
O:	C02521	bara Separator drain to BBT reset pressure
P:		
Q:	X12450	<0-1> Separator level controller 3 test
R:	C12451	m Separator level controller 3 step
S:	C12452	sec Separator level controller 3 periode
T:		

2.192 Page:2428 MD240* * BOTTUM BLOW TANK LEVEL CONTROL

A:		
B:	X12460	<0-1> Bottom blow tank level contr auto
C:	L12461	m Bottom blow tank level contr set point
D:	Z12462	m Bottom blow tank level contr feed back
E:	Z12463	% Bottom blow tank level contr output
F:	Z12464	m Bottom blow tank level contr deviation
G:	C12465	%/m Bottom blow tank level contr gain
H:	C12466	sec Bottom blow tank level contr integr time
I:	C12467	sec Bottom blow tank level contr deriv time
J:	C12468	<0-8> Bottom blow tank level contr deriv range
K:		
L:	V12475	% Bottom blow tank level control valve pos
M:	C12476	sec Bottom blow tank level control valve tc
N:	C12477	sec Bottom blow tank level control sensor tc
O:		
P:		
Q:	X12470	<0-1> Bottom blow tank level contr test
R:	C12471	m Bottom blow tank level contr step
S:	C12472	sec Bottom blow tank level contr periode
T:		



2.193 Page:2429 MD240** BOILER OUTLET STEAM PRESSURE CONTROL

A:		
B:	X12580 <0-1>	Boiler outlet steam press contr auto
C:	P12581 bara	Boiler outlet steam press contr set point
D:	Z12582 bara	Boiler outlet steam press contr feed back
E:	Z12583 %	Boiler outlet steam press contr output
F:	Z12584 bar	Boiler outlet steam press contr deviation
G:	C12585 %/bar	Boiler outlet steam press contr gain
H:	C12586 sec	Boiler outlet steam press contr integr time
I:	C12587 sec	Boiler outlet steam press contr deriv time
J:	C12588 <0-8>	Boiler outlet steam press contr deriv range
K:		
L:	V12595 %	Boiler outlet steam press contr valve pos
M:	C12596 sec	Boiler outlet steam press contr valve tc
N:		
O:		
P:		
Q:	X12590 <0-1>	Boiler outlet steam press contr test
R:	C12591 bar	Boiler outlet steam press contr step
S:	C12592 sec	Boiler outlet steam press contr periode
T:		

2.194 Page:2490 MD24** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.195 Page:2500 MD250* * SUPERHEATER 2

A:			
B:	P02320	bara	Superheater 2 steam inlet press
C:	G02321	ton/h	Superheater 2 steam inlet flow
D:	T02322	dgrC	Superheater 2 steam inlet temp
E:	H02323	kJ/kg	Superheater 2 steam inlet enth
F:	T02324	dgrC	L=--- H=480.0 Superheater 2 steam outlet temp
G:	H02325	kJ/kg	Superheater 2 steam outlet enth
H:	G02326	ton/h	Superheater 2 steam outlet flow
I:			
J:	G02327	ton/h	Superheater 2 gas inlet flow
K:	T02328	dgrC	Superheater 2 gas inlet temp
L:	H02329	kJ/kg	Superheater 2 gas inlet enth
M:	T02330	dgrC	Superheater 2 gas outlet temp
N:	H02331	kJ/kg	Superheater 2 gas outlet enth
O:			
P:	Q02334	MW	Superheater 2 radiation from furnace
Q:	Q02335	MW	Superheater 2 transfered heat (total)
R:			
S:	T02337	dgrC	Superheater 2 metal temp (steam inlet)
T:	T02338	dgrC	Superheater 2 metal temp (steam outlet)

2.196 Page:2501 MD250* * SUPERHEATER 3

A:			
B:	P02340	bara	Superheater 3 steam inlet press
C:	G02341	ton/h	Superheater 3 steam inlet flow
D:	T02342	dgrC	Superheater 3 steam inlet temp
E:	H02343	kJ/kg	Superheater 3 steam inlet enth
F:	T02344	dgrC	L=--- H=550.0 Superheater 3 steam outlet temp
G:	H02345	kJ/kg	Superheater 3 steam outlet enth
H:	G02346	ton/h	Superheater 3 steam outlet flow
I:			
J:	G02347	ton/h	Superheater 3 gas inlet flow
K:	T02348	dgrC	Superheater 3 gas inlet temp
L:	H02349	kJ/kg	Superheater 3 gas inlet enth
M:	T02350	dgrC	Superheater 3 gas outlet temp
N:	H02351	kJ/kg	Superheater 3 gas outlet enth
O:			
P:	Q02354	MW	Superheater 3 radiation from furnace
Q:	Q02355	MW	Superheater 3 transfered heat (total)
R:			
S:	T02357	dgrC	Superheater 3 metal temp (steam inlet)
T:	T02358	dgrC	Superheater 3 metal temp (steam outlet)

**2.197 Page:2502 MD250** REHEATER 1**

A:				
B:	P02380	bara		Reheater 1 steam inlet press
C:	G02381	ton/h		Reheater 1 steam inlet flow
D:	T02382	dgrC	L=--- H=390.0	Reheater 1 steam inlet temp
E:	H02383	kJ/kg		Reheater 1 steam inlet enth
F:	T02384	dgrC	L=--- H=520.0	Reheater 1 steam outlet temp
G:	H02385	kJ/kg		Reheater 1 steam outlet enth
H:	G02386	ton/h		Reheater 1 steam outlet flow
I:				
J:	G02387	ton/h		Reheater 1 gas inlet flow
K:	T02388	dgrC		Reheater 1 gas inlet temp
L:	H02389	kJ/kg		Reheater 1 gas inlet enth
M:	T02390	dgrC		Reheater 1 gas outlet temp
N:	H02391	kJ/kg		Reheater 1 gas outlet enth
O:				
P:	Q02395	MW		Reheater 1 transfered heat
Q:				
R:	T02397	dgrC		Reheater 1 metal temp (steam inlet)
S:	T02398	dgrC		Reheater 1 metal temp (steam outlet)
T:				

2.198 Page:2503 MD250 REHEATER 2**

A:				
B:	P02360	bara		Reheater 2 steam inlet press
C:	G02361	ton/h		Reheater 2 steam inlet flow
D:	T02362	dgrC		Reheater 2 steam inlet temp
E:	H02363	kJ/kg		Reheater 2 steam inlet enth
F:	T02364	dgrC	L=--- H=550.0	Reheater 2 steam outlet temp
G:	H02365	kJ/kg		Reheater 2 steam outlet enth
H:	G02366	ton/h		Reheater 2 steam outlet flow
I:				
J:	G02367	ton/h		Reheater 2 gas inlet flow
K:	T02368	dgrC		Reheater 2 gas inlet temp
L:	H02369	kJ/kg		Reheater 2 gas inlet enth
M:	T02370	dgrC		Reheater 2 gas outlet temp
N:	H02371	kJ/kg		Reheater 2 gas outlet enth
O:				
P:	Q02375	MW		Reheater 2 transfered heat
Q:				
R:	T02377	dgrC		Reheater 2 metal temp (steam inlet)
S:	T02378	dgrC		Reheater 2 metal temp (steam outlet)
T:				

2.199 Page:2504 MD250* * ECONOMIZER

A:			
B:	P02400	bara	Economizer water inlet press
C:	G02401	ton/h	Economizer water inlet flow
D:	T02402	dgrC	Economizer water inlet temp
E:	H02403	kJ/kg	Economizer water inlet enth
F:	T02404	dgrC	Economizer water outlet temp
G:	H02405	kJ/kg	Economizer water outlet enth
H:			
I:	T02405	dgrC	Economizer water boiling temp
J:	T02406	dgrC	Economizer water boiling temp margin
K:	G02407	ton/h	Economizer gas inlet flow
L:	T02408	dgrC	Economizer gas inlet temp
M:	H02409	kJ/kg	Economizer gas inlet enth
N:	T02410	dgrC	Economizer gas outlet temp
O:	H02411	kJ/kg	Economizer gas outlet enth
P:			
Q:	Q02415	MW	Economizer transferred heat
R:			
S:	T02417	dgrC	Economizer metal temp (water inlet)
T:	T02418	dgrC	Economizer metal temp (water outlet)

2.200 Page:2506 MD250* * WATER INJECTION

A:			
B:	G02560	ton/h	Superheater 2 inj water flow
C:	V02561	<0-1>	Superheater 2 inj water shut off valve
D:			
E:	G02564	ton/h	Superheater 3 inj water flow
F:	V02565	<0-1>	Superheater 3 inj water shut off valve
G:			
H:	V02568	<0-1>	Superheater 2/3 water supply valve
I:			
J:			
K:	G02570	ton/h	Reheater 2 inj water flow
L:	V02571	<0-1>	Reheater 2 inj water shut off valve
M:			
N:	V02574	<0-1>	Reheater 2 water supply valve
O:			
P:			
Q:	X13078	<0-1>	Boiler superheater drain valves
R:			
S:			
T:			

**2.201 Page:2520 MD250** SUPERHEATER 2 STEAM
TEMP CONTROL**

A:		
B:	X12300 <0-1>	Superheater 2 temp contr auto
C:	T12301 dgrC	Superheater 2 temp contr set point
D:	Z12309 dgrC	Superheater 2 temp contr feed back
E:	Z12303 %	Superheater 2 temp contr output
F:	Z12304 dgrC	Superheater 2 temp contr deviation
G:	C12305 %/dgrC	Superheater 2 temp contr gain
H:	C12306 sec	Superheater 2 temp contr integr time
I:	C12307 sec	Superheater 2 temp contr deriv time
J:	C12308 <0-8>	Superheater 2 temp contr deriv range
K:		
L:	Z12313 dgrC	Superheater 2 temp contr cross temp (inlet)
M:	C12314 %/dgrC	Superheater 2 temp contr cross gain
N:	C12315 sec	Superheater 2 temp contr cross tc
O:		
P:	V12316 %	Superheater 2 temp control valve pos
Q:		
R:	X12310 <0-1>	Superheater 2 temp contr test
S:	C12311 dgrC	Superheater 2 temp contr step
T:	C12312 sec	Superheater 2 temp contr periode

2.202 Page:2521 MD250 SUPERHEATER 3 STEAM
TEMP CONTROL**

A:		
B:	X12320 <0-1>	Superheater 3 temp contr auto
C:	T12321 dgrC	Superheater 3 temp contr set point
D:	Z12329 dgrC	Superheater 3 temp contr feed back
E:	Z12323 %	Superheater 3 temp contr output
F:	Z12324 dgrC	Superheater 3 temp contr deviation
G:	C12325 %/dgrC	Superheater 3 temp contr gain
H:	C12326 sec	Superheater 3 temp contr integr time
I:	C12327 sec	Superheater 3 temp contr deriv time
J:	C12328 <0-8>	Superheater 3 temp contr deriv range
K:		
L:	Z12333 dgrC	Superheater 3 temp contr cross temp (inlet)
M:	C12334 %/dgrC	Superheater 3 temp contr cross gain
N:	C12335 sec	Superheater 3 temp contr cross tc
O:		
P:	V12336 %	Superheater 3 temp control valve pos
Q:		
R:	X12330 <0-1>	Superheater 3 temp contr test
S:	C12331 dgrC	Superheater 3 temp contr step
T:	C12332 sec	Superheater 3 temp contr periode

2.203 Page:2522 MD250* * REHEATER 2 STEAM TEMP CONTROL

A:		
B:	X12340	<0-1> Reheater 2 temp contr auto
C:	T12341	dgrC Reheater 2 temp contr set point
D:	Z12349	dgrC Reheater 2 temp contr feed back
E:	Z12343	% Reheater 2 temp contr output
F:	Z12344	dgrC Reheater 2 temp contr deviation
G:	C12345	%/dgrC Reheater 2 temp contr gain
H:	C12346	sec Reheater 2 temp contr integr time
I:	C12347	sec Reheater 2 temp contr deriv time
J:	C12348	<0-8> Reheater 2 temp contr deriv range
K:		
L:	Z12353	dgrC Reheater 2 temp contr cross temp (inlet)
M:	C12354	%/dgrC Reheater 2 temp contr cross gain
N:	C12355	sec Reheater 2 temp contr cross tc
O:		
P:	V12356	% Reheater 2 temp control valve pos
Q:		
R:	X12350	<0-1> Reheater 2 temp contr test
S:	C12351	dgrC Reheater 2 temp contr step
T:	C12352	sec Reheater 2 temp contr periode

2.204 Page:2523 MD250* * STEAM TEMP CONTROL VALVE/SENSOR TC

A:		
B:		
C:	C12317	sec Superheater 2 temp control valve tc
D:	C12318	sec Superheater 2 temp control sensor tc (outlet)
E:	C12319	sec Superheater 2 temp control sensor tc (inlet)
F:		
G:		
H:	C12337	sec Superheater 3 temp control valve tc
I:	C12338	sec Superheater 3 temp control sensor tc (outlet)
J:	C12339	sec Superheater 3 temp control sensor tc (inlet)
K:		
L:		
M:	C12357	sec Reheater 2 temp control valve tc
N:	C12358	sec Reheater 2 temp control sensor tc (outlet)
O:	C12359	sec Reheater 2 temp control sensor tc (inlet)
P:		
Q:		
R:		
S:		
T:		



2.205 Page:2524 MD250** STEAM TEMP RATE CONTROL

A:
B:
C:
D: X12360 <0-1> Superheater 3 temp rate contr auto
E:
F: T12361 dgrC Superheater 3 temp contr max sp (target)
G: C12370 dgrC/min Superheater 3 temp contr rate
H:
I:
J:
K: T12380 dgrC Superheater 2 temp setp (rate adjusted)
L: C12380 dgrC/min Superheater 2 temp setp (increase rate)
M: C12381 dgrC Superheater 2 temp setp (min value)
N:
O:
P:
Q:
R:
S:
T:

2.206 Page:2590 MD25** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.207 Page:2600 MD260* * HIGH PRESSURE STEAM SYSTEM

A:					
B:	G02600	ton/h			HP line steam flow
C:	P02601	bara	L=---	H=200.0	HP line steam pressure
D:	T02602	dgrC			HP line steam temperature
E:	H02603	kJ/kg			HP line steam enthalpy
F:					
G:					
H:	G02610	ton/h			HP bypass control steam flow
I:	T02611	dgrC	L=---	H=420.0	HP bypass control steam temp (after mix)
J:	H02612	kJ/kg			HP bypass control steam enth (after mix)
K:	X02613	<0-1>			HP bypass control steam qual (after mix)
L:					
M:	P02617	bara			HP bypass control water supply press
N:	T02618	dgrC			HP bypass control water supply temp
O:					
P:	P02619	bara			HP bypass control water press
Q:	G02620	ton/h			HP bypass control water flow
R:	T02621	dgrC			HP bypass control water temp
S:	H02622	kJ/kg			HP bypass control water enth
T:					

2.208 Page:2601 MD260* * INTERMEDIATE PRESSURE STEAM SYSTEM

A:					
B:	G02630	ton/h			IPC line steam flow
C:	P02631	bara	L=---	H=55.0	IPC line steam pressure
D:	T02632	dgrC	L=---	H=400.0	IPC line steam temperature
E:	H02633	kJ/kg			IPC line steam enthalpy
F:					
G:	G02635	ton/h			IPC line steam to LP steam generator
H:	G02636	ton/h			IPC line steam to feed heater (ext6)
I:	G02637	ton/h			IPC line steam to reheaters (RH1/2)
J:					
K:	V02638	<0-1>			IPC line steam extraction valve (ext6)
L:					
M:	G02640	ton/h			IPH line steam flow
N:	P02641	bara	L=---	H=47.0	IPH line steam pressure
O:	T02642	dgrC			IPH line steam temperature
P:	H02643	kJ/kg			IPH line steam enthalpy
Q:					
R:	V02650	%			IPH line vent valve position
S:	G02651	ton/h			IPH line vent valve flow (free blowing)
T:					

**2.209 Page:2602 MD260** SAFETY VALVES**

A:				
B:	V02661	%		HP safety valve position
C:	G02662	ton/h	L=--- H=0.1	HP safety valve steam flow
D:	X02663	<0-1>		HP safety valve test
E:				
F:	C02660	bara		HP safety valve open press (mech limit)
G:				
H:				
I:	V02666	%		IP safety valve position
J:	G02667	ton/h	L=--- H=0.1	IP safety valve steam flow
K:				
L:	X02670	<0-1>		IP safety valve auto control
M:	P02671	bara		IP safety valve open press set point
N:				
O:	C02665	bara		IP safety valve open press (mech limit)
P:				
Q:				
R:				
S:				
T:				

2.210 Page:2604 MD260 SOOT BLOWING STEAM
++**

A:				
B:	V02685	<0-1>		Sootblowing steam supply valve
C:				
D:	V02686	%		Sootblowing steam flow adjust valve
E:	G02687	ton/h		Sootblowing steam flow
F:				
G:	C02688	bara		Sootblowing steam press limit
H:				
I:				
J:				
K:				
L:	G02680	ton/h		HP line steam leakage
M:	G02681	ton/h		IPC line steam leakage
N:	G02682	ton/h		IPH line steam leakage
O:				
P:				
Q:				
R:				
S:				
T:				

2.211 Page:2605 MD260** LP STEAM DUMP SYSTEM

A:					
B:	V22640	<0-1>			LP steam dump shut off valve
C:					
D:	G22645	ton/h			LP steam dump coolw flow
E:	P22645	bara	L=0.5	H=---	LP steam dump coolw pressure
F:					
G:	G22644	ton/h			LP steam dump flow
H:	G22646	ton/h			LP steam dump flow (after mix)
I:	T22646	dgrC	L=---	H=130.0	LP steam dump temp (after mix)
J:					
K:	X22650	<0-3>	L=---	H=0.9	LP steam dump trip
L:					
M:	C22651	dgrC			LP steam dump trip 1 limit (steam temp)
N:	C22652	bara			LP steam dump trip 2 limit (water press)
O:	C22653	mbar			LP steam dump trip 3 limit (vacuum)
P:	C22655	sec			LP steam dump trip sensor tc
Q:					
R:					
S:					
T:					

2.212 Page:2620 MD260** HP BYPASS STEAM PRESSURE CONTROL

A:					
B:	X12600	<0-1>			HP bypass steam press contr auto
C:	P12601	bara			HP bypass steam press contr set point
D:	Z12609	bara			HP bypass steam press contr feed back
E:	Z12603	%			HP bypass steam press contr output
F:	Z12604	bar			HP bypass steam press contr deviation
G:	C12605	%/bar			HP bypass steam press contr gain
H:	C12606	sec			HP bypass steam press contr integr time
I:	C12607	sec			HP bypass steam press contr deriv time
J:	C12608	<0-8>			HP bypass steam press contr deriv range
K:					
L:	C12618	%			HP bypass steam press contr valve min pos
M:					
N:	V12615	%			HP bypass steam press contr valve pos
O:	C12616	sec			HP bypass steam press contr valve tc
P:	C12617	sec			HP bypass steam press contr sensor tc
Q:					
R:	X12610	<0-1>			HP bypass steam press contr test
S:	C12611	bar			HP bypass steam press contr step
T:	C12612	sec			HP bypass steam press contr periode

**2.213 Page:2621 MD260** HP BYPASS STEAM TEMP CONTROL**

A:		
B:	X12620 <0-1>	HP bypass steam temp contr auto
C:	T12621 dgrC	HP bypass steam temp contr set point
D:	Z12629 dgrC	HP bypass steam temp contr feed back
E:	Z12623 %	HP bypass steam temp contr output
F:	Z12624 dgrC	HP bypass steam temp contr deviation
G:	C12625 %/dgrC	HP bypass steam temp contr gain
H:	C12626 sec	HP bypass steam temp contr integr time
I:	C12627 sec	HP bypass steam temp contr deriv time
J:	C12628 <0-8>	HP bypass steam temp contr deriv range
K:		
L:		
M:	V12635 %	HP bypass steam temp contr valve pos
N:	C12636 sec	HP bypass steam temp contr valve tc
O:	C12637 sec	HP bypass steam temp contr sensor tc
P:		
Q:	X12630 <0-1>	HP bypass steam temp contr test
R:	C12631 dgrC	HP bypass steam temp contr step
S:	C12632 sec	HP bypass steam temp contr periode
T:		

2.214 Page:2622 MD260 HP BYPASS WATER INJECTION DP CONTROL**

A:		
B:	X12640 <0-1>	HP bypass water dp contr auto
C:	P12641 bara	HP bypass water dp contr set point
D:	Z12649 bara	HP bypass water dp contr feed back
E:	Z12643 %	HP bypass water dp contr output
F:	Z12644 bar	HP bypass water dp contr deviation
G:	C12645 %/bar	HP bypass water dp contr gain
H:	C12646 sec	HP bypass water dp contr integr time
I:	C12647 sec	HP bypass water dp contr deriv time
J:	C12648 <0-8>	HP bypass water dp contr deriv range
K:		
L:		
M:	V12655 %	HP bypass water dp contr valve pos
N:	C12656 sec	HP bypass water dp contr valve tc
O:		
P:		
Q:	X12650 <0-1>	HP bypass water dp contr test
R:	C12651 bar	HP bypass water dp contr step
S:	C12652 sec	HP bypass water dp contr periode
T:		

2.215 Page:2623 MD260** HP BYPASS STEAM PRESS GLIDE CONTROL

A:		
B:	X12660 <0-1>	HP bypass steam press glide control auto
C:	X12661 <0-1>	HP bypass steam press glide control reset
D:		
E:	P12662 bar	HP bypass steam press glide set point
F:		
G:		
H:	C12663 sec	HP bypass steam press glide time const
I:	C12664 bara	HP bypass steam press glide min press
J:	C12665 bara	HP bypass steam press glide max press
K:	C12666 bara	HP bypass steam press glide margin
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.216 Page:2624 MD260** LP BYPASS STEAM PRESSURE CONTROL

A:			
B:	X22600 <0-1>		LP bypass steam press contr auto
C:	P22601 bara		LP bypass steam press contr set point
D:	Z22609 bara		LP bypass steam press contr feed back
E:	Z22603 %		LP bypass steam press contr output
F:	Z22604 bar		LP bypass steam press contr deviation
G:	C22605 %/bar		LP bypass steam press contr gain
H:	C22606 sec		LP bypass steam press contr integr time
I:	C22607 sec		LP bypass steam press contr deriv time
J:	C22608 <0-8>		LP bypass steam press contr deriv range
K:	Z22610 m		LP bypass steam press contr level command
L:	C22617 sec		LP bypass steam press contr sensor tc
M:			
N:	X22618 <0-2>	L=---	H=1.9 LP bypass steam controller stby
O:	C22618 bara		LP bypass steam controller stby setp
P:			
Q:	X22610 <0-1>		LP bypass steam press contr test
R:	C22611 bar		LP bypass steam press contr step
S:	C22612 sec		LP bypass steam press contr periode
T:			

**2.217 Page:2625 MD260** LP STEAM DUMP CONTROL**

A:				
B:	X22620	<0-1>		LP steam dump controller auto
C:	P22621	bara		LP steam dump controller set point
D:	Z22629	bara		LP steam dump controller feed back
E:	Z22623	%		LP steam dump controller output
F:	Z22624	bar		LP steam dump controller deviation
G:	C22625	%/bar		LP steam dump controller gain
H:	C22626	sec		LP steam dump controller integr time
I:	C22627	sec		LP steam dump controller deriv time
J:	C22628	<0-8>		LP steam dump controller deriv range
K:	C22637	sec		LP steam dump controller sensor tc
L:				
M:	X22648	<0-2>	L=--- H=1.9	LP steam dump controller stby
N:	C22648	bara		LP steam dump controller stby setp
O:				
P:				
Q:	X22630	<0-1>		LP steam dump controller test
R:	C22631	bar		LP steam dump controller step
S:	C22632	sec		LP steam dump controller periode
T:				

2.218 Page:2630 MD260 HP TURBINE TEMP PROTECTION**

A:				
B:	X02673	<0-1>	L=--- H=0.9	HP turbine high temp protect trip
C:	S02674	<0-2>		HP turbine high temp protect trip code
D:				
E:	X02672	<0-1>		HP turbine high temp protect trip inhibit
F:				
G:	C02675	dgrC		HP protect 1 : intercept valve open
H:	C02676	dgrC		HP protect 2 : IP safety valve open
I:				
J:				
K:	C02677	bara		HP high temp protect off (IPC press low)
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.219 Page:2690 MD26 CONFIGURABLE PAGE**

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.220 Page:3000 MD300 HP TURBINE**

A:			
B:	V03000	%	HP turbine steam control valve pos
C:			
D:	V03001	<0-1>	HP turbine steam supply valve
E:	V03003	<0-1>	HP turbine steam outlet valve
F:	V03002	<0-1>	HP turbine steam shut off valve
G:			
H:	G03005	ton/h	HP turbine steam inlet flow
I:	P03006	bara	HP turbine steam press at control valve
J:	T03007	dgrC	HP turbine steam temp at control valve
K:	H03008	kJ/kg	HP turbine steam enth at control valve
L:	P03010	bara	HP turbine steam press at nozzles
M:	T03011	dgrC	HP turbine steam temp at nozzles
N:	P03014	bara	HP turbine steam outlet pressure
O:	T03015	dgrC	HP turbine steam outlet temp
P:	H03016	kJ/kg	HP turbine steam outlet enth
Q:	X03017	<0-1>	HP turbine steam outlet quality
R:			
S:	E03018	kW	HP turbine shaft power
T:	Z03020	%	HP turbine thermodyn efficiency

**2.221 Page:3001 MD300** IP TURBINE 1/2**

A:		
B:	V03030 %	IP turbine steam control valve pos
C:		
D:	V03031 <0-1>	IP turbine steam supply valve
E:	V03032 <0-1>	IP turbine steam shut off valve
F:		
G:	G03035 ton/h	IP turbine steam inlet flow (total)
H:		
I:	P03036 bara	IP turbine steam press at control valve
J:	T03037 dgrC	IP turbine steam temp at control valve
K:	H03038 kJ/kg	IP turbine steam enth at control valve
L:		
M:	P03040 bara	IP turbine steam press at nozzles
N:	T03041 dgrC	IP turbine steam temp at nozzles
O:		
P:		
Q:	E03043 kW	IP1 turbine shaft power
R:	E03044 kW	IP2 turbine shaft power
S:		
T:		

2.222 Page:3002 MD300 IP TURBINE 1 SECTIONS**

A:		
B:	G03050 ton/h	IP1 turbine section 1 steam flow
C:	G03051 ton/h	IP1 turbine section 1 extr flow (ext5)
D:	E03052 kW	IP1 turbine section 1 power
E:		
F:		
G:	G03060 ton/h	IP1 turbine section 2 steam flow
H:	G03061 ton/h	IP1 turbine section 2 extr flow (ext3)
I:	E03062 kW	IP1 turbine section 2 power
J:		
K:		
L:	G03070 ton/h	IP1 turbine section 3 steam flow
M:	E03072 kW	IP1 turbine section 3 power
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.223 Page:3003 MD260** IP TURBINE 1 EXTRACTIONS

A:			
B:	P03055	bara	IP1 turbine steam press at ext5
C:	T03056	dgrC	IP1 turbine steam temp at ext5
D:	H03057	kJ/kg	IP1 turbine steam enth at ext5
E:	X03058	<0-1>	IP1 turbine steam qual at ext5
F:			
G:	P03065	bara	IP1 turbine steam press at ext3
H:	T03066	dgrC	IP1 turbine steam temp at ext3
I:	H03067	kJ/kg	IP1 turbine steam enth at ext3
J:	X03068	<0-1>	IP1 turbine steam qual at ext3
K:			
L:	P03075	bara	IP1 turbine steam press at outlet (ext2)
M:	T03076	dgrC	IP1 turbine steam temp at outlet (ext2)
N:	H03077	kJ/kg	IP1 turbine steam enth at outlet (ext2)
O:	X03078	<0-1>	IP1 turbine steam qual at outlet (ext2)
P:			
Q:			
R:			
S:			
T:			

2.224 Page:3004 MD300** IP TURBINE 2 SECTIONS

A:			
B:	G03100	ton/h	IP2 turbine section 1 steam flow
C:	G03101	ton/h	IP2 turbine section 1 extr flow (ext5)
D:	E03102	kW	IP2 turbine section 1 power
E:			
F:			
G:	G03110	ton/h	IP2 turbine section 2 steam flow
H:	G03111	ton/h	IP2 turbine section 2 extr flow (ext4)
I:	E03112	kW	IP2 turbine section 2 power
J:			
K:			
L:	G03120	ton/h	IP2 turbine section 3 steam flow
M:	G03121	ton/h	IP2 turbine section 3 extr flow (ext3)
N:	E03122	kW	IP2 turbine section 3 power
O:			
P:			
Q:	G03130	ton/h	IP2 turbine section 4 steam flow
R:	E03132	kW	IP2 turbine section 4 power
S:			
T:			

**2.225 Page:3005 MD300** IP TURBINE 2
EXTRACTIONS**

A:			
B:	P03105	bara	IP2 turbine steam press at ext5
C:	T03106	dgrC	IP2 turbine steam temp at ext5
D:	H03107	kJ/kg	IP2 turbine steam enth at ext5
E:	X03108	<0-1>	IP2 turbine steam qual at ext5
F:			
G:	P03115	bara	IP2 turbine steam press at ext4
H:	T03116	dgrC	IP2 turbine steam temp at ext4
I:	H03117	kJ/kg	IP2 turbine steam enth at ext4
J:	X03118	<0-1>	IP2 turbine steam qual at ext4
K:			
L:	P03125	bara	IP2 turbine steam press at ext3
M:	T03126	dgrC	IP2 turbine steam temp at ext3
N:	H03127	kJ/kg	IP2 turbine steam enth at ext3
O:	X03128	<0-1>	IP2 turbine steam qual at ext3
P:			
Q:	P03135	bara	IP2 turbine steam press at outlet (ext1)
R:	T03136	dgrC	IP2 turbine steam temp at outlet (ext1)
S:	H03137	kJ/kg	IP2 turbine steam enth at outlet (ext1)
T:	X03138	<0-1>	IP2 turbine steam qual at outlet (ext1)

2.226 Page:3006 MD300 LP TURBINE 1**

A:			
B:	V03150	%	LP1 turbine steam control valve pos
C:			
D:	V03152	<0-1>	LP1 turbine steam shut off valve
E:			
F:	G03155	ton/h	LP1 turbine steam inlet flow
G:			
H:	P03156	bara	LP1 turbine steam press at control valve
I:	T03157	dgrC	LP1 turbine steam temp at control valve
J:	H03158	kJ/kg	LP1 turbine steam enth at control valve
K:			
L:	P03160	bara	LP1 turbine steam press at nozzles
M:	T03161	dgrC	LP1 turbine steam temp at nozzles
N:			
O:	E03163	kW	LP1 turbine shaft power
P:			
Q:	T03246	dgrC	L=--- H=150.0 LP turbine casing temperature
R:	G03240	ton/h	LP turbine coolw flow
S:	V03241	<0-1>	LP turbine coolw auto valve
T:			

2.227 Page:3007 MD300* * LP TURBINE 1 SECTIONS

A:		
B:	G03170 ton/h	LP1 turbine section 1 steam flow
C:	G03171 ton/h	LP1 turbine section 1 extr flow (ext0)
D:	E03172 kW	LP1 turbine section 1 power
E:		
F:		
G:	P03175 bara	LP1 turbine steam press at ext0
H:	T03176 dgrC	LP1 turbine steam temp at ext0
I:	H03177 kJ/kg	LP1 turbine steam enth at ext0
J:	X03178 <0-1>	LP1 turbine steam qual at ext0
K:		
L:	G03180 ton/h	LP1 turbine section 2 steam flow
M:	E03182 kW	LP1 turbine section 2 power
N:		
O:		
P:	P03185 bara	LP1 turbine steam press at outlet
Q:	T03186 dgrC	LP1 turbine steam temp at outlet
R:	H03187 kJ/kg	LP1 turbine steam enth at outlet
S:	X03188 <0-1>	LP1 turbine steam qual at outlet
T:	G03189 ton/h	LP1 turbine steam flow at outlet

2.228 Page:3008 MD300* * LP TURBINE 2

A:		
B:	V03200 %	LP2 turbine steam control valve pos
C:		
D:	V03202 <0-1>	LP2 turbine steam shut off valve
E:		
F:	G03205 ton/h	LP2 turbine steam inlet flow
G:		
H:	P03206 bara	LP2 turbine steam press at control valve
I:	T03207 dgrC	LP2 turbine steam temp at control valve
J:	H03208 kJ/kg	LP2 turbine steam enth at control valve
K:		
L:	P03210 bara	LP2 turbine steam press at nozzles
M:	T03211 dgrC	LP2 turbine steam temp at nozzles
N:		
O:	E03213 kW	LP2 turbine shaft power
P:		
Q:	G03242 ton/h	LP turbine steam outlet flow
R:	T03243 dgrC	LP turbine steam outlet temp
S:	H03244 kJ/kg	LP turbine steam outlet enth
T:		

**2.229 Page:3009 MD300** LP TURBINE 2 SECTIONS**

A:		
B:	G03220 ton/h	LP2 turbine section 1 steam flow
C:	G03221 ton/h	LP2 turbine section 1 extr flow (ext0)
D:	E03222 kW	LP2 turbine section 1 power
E:		
F:		
G:	P03225 bara	LP2 turbine steam press at ext0
H:	T03226 dgrC	LP2 turbine steam temp at ext0
I:	H03227 kJ/kg	LP2 turbine steam enth at ext0
J:	X03228 <0-1>	LP2 turbine steam qual at ext0
K:		
L:	G03230 ton/h	LP2 turbine section 2 steam flow
M:	E03232 kW	LP2 turbine section 2 power
N:		
O:		
P:	P03235 bara	LP2 turbine steam press at outlet
Q:	T03236 dgrC	LP2 turbine steam temp at outlet
R:	H03237 kJ/kg	LP2 turbine steam enth at outlet
S:	X03238 <0-1>	LP2 turbine steam qual at outlet
T:	G03239 ton/h	LP2 turbine steam flow at outlet

2.230 Page:3010 MD300 TURBINE EXTRACTION LINES (1)**

A:		
B:	V03250 <0-1>	Extraction 5 shut off valve
C:	G03252 ton/h	Extraction 5 steam flow
D:	T03253 dgrC	Extraction 5 steam temp
E:	H03254 kJ/kg	Extraction 5 steam enth
F:		
G:	V03260 <0-1>	Extraction 4 shut off valve
H:	G03262 ton/h	Extraction 4 steam flow
I:	T03263 dgrC	Extraction 4 steam temp
J:	H03264 kJ/kg	Extraction 4 steam enth
K:		
L:	V03270 <0-1>	Extraction 3.1 shut off valve
M:	V03271 <0-1>	Extraction 3.2 shut off valve
N:		
O:	G03272 ton/h	Extraction 3 steam flow
P:	T03273 dgrC	Extraction 3 steam temp
Q:	H03274 kJ/kg	Extraction 3 steam enth
R:		
S:		
T:		

2.231 Page:3011 MD300** TURBINE EXTRACTION LINES (2)

A:					
B:	G03282	ton/h		Extraction 2 steam flow	
C:	T03283	dgrC	L=---	H=200.0	Extraction 2 steam temp
D:	H03284	kJ/kg			Extraction 2 steam enth
E:					
F:	G03286	ton/h			Extraction 2 steam flow to HC2
G:	G03287	ton/h			Extraction 2 steam flow to LP2
H:					
I:	G03292	ton/h			Extraction 1 steam flow
J:	T03293	dgrC			Extraction 1 steam temp
K:	H03294	kJ/kg			Extraction 1 steam enth
L:					
M:	G03296	ton/h			Extraction 1 steam flow to HC1
N:	G03297	ton/h			Extraction 1 steam flow to LP1
O:					
P:					
Q:	G03302	ton/h			Extraction 0 steam flow
R:	T03303	dgrC			Extraction 0 steam temp
S:	H03304	kJ/kg			Extraction 0 steam enth
T:					

2.232 Page:3012 MD300** TURBINE AUXIL SYSTEMS

A:					
B:					
C:	X13070	<0-1>			Turbine el lub. oil pump
D:	X13071	<0-1>			Turbine el governing oil pump
E:	X13072	<0-1>			Turbine turning gear
F:	X13073	<0-1>			Turbine sealing steam system
G:	V13074	<0-1>			Turbine sealing steam sypply (main)
H:	X13077	<0-1>			Turbine steam lines / casing drain valves
I:					
J:					
K:	C13070	rpm			Turbine el lube pumps stop limit
L:	C13071	rpm			Turbine el lube pumps start limit
M:					
N:	Z03361	um	L=---	H=20.0	Turbine vibration
O:					
P:	P03370	bar	L=1.5	H=---	Turbine bearing lub oil pressure
Q:	T03371	dgrC	L=---	H=75.0	Turbine axial bearing temperature
R:	X03372	mm	L=---	H=0.6	Turbine axial bearing displacement
S:					
T:					

**2.233 Page:3013 MD300** TURBINE POWER (1)**

A:				
B:				
C:	N03350	rpm	L=--- H=3200.0	Turbine shaft speed
D:	E03351	kW		Turbine shaft power (net)
E:	Q03352	kNm		Turbine shaft torque (net)
F:				
G:				
H:	E03018	kW		HP turbine shaft power
I:				
J:	E03043	kW		IP1 turbine shaft power
K:	E03044	kW		IP2 turbine shaft power
L:				
M:	E03163	kW		LP1 turbine shaft power
N:	E03213	kW		LP2 turbine shaft power
O:				
P:				
Q:				
R:	E03355	kW		Turbine friction power (bearing/vent)
S:				
T:				

2.234 Page:3014 MD300 TURBINE POWER (2)**

A:				
B:				
C:				
D:				
E:	E03052	kW		IP1 turbine section 1 power
F:	E03062	kW		IP1 turbine section 2 power
G:	E03072	kW		IP1 turbine section 3 power
H:				
I:	E03102	kW		IP2 turbine section 1 power
J:	E03112	kW		IP2 turbine section 2 power
K:	E03122	kW		IP2 turbine section 3 power
L:	E03132	kW		IP2 turbine section 4 power
M:				
N:	E03172	kW		LP1 turbine section 1 power
O:	E03182	kW		LP1 turbine section 2 power
P:				
Q:	E03222	kW		LP2 turbine section 1 power
R:	E03232	kW		LP2 turbine section 2 power
S:				
T:				

2.235 Page:3015 MD300* * TURBINE EFFICIENCIES

A:		
B:		
C:		
D:	Z03020 %	HP turbine thermodyn efficiency
E:		
F:	Z03053 %	IP1 turbine section 1 efficiency
G:	Z03063 %	IP1 turbine section 2 efficiency
H:	Z03073 %	IP1 turbine section 3 efficiency
I:		
J:		
K:	Z03103 %	IP2 turbine section 1 efficiency
L:	Z03113 %	IP2 turbine section 2 efficiency
M:	Z03123 %	IP2 turbine section 3 efficiency
N:	Z03133 %	IP2 turbine section 4 efficiency
O:		
P:	Z03173 %	LP1 turbine section 1 efficiency
Q:	Z03183 %	LP1 turbine section 2 efficiency
R:		
S:	Z03223 %	LP2 turbine section 1 efficiency
T:	Z03233 %	LP2 turbine section 2 efficiency

2.236 Page:3020 MD300* * TURBINE SPEED CONTROL (1)

A:		
B:	X13000 <0-1>	HP turbine steam contr valve decr
C:	X13001 <0-1>	HP turbine steam contr valve incr
D:		
E:	P13010 %	Hydraulic press to governor (set point)
F:		
G:		
H:	N13021 rpm	Turbine speed controller set point
I:	Z13022 rpm	Turbine speed controller feed back
J:	Z13023 %	Turbine speed controller output (add)
K:		
L:	C13025 %/rpm	Turbine speed controller gain
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.237 Page:3021 MD300** TURBINE SPEED CONTROL
(2)**

A:		
B:	X13002 <0-1>	IP turbine steam contr valve decr
C:	X13003 <0-1>	IP turbine steam contr valve incr
D:		
E:	V03030 %	IP turbine steam control valve pos
F:		
G:		
H:	X13060 <0-1>	LP turbine steam contr valve remote
I:	X13004 <0-1>	LP turbine steam contr valve decr
J:	X13005 <0-1>	LP turbine steam contr valve incr
K:		
L:	V03150 %	LP1 turbine steam control valve pos
M:	V03200 %	LP2 turbine steam control valve pos
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.238 Page:3022 MD300 TURBINE MIN INLET
PRESS CONTROL**

A:		
B:	X13040 <0-1>	Turbine min inlet press contr auto
C:	P13041 bara	Turbine min inlet press contr set point
D:	Z13049 bara	Turbine min inlet press contr feed back
E:	Z13043 %	Turbine min inlet press contr output
F:	C13045 %/bar	Turbine min inlet press contr gain
G:		
H:	C13046 bara	Turbine min inlet press contr low limit
I:		
J:		
K:	X13050 <0-1>	Turbine min inlet press contr test
L:	C13051 bar	Turbine min inlet press contr step
M:	C13052 sec	Turbine min inlet press contr periode
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.239 Page:3023 MD300* * TURBINE CONDENSER VACUUM CONTROL

A:			
B:	X13055	<0-1>	Turbine vacuum protection on/off
C:			
D:	Z13056	%	Turbine vacuum protection output
E:			
F:	C13057	mbar	Turbine condenser pressure low
G:	C13058	mbar	Turbine condenser pressure high
H:			
I:	K13057	%	Turbine vacuum protection low
J:	K13058	%	Turbine vacuum protection high
K:			
L:	X24060	<0-1>	Partial vacuum breaking at turbine trip
M:	X24061	<0-1>	Partial vacuum breaking going on
N:			
O:	C24060	rpm	Partial vacuum breaking: low speed
P:	C24061	mbar	Partial vacuum breaking: high pressure
Q:	C24062	mbar	Partial vacuum breaking: low pressure
R:			
S:			
T:			

2.240 Page:3030 MD300* * TURBINE TRIP (1)

A:	X13080	<0-1>	L=---	H=0.9	Turbine trip
B:	S13081	<0-20>			Turbine trip code
C:	X13082	<0-1>			Turbine trip inhibit
D:					
E:	C13083	rpm			Turb trip 1 : overspeed
F:	C13084	bar			Turb trip 2 : LO pressure
G:	C13085	dgrC			Turb trip 3 : thrust bearing temp
H:	C13086	%			Turb trip 4 : vibration
I:	C13087	mm			Turb trip 5 : axial displacement
J:	C13088	dgrC			Turb trip 6 : HP turbine outlet temp
K:	C13089	dgrC			Turb trip 7 : IP turbine outlet temp
L:	C13090	bara			Turb trip 8 : HP turbine outlet press
M:	C13091	bara			Turb trip 9 : cold condenser press
N:	C13092	m			Turb trip 10 : cold condenser level
O:	C13093	bara			Turb trip 11 : hot condenser 1 press
P:	C13094	m			Turb trip 12 : hot condenser 1 level
Q:	C13095	bara			Turb trip 13 : hot condenser 2 press
R:	C13096	m			Turb trip 14 : hot condenser 2 level
S:	C13097	<0-2>			Turb trip 15 : generator excitation
T:	C13098	m			Turb trip 16 : boiler separator level

**2.241 Page:3031 MD300** TURBINE TRIP (2)**

A:
B: Z13100 % Turbine trip action signal
C:
D:
E: C13099 % Turb trip 19 : simulator action
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.242 Page:3090 MD30 CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.243 Page:3800 MD380* * ELECTRIC GENERATOR (1)

A:					
B:	V03800	kV	L=200.0	H=240.0	Line voltage
C:	F03801	Hz	L=48.0	H=52.0	Line frequency
D:					
E:	E03802	MW			Line power
F:	E03803	MVAr			Line power - reactive
G:	I03804	A	L=---	H=710.0	Line current
H:	Z03805	<0-1>	L=0.8	H=---	Line current cos(phi)
I:					
J:	V03810	kV	L=17.0	H=18.5	Generator voltage
K:	F03811	Hz	L=47.0	H=53.0	Generator frequency
L:	E03812	MW			Generator power
M:	E03813	MVAr			Generator power - reactive
N:	I03814	A			Generator current
O:	Z03815	<0-1>			Generator current cos(phi)
P:					
Q:	V03818	kV			Voltage at main circuit breaker
R:					
S:					
T:					

2.244 Page:3801 MD380* * ELECTRIC GENERATOR (2)

A:					
B:	Z03850	%	L=75.0	H=---	Generator field excitation
C:	X03851	<0-1>			Generator field excitation switch
D:					
E:	X03852	<0-1>			Generator field excitation increase
F:	X03853	<0-1>			Generator field excitation decrease
G:					
H:	X03856	<0-1>			Generator synchronizer : on
I:	X03857	<0-1>			Generator synchronizer : voltage ok
J:	X03858	<0-1>			Generator synchronizer : frequency ok
K:					
L:	V03820	kV			Block auxil voltage
M:	F03821	Hz			Block auxil frequency
N:	E03822	MW			Block auxil power
O:	E03823	MVAr			Block auxil power - reactive
P:	I03824	A			Block auxil current
Q:	Z03825	<0-1>			Block auxil current cos(phi)
R:					
S:	X03854	<0-3>			Generator stability indication
T:					

**2.245 Page:3802 MD380** MAIN CIRCUIT BREAKERS**

A:		
B:	X03830 <0-1>	Main circuit breaker
C:	X03832 <0-1>	Main circuit breaker connect
D:	X03833 <0-1>	Main circuit breaker disconnect
E:		
F:	X03834 <0-1>	Auxil circuit breaker
G:	X03835 <0-1>	Auxil circuit breaker connect
H:	X03836 <0-1>	Auxil circuit breaker disconnect
I:		
J:		
K:	X03840 <0-1>	Fast circuit breaker
L:	X03841 <0-1>	Fast circuit breaker connect
M:	X03842 <0-1>	Fast circuit breaker disconnect
N:		
O:		
P:	X03844 <0-1>	Bus tie breaker
Q:	X03845 <0-1>	Bus tie breaker connect
R:	X03846 <0-1>	Bus tie breaker disconnect
S:		
T:		

2.246 Page:3803 MD380 AUXIL CIRCUIT BREAKERS**

A:		
B:		
C:		
D:	X03870 <0-1>	Circuit breaker 1 : comb air fan 1
E:	X03871 <0-1>	Circuit breaker 1 : flue gas fan 1
F:	X03872 <0-1>	Circuit breaker 1 : feedw pump 1
G:	X03873 <0-1>	Circuit breaker 1 : feedw pump 2
H:	X03874 <0-1>	Circuit breaker 1 : DHW supply pump 1
I:	X03875 <0-1>	Circuit breaker 1 : DHW return pump 1
J:	X03876 <0-1>	Circuit breaker 1 : 400 V pumps no 1
K:		
L:		
M:	X03880 <0-1>	Circuit breaker 2 : comb air fan 2
N:	X03881 <0-1>	Circuit breaker 2 : flue gas fan 2
O:	X03882 <0-1>	Circuit breaker 2 : feedw pump 3
P:	X03883 <0-1>	Circuit breaker 2 : DHW supply pump 2
Q:	X03884 <0-1>	Circuit breaker 2 : DHW return pump 2
R:	X03885 <0-1>	Circuit breaker 2 : 400 V pumps no 2/3
S:	X03886 <0-1>	Circuit breaker 2 : denox/desox plant
T:		

2.247 Page:3804 MD380** ELECTRIC POWER CONSUMPTION

A:		
B:		
C:		
D:	E13870 kW	El supply power 1 : comb air fan 1
E:	E13871 kW	El supply power 1 : flue gas fan 1
F:	E13872 kW	El supply power 1 : feedw pump 1
G:	E13873 kW	El supply power 1 : feedw pump 2
H:	E13874 kW	El supply power 1 : DHW supply pump 1
I:	E13875 kW	El supply power 1 : DHW return pump 1
J:	E13876 kW	El supply power 1 : 400 V pumps no 1
K:		
L:		
M:	E13880 kW	El supply power 2 : comb air fan 2
N:	E13881 kW	El supply power 2 : flue gas fan 2
O:	E13882 kW	El supply power 2 : feedw pump 3
P:	E13883 kW	El supply power 2 : DHW supply pump 2
Q:	E13884 kW	El supply power 2 : DHW return pump 2
R:	E13885 kW	El supply power 2 : 400 V pumps no 2/3
S:	E13886 kW	El supply power 2 : denox/desox plant
T:		

2.248 Page:3810 MD380** EXTERNAL ELECTRIC GRID (1)

A:		
B:	X03805 <0-1>	Electric grid model active
C:		
D:	E03805 MW	Electric grid load (target) (input)
E:	E03806 MW	Electric grid load (actual)
F:	E03807 MW	Electric grid power (total)
G:	E03808 MW	Electric grid power (External)
H:	E03809 MW	Electric grid power (TPP)
I:		
J:		
K:	C03805 MW	Electric grid power limit (max)
L:	C03806 MW	Electric grid power limit (min)
M:		
N:	C03807 MW/min	Electric grid load increase rate
O:	C03808 MW/min	Electric grid load decrease rate
P:		
Q:		
R:		
S:		
T:		

**2.249 Page:3811 MD380** EXTERNAL ELECTRIC GRID
(2)**

A:				
B:	X03806	<0-1>		Fixed electric grid conditions
C:				
D:	V03800	kV	L=200.0 H=240.0	Line voltage
E:	F03801	Hz	L=48.0 H=52.0	Line frequency
F:	X03800	<0-1>		Line voltage adjust enable
G:	X03801	<0-1>		Line voltage adjust step length
H:	C03800	kV		Line voltage adjust step
I:	K03800	kV		Line voltage adjust min limit
J:	K03801	kV		Line voltage adjust max limit
K:	X03802	<0-1>		Line frequency adjust enable
L:	X03803	<0-1>		Line frequency adjust step length
M:	C03802	Hz		Line frequency adjust step
N:	K03802	Hz		Line frequency adjust min limit
O:	K03803	Hz		Line frequency adjust max limit
P:				
Q:				
R:				
S:				
T:				

2.250 Page:3830 MD380 MAIN CIRCUIT BREAKER
TRIP**

A:				
B:	X03831	<0-1>	L=--- H=0.9	Main circuit breaker trip
C:	S03829	<0-6>		Main circuit breaker trip code
D:				
E:	X03828	<0-1>		Main circuit breaker trip inhibit
F:				
G:				
H:				
I:				
J:				
K:	C03890	A		MCB trip limit 1 : overload (current)
L:	C03891	MW		MCB trip limit 2 : underload (rev pow)
M:	C03892	kV		MCB trip limit 3 : low voltage
N:	C03893	Hz		MCB trip limit 4 : low frequency
O:	C03894	<0-16>		MCB trip limit 5 : turbine trip
P:				
Q:	K03891	sec		MCB trip limit 2 : underload tc
R:				
S:				
T:				

2.251 Page:3890 MD38 CONFIGURABLE PAGE**

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.252 Page:4000 MD400 COLD CONDENSER (1)**

A:					
B:	P04020	mbar	L=---	H=100.0	Cold condenser pressure
C:	P04021	mbar			Cold condenser air press (partial)
D:	P04022	mbar			Cold condenser steam press (partial)
E:	Q04037	MW			Cold condenser heat transfer
F:	T04023	dgrC			Cold condenser condensing temp
G:					
H:	L04024	m	L=0.3	H=0.8	Cold condenser hotwell water level
I:	T04025	dgrC			Cold condenser hotwell water temp
J:	X04028	micS/m	L=---	H=70.0	Cold condenser hotwell conductivity
K:					
L:	P04029	bar	L=0.4	H=---	Cold condenser coolw inlet pressure
M:	G04030	ton/h			Cold condenser coolw inlet flow
N:	T04031	dgrC			Cold condenser coolw inlet temp
O:	H04032	kJ/kg			Cold condenser coolw inlet enth
P:					
Q:	T04035	dgrC			Cold condenser coolw outlet temp
R:	H04036	kJ/kg			Cold condenser coolw outlet enth
S:					
T:	C14030	<0-4>			Cold condenser tube number factor (test)

**2.253 Page:4001 MD400** COLD CONDENSER (2)**

A:		
B:	G04000 ton/h	Cold condenser inlet steam from LP1 turb
C:	G04001 ton/h	Cold condenser inlet steam from LP2 turb
D:	G04002 ton/h	Cold condenser inlet coolw from LP turb
E:		
F:	G04005 ton/h	Cold condenser filling flow
G:	V04004 <0-1>	Cold condenser filling valve
H:	C04005 m	Cold condenser filling valve open
I:	C04006 m	Cold condenser filling valve close
J:		
K:		
L:	V04012 <0-1>	Cold condenser LP1 feed htr drain valve
M:	G04013 ton/h	Cold condenser LP1 feed htr drain flow
N:		
O:	V04014 <0-1>	Cold condenser recirc shut off valve
P:	G04015 ton/h	Cold condenser recirc condensate flow
Q:		
R:	G04040 kg/h	Cold condenser air in-flow (gland leak)
S:	G04041 kg/h	Cold condenser air out-flow (vac pumps)
T:		

2.254 Page:4002 MD400 COLD CONDENSER VACUUM PUMPS**

A:		
B:	X04050 <0-1>	Cold condenser vacuum pump 1 auto
C:	X04051 <0-1>	Cold condenser vacuum pump 2 auto
D:		
E:	R04052 <0-1>	Cold condenser vacuum pump 1 s/s
F:	V04053 <0-1>	Cold condenser vacuum pump 1 eject valve
G:	G04054 kg/h	Cold condenser vacuum pump 1 air flow
H:	E04055 kW	Cold condenser vacuum pump 1 power
I:		
J:	R04056 <0-1>	Cold condenser vacuum pump 2 s/s
K:	V04057 <0-1>	Cold condenser vacuum pump 2 eject valve
L:	G04058 kg/h	Cold condenser vacuum pump 2 air flow
M:	E04059 kW	Cold condenser vacuum pump 2 power
N:		
O:	V04060 <0-1>	Cold cond vacuum pump HC1/2 x-over valve
P:	V04061 <0-1>	Cold cond coolw system air removal valve
Q:		
R:	R04062 <0-1>	Vacuum pump seal water pump 1 s/s
S:	R04063 <0-1>	Vacuum pump seal water pump 2 s/s
T:		

2.255 Page:4004 MD400** COLD CONDENSER MAIN COOLW PUMPS

A:		
B:	X04070 <0-2>	Cold cond main coolw pump 1 auto
C:	R04071 <0-1>	Cold cond main coolw pump 1 s/s
D:		
E:	V04073 <0-1>	Cold cond main coolw pump 1 outlet valve
F:	G04074 ton/h	Cold cond main coolw pump 1 flow
G:	E04075 kW	Cold cond main coolw pump 1 power
H:	Z04076 %	Cold cond main coolw pump 1 eff
I:		
J:		
K:	X04080 <0-2>	Cold cond main coolw pump 2 auto
L:	R04081 <0-1>	Cold cond main coolw pump 2 s/s
M:		
N:	V04083 <0-1>	Cold cond main coolw pump 2 outlet valve
O:	G04084 ton/h	Cold cond main coolw pump 2 flow
P:	E04085 kW	Cold cond main coolw pump 2 power
Q:	Z04086 %	Cold cond main coolw pump 2 eff
R:		
S:	C14031 <0-8>	Cold cond main coolw pump const (test)
T:		

2.256 Page:4005 MD400** COLD CONDENSER AUXIL COOLW PUMP

A:		
B:		
C:	R04090 <0-1>	Cold cond auxil coolw pump s/s
D:		
E:	V04091 <0-1>	Cold cond auxil coolw pump outlet valve
F:	V04092 %	Cold cond auxil coolw pump return valve
G:		
H:	G04093 ton/h	Cold cond auxil coolw pump flow
I:	E04094 kW	Cold cond auxil coolw pump power
J:	Z04095 %	Cold cond auxil coolw pump eff
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.257 Page:4006 MD400** MAIN COLD CONDENSATE PUMPS**

A:		
B:	X14001 <0-2>	Main cold condensate pump 1 auto
C:	R14002 <0-1>	Main cold condensate pump 1 s/s
D:	V14003 <0-1>	Main cold condensate pump 1 inlet valve
E:	V14004 <0-1>	Main cold condensate pump 1 outlet valve
F:		
G:	G14006 ton/h	Main cold condensate pump 1 flow
H:	E14007 kW	Main cold condensate pump 1 power
I:	Z14008 %	Main cold condensate pump 1 eff
J:		
K:		
L:	X14011 <0-2>	Main cold condensate pump 2 auto
M:	R14012 <0-1>	Main cold condensate pump 2 s/s
N:	V14013 <0-1>	Main cold condensate pump 2 inlet valve
O:	V14014 <0-1>	Main cold condensate pump 2 outlet valve
P:		
Q:	G14016 ton/h	Main cold condensate pump 2 flow
R:	E14017 kW	Main cold condensate pump 2 power
S:	Z14018 %	Main cold condensate pump 2 eff
T:		

2.258 Page:4007 MD400 AUXIL COLD CONDENSATE PUMPS**

A:		
B:	X14021 <0-2>	Main cold condensate pump 3 auto
C:	R14022 <0-1>	Main cold condensate pump 3 s/s
D:	V14023 <0-1>	Main cold condensate pump 3 inlet valve
E:	V14024 <0-1>	Main cold condensate pump 3 outlet valve
F:		
G:	G14026 ton/h	Main cold condensate pump 3 flow
H:	E14027 kW	Main cold condensate pump 3 power
I:	Z14028 %	Main cold condensate pump 3 eff
J:		
K:		
L:	X14031 <0-1>	Auxil cold condensate pump auto
M:	R14032 <0-1>	Auxil cold condensate pump s/s
N:	V14033 <0-1>	Auxil cold condensate pump inlet valve
O:	V14034 <0-1>	Auxil cold condensate pump outlet valve
P:		
Q:	G14036 ton/h	Auxil cold condensate pump flow
R:	E14037 kW	Auxil cold condensate pump power
S:	Z14038 %	Auxil cold condensate pump eff
T:		

2.259 Page:4008 MD400* * LP FEED HEATER 0

A:	G14041	ton/h			LP feed heater 0 condensate inlet flow
B:	T14042	dgrC			LP feed heater 0 condensate inlet temp
C:	H14043	kJ/kg			LP feed heater 0 condensate inlet enth
D:	T14045	dgrC			LP feed heater 0 condensate outlet temp
E:	H14046	kJ/kg			LP feed heater 0 condensate outlet enth
F:					
G:	V14051	<0-1>			LP feed heater 0 air vent valve
H:	V14052	<0-1>			LP feed heater 0 steam shut off valve
I:	G14053	ton/h			LP feed heater 0 steam inlet flow
J:	T14054	dgrC			LP feed heater 0 steam inlet temp
K:	H14055	kJ/kg			LP feed heater 0 steam inlet enth
L:					
M:	P14060	bara			LP feed heater 0 pressure
N:	P14061	bara			LP feed heater 0 air press (partial)
O:	T14062	dgrC			LP feed heater 0 condensing temp
P:	L14063	m	L=0.2	H=0.7	LP feed heater 0 drain level
Q:	G14064	ton/h			LP feed heater 0 drain outlet flow
R:	T14065	dgrC			LP feed heater 0 drain outlet temp
S:	H14066	kJ/kg			LP feed heater 0 drain outlet enth
T:	Q14067	MW			LP feed heater 0 transfered heat

2.260 Page:4009 MD400* * COLD CONDENSATE LINE

A:					
B:					
C:	P14070	bara	L=1.4	H=---	Cold condensate line pressure
D:	T14071	dgrC			Cold condensate line temp
E:	H14072	kJ/kg			Cold condensate line enth
F:					
G:	G14076	ton/h			Cold condensate flow to condensate tank
H:	G14077	ton/h			Cold condensate flow to cold condenser
I:	G14078	ton/h			Cold condensate flow LP turbine cooling
J:	G14079	ton/h			Cold condensate flow to steam dump
K:					
L:	V04067	<0-1>			LP turbine casing coolw supply valve
M:					
N:					
O:					
P:	G04043	ton/h			Gland steam condenser inlet flow
Q:					
R:	Q14043	MW			Gland steam condenser heat transfer
S:					
T:					



2.261 Page:4020 MD400** COLD CONDENSER HOTWELL LEVEL CONTROL

A:		
B:		
C:	X24020 <0-1>	Cold condenser level contr auto
D:	L24021 m	Cold condenser level contr set point
E:	Z24022 m	Cold condenser level contr feed back
F:	Z24023 %	Cold condenser level contr output
G:		
H:	C24025 %/m	Cold condenser level contr gain
I:	C24026 sec	Cold condenser level contr integr time
J:		
K:	V24035 %	Cold condenser level control valve pos
L:	V24036 %	Cold condenser level recirc valve pos
M:		
N:	C24037 sec	Cold condenser level control valve tc
O:	C24038 sec	Cold condenser level recirc valve tc
P:		
Q:	X24030 <0-1>	Cold condenser level contr test
R:	C24031 m	Cold condenser level contr step
S:	C24032 sec	Cold condenser level contr periode
T:		

2.262 Page:4021 MD400** LP FEED HEATER 0 LEVEL CONTROL

A:		
B:		
C:	X24000 <0-1>	LP feed heater 0 level contr auto
D:	L24001 m	LP feed heater 0 level contr set point
E:	Z24002 m	LP feed heater 0 level contr feed back
F:	Z24003 %	LP feed heater 0 level contr output
G:		
H:	C24005 %/m	LP feed heater 0 level contr gain
I:	C24006 sec	LP feed heater 0 level contr integr time
J:		
K:	V24015 %	LP feed heater 0 level control valve pos
L:	C24016 sec	LP feed heater 0 level control valve tc
M:		
N:		
O:		
P:		
Q:	X24010 <0-1>	LP feed heater 0 level contr test
R:	C24011 m	LP feed heater 0 level contr step
S:	C24012 sec	LP feed heater 0 level contr periode
T:		

2.263 Page:4030 MD400** COLD CONDENSER VACUUM BREAKER TRIP

A:					
B:					
C:	V04064	<0-1>		Cold condenser vacuum breaker valve	
D:					
E:					
F:	X04065	<0-1>	L=---	H=0.9	Cold condenser vacuum breaker trip
G:	S04066	<0-3>			Cold condenser vacuum breaker trip code
H:					
I:	X04044	<0-1>			Cold condenser vacuum breaker trip inhibit
J:					
K:					
L:					
M:	C04045	m			Vacuum breaker trip limit 1 : LP0 level
N:	C04046	m			Vacuum breaker trip limit 2 : LP1 level
O:	C04047	m			Vacuum breaker trip limit 3 : LP2 level
P:					
Q:	X24060	<0-1>			Partial vacuum breaking at turbine trip
R:					
S:					
T:					

2.264 Page:4040 MD400** MAIN COOLW PUMP CONTROL DATA

A:					
B:					
C:	X13803	<0-2>	L=---	H=1.9	Auto start : Main coolw pump 1
D:	X13804	<0-2>	L=---	H=1.9	Auto start : Main coolw pump 2
E:					
F:	C13803	bar			Auto start press limit (coolw)
G:	C13804	mbar			Auto start press limit (vacuum)
H:	C13805	sec			Auto start delay
I:					
J:	Y13803	<0-1>			Auto-Auto (only if auxil pump on)
K:	Z13803	%			Auto-Auto command (LP damper/MCB)
L:	K13803	%			Auto-Auto start value
M:	K13804	%			Auto-Auto stop value
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.265 Page:4041 MD400** COLD CONDENSATE PUMP CONTROL DATA**

A:
 B: X13806 <0-2> L=--- H=1.9 Auto start : Cold condensate pump 1
 C: X13807 <0-2> L=--- H=1.9 Auto start : Cold condensate pump 2
 D: X13808 <0-2> L=--- H=1.9 Auto start : Cold condensate pump 3
 E:
 F: C13806 bara Auto start press limit (condensate)
 G: C13807 m Auto start level limit (hotwell)
 H: C13808 sec Auto start delay
 I:
 J: Y13806 <0-1> Auto-Auto (only if auxil pump on)
 K: Z13806 % Auto-Auto command (LP damper/MCB)
 L: K13806 % Auto-Auto start value
 M: K13807 % Auto-Auto stop value
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.266 Page:4042 MD400 CONDENSER VACUUM PUMP CONTROL DATA**

A:
 B:
 C: X13816 <0-2> L=--- H=1.9 Auto start : Main vacuum pump 1
 D: X13817 <0-2> L=--- H=1.9 Auto start : Main vacuum pump 2
 E:
 F: Z13816 kW Auto start command (el power sum)
 G:
 H: C13816 kW Auto start power limit
 I: C13817 sec Auto start delay
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.267 Page:4090 MD40 CONFIGURABLE PAGE**

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.268 Page:4100 MD410 CONDENSATE TANK (1)**

A:					
B:	P04140	bara	L=---	H=0.9	Condensate tank pressure
C:	P04141	bara			Condensate tank air press (partial)
D:					
E:	L04145	m	L=1.0	H=2.0	Condensate tank water level
F:	T04146	dgrC			Condensate tank water temp
G:	H04147	kJ/kg			Condensate tank water enth
H:	X04147	micS/m			Condensate tank water purity
I:					
J:	G04149	ton/h	L=---	H=0.1	Condensate tank safety valve flow
K:					
L:	R04150	<0-1>			Condensate tank vacuum pump s/s
M:	V04151	<0-1>			Condensate tank vacuum pump suction valve
N:	G04152	kg/h			Condensate tank vacuum pump air flow
O:	E04153	kW			Condensate tank vacuum pump power
P:					
Q:	V04120	<0-1>			CT MD water inlet shut off valve
R:	G04121	ton/h			CT MD water inlet flow
S:	T04122	dgrC			CT MD water inlet temp
T:	H04123	kJ/kg			CT MD water inlet enth

**2.269 Page:4101 MD410** CONDENSATE TANK (2)**

A:		
B:	V04100 <0-1>	CT cold condensate inlet shut off valve
C:	G04101 ton/h	CT cold condensate inlet flow
D:	T04102 dgrC	CT cold condensate inlet temp
E:	H04103 kJ/kg	CT cold condensate inlet enth
F:		
G:	V04105 <0-1>	CT hot condensate inlet shut off valve
H:	G04106 ton/h	CT hot condensate inlet flow
I:	T04107 dgrC	CT hot condensate inlet temp
J:	H04108 kJ/kg	CT hot condensate inlet enth
K:		
L:	V04110 <0-1>	CT DH1 condensate inlet shut off valve
M:	G04111 ton/h	CT DH1 condensate inlet flow
N:	T04112 dgrC	CT DH1 condensate inlet temp
O:	H04113 kJ/kg	CT DH1 condensate inlet enth
P:		
Q:	V04115 <0-1>	CT DH2 condensate inlet shut off valve
R:	G04116 ton/h	CT DH2 condensate inlet flow
S:	T04117 dgrC	CT DH2 condensate inlet temp
T:	H04118 kJ/kg	CT DH2 condensate inlet enth

2.270 Page:4102 MD410 CONDENSATE CLEANING PLANT ++**

A:		
B:	R04124 <0-1>	Condensate cleaning filter pump s/s
C:		
D:	R04125 <0-1>	Condensate cleaning circ pump s/s
E:	V04126 <0-1>	Condensate cleaning circ pump valve
F:	G04127 ton/h	Condensate cleaning circ pump flow
G:	P04128 bara	Condensate cleaning circ pump press
H:	E04129 kW	Condensate cleaning circ pump power
I:	V04130 <0-1>	Condensate cleaning return flow valve
J:		
K:		
L:	V04132 <0-1>	Cold condenser filling water supply valve
M:	G04133 ton/h	Cold condenser filling water flow
N:		
O:	V04134 <0-1>	Hot condenser 2 filling water supply valve
P:	G04135 ton/h	Hot condenser 2 filling water flow
Q:		
R:	V04240 <0-1>	Condensate line sealw tank supply valve
S:	G04241 ton/h	Condensate line sealw tank supply flow
T:		

2.271 Page:4104 MD410* * MAIN CONDENSATE PUMPS (1)

A:	P04160	bara	L=18.0	H=---	Main condensate pump discharge pressure
B:	G04161	ton/h			Main condensate pump discharge flow
C:					
D:	X14101	<0-2>			Main condensate pump 1 auto
E:	R14102	<0-1>			Main condensate pump 1 s/s
F:	V14103	<0-1>			Main condensate pump 1 inlet valve
G:	V14104	<0-1>			Main condensate pump 1 outlet valve
H:	V14105	<0-1>			Main condensate pump 1 sealw valve
I:	G14106	ton/h			Main condensate pump 1 flow
J:	E14107	kW			Main condensate pump 1 power
K:	Z14108	%			Main condensate pump 1 eff
L:					
M:	X14111	<0-2>			Main condensate pump 2 auto
N:	R14112	<0-1>			Main condensate pump 2 s/s
O:	V14113	<0-1>			Main condensate pump 2 inlet valve
P:	V14114	<0-1>			Main condensate pump 2 outlet valve
Q:	V14115	<0-1>			Main condensate pump 2 sealw valve
R:	G14116	ton/h			Main condensate pump 2 flow
S:	E14117	kW			Main condensate pump 2 power
T:	Z14118	%			Main condensate pump 2 eff

2.272 Page:4105 MD410* * MAIN CONDENSATE PUMPS (2)

A:					
B:	G04162	ton/h			Condensate flow to LP feed heaters
C:					
D:	X14121	<0-2>			Main condensate pump 3 auto
E:	R14122	<0-1>			Main condensate pump 3 s/s
F:	V14123	<0-1>			Main condensate pump 3 inlet valve
G:	V14124	<0-1>			Main condensate pump 3 outlet valve
H:	V14125	<0-1>			Main condensate pump 3 sealw valve
I:	G14126	ton/h			Main condensate pump 3 flow
J:	E14127	kW			Main condensate pump 3 power
K:	Z14128	%			Main condensate pump 3 eff
L:					
M:					
N:	V04136	<0-1>			CT LP stgen supply valve
O:	V04137	<0-1>			CT DHW supply valve (make up)
P:					
Q:	G04163	ton/h			Condensate flow to LP steam generator
R:	G04164	ton/h			Condensate flow to DHW system (dump)
S:					
T:					

**2.273 Page:4120 MD410** CONDENSATE TANK LEVEL CONTROL**

A:			
B:	X14140	<0-1>	Condensate tank level contr auto
C:	L14141	m	Condensate tank level contr set point
D:	Z14142	m	Condensate tank level contr feed back
E:	Z14143	%	Condensate tank level contr output
F:	Z14144	m	Condensate tank level contr deviation
G:	C14145	%/m	Condensate tank level contr gain
H:	C14146	sec	Condensate tank level contr integr time
I:	C14147	sec	Condensate tank level contr deriv time
J:	C14148	<0-8>	Condensate tank level contr deriv range
K:	Z14157	ton/h	Condensate tank level contr ff signal
L:	C14158	%/ton/h	Condensate tank level contr ff gain
M:			
N:	V14155	%	Condensate tank level control valve pos
O:	C14156	sec	Condensate tank level control valve tc
P:			
Q:	X14150	<0-1>	Condensate tank level contr test
R:	C14151	m	Condensate tank level contr step
S:	C14152	sec	Condensate tank level contr periode
T:			

2.274 Page:4130 MD410 MAIN CONDENSATE PUMP TRIP**

A:					
B:	X14130	<0-1>	L=---	H=0.9	Main condensate pump trip
C:	S14131	<0-2>			Main condensate pump trip code
D:					
E:	X14132	<0-1>			Main condensate pump trip inhibit
F:					
G:					
H:	C14134	m			Pump trip 1 : condensate tank level low
I:	C14135	m			Pump trip 2 : feedw deaerator level high
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.275 Page:4140 MD410** MAIN CONDENSATE PUMP CONTROL DATA

A:
B: X13813 <0-2> L=--- H=1.9 Auto start : Main condensate pump 1
C: X13814 <0-2> L=--- H=1.9 Auto start : Main condensate pump 2
D: X13815 <0-2> L=--- H=1.9 Auto start : Main condensate pump 3
E:
F: Z13813 bara Auto start command (condensate press)
G:
H: C13813 bara Auto start pressure limit
I: C13814 sec Auto start delay
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.276 Page:4190 MD41** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.277 Page:4200 MD420** CONDENSATE FILTER**

A:				
B:	P04214	bar		Condensate line inlet pressure
C:	T04215	dgrC		Condensate line inlet temp
D:				
E:	G04200	ton/h		Condensate filter supply line flow
F:	G04201	ton/h		Condensate filter bypass flow
G:	G04202	ton/h		Condensate filter flow
H:	G04203	ton/h		Condensate direct line flow
I:				
J:	V04205	%		Condensate filter supply line valve
K:	V04206	%		Condensate direct line valve
L:				
M:	P04208	bar	L=--- H=1.5	Condensate filter diff pressure
N:				
O:				
P:	R04210	<0-1>		Condensate filter circ pump 1 run
Q:	R04211	<0-1>		Condensate filter circ pump 2 run
R:				
S:				
T:				

2.278 Page:4201 MD420 LP FEED HEATER 1 (1)**

A:				
B:	V14202	<0-1>		LP feed heater 1 steam shut off valve
C:	G14203	ton/h		LP feed heater 1 steam inlet flow
D:	T14204	dgrC		LP feed heater 1 steam inlet temp
E:	H14205	kJ/kg		LP feed heater 1 steam inlet enth
F:				
G:	G14210	ton/h		LP feed heater 1 condensate inlet flow
H:	T14211	dgrC		LP feed heater 1 condensate inlet temp
I:	H14212	kJ/kg		LP feed heater 1 condensate inlet enth
J:				
K:	T14214	dgrC		LP feed heater 1 condensate outlet temp
L:	H14215	kJ/kg		LP feed heater 1 condensate outlet enth
M:				
N:				
O:	G14216	ton/h		LP feed heater 1 drain inlet flow
P:	T14217	dgrC		LP feed heater 1 drain inlet temp
Q:	H14218	kJ/kg		LP feed heater 1 drain inlet enth
R:				
S:	L14219	m	L=0.1 H=1.0	LP feed heater 1 drain level
T:				

2.279 Page:4202 MD420** LP FEED HEATER 1 (2)

A:		
B:	P14224	bara LP feed heater 1 pressure
C:	P14225	bara LP feed heater 1 air press (partial)
D:		
E:	V14201	<0-1> LP feed heater 1 air vent valve
F:	T14227	dgrC LP feed heater 1 condensing temp
G:	Q14228	MW LP feed heater 1 transfered heat
H:		
I:	G14248	ton/h LP feed heater 1 drain flow to CC
J:	G14249	ton/h LP feed heater 1 drain flow to HC1
K:	V14220	<0-1> LP feed heater 1 drain outlet shut off valve
L:	G14221	ton/h LP feed heater 1 drain outlet flow
M:	T14222	dgrC LP feed heater 1 drain outlet temp
N:	H14223	kJ/kg LP feed heater 1 drain outlet enth
O:		
P:	X14247	<0-1> LP feed heater 1 emerg drain auto
Q:	V14247	<0-1> LP feed heater 1 emerg drain valve
R:	C14247	m LP feed heater 1 emerg drain on
S:	C14248	m LP feed heater 1 emerg drain off
T:		

2.280 Page:4203 MD420** LP FEED HEATER 2 (1)

A:		
B:	V24202	<0-1> LP feed heater 2 steam shut off valve
C:	G24203	ton/h LP feed heater 2 steam inlet flow
D:	T24204	dgrC LP feed heater 2 steam inlet temp
E:	H24205	kJ/kg LP feed heater 2 steam inlet enth
F:		
G:	G24210	ton/h LP feed heater 2 condensate inlet flow
H:	T24211	dgrC LP feed heater 2 condensate inlet temp
I:	H24212	kJ/kg LP feed heater 2 condensate inlet enth
J:		
K:	T24214	dgrC LP feed heater 2 condensate outlet temp
L:	H24215	kJ/kg LP feed heater 2 condensate outlet enth
M:		
N:		
O:	G24216	ton/h LP feed heater 2 drain inlet flow
P:	T24217	dgrC LP feed heater 2 drain inlet temp
Q:	H24218	kJ/kg LP feed heater 2 drain inlet enth
R:		
S:	L24219	m L=0.1 H=1.1 LP feed heater 2 drain level
T:		

**2.281 Page:4204 MD420** LP FEED HEATER 2 (2)**

A:		
B:	P24224	bara LP feed heater 2 pressure
C:	P24225	bara LP feed heater 2 air press (partial)
D:		
E:	V24201	<0-1> LP feed heater 2 air vent valve
F:		
G:	T24227	dgrC LP feed heater 2 condensing temp
H:		
I:	Q24228	MW LP feed heater 2 transfered heat
J:		
K:	V24220	<0-1> LP feed heater 2 drain outlet shut off valve
L:	G24221	ton/h LP feed heater 2 drain outlet flow (to LP1)
M:	T24222	dgrC LP feed heater 2 drain outlet temp
N:	H24223	kJ/kg LP feed heater 2 drain outlet enth
O:		
P:	X24247	<0-1> LP feed heater 2 emerg drain auto
Q:	V24247	<0-1> LP feed heater 2 emerg drain valve
R:	C24247	m LP feed heater 2 emerg drain on
S:	C24248	m LP feed heater 2 emerg drain off
T:		

2.282 Page:4205 MD420 LP FEED HEATER 3 (1)**

A:		
B:	V34202	<0-1> LP feed heater 3 steam shut off valve
C:	G34203	ton/h LP feed heater 3 steam inlet flow
D:	T34204	dgrC LP feed heater 3 steam inlet temp
E:	H34205	kJ/kg LP feed heater 3 steam inlet enth
F:		
G:	G34210	ton/h LP feed heater 3 condensate inlet flow
H:	T34211	dgrC LP feed heater 3 condensate inlet temp
I:	H34212	kJ/kg LP feed heater 3 condensate inlet enth
J:	T34215	dgrC LP feed heater 3 subcooler outlet temp
K:	T34214	dgrC LP feed heater 3 condensate outlet temp
L:	H34215	kJ/kg LP feed heater 3 condensate outlet enth
M:		
N:		
O:	G34216	ton/h LP feed heater 3 drain inlet flow
P:	T34217	dgrC LP feed heater 3 drain inlet temp
Q:	H34218	kJ/kg LP feed heater 3 drain inlet enth
R:		
S:	L34219	m L=0.1 H=1.2 LP feed heater 3 drain level
T:		

2.283 Page:4206 MD420* * LP FEED HEATER 3 (2)

A:					
B:	P34224	bara	L=---	H=10.0	LP feed heater 3 pressure
C:	P34225	bara			LP feed heater 3 air press (partial)
D:					
E:	V34201	<0-1>			LP feed heater 3 air vent valve
F:					
G:	T34227	dgrC			LP feed heater 3 condensing temp
H:					
I:	Q34228	MW			LP feed heater 3 transfered heat
J:					
K:	V34220	<0-1>			LP feed heater 3 drain subc outlet valve
L:	G34221	ton/h			LP feed heater 3 drain subc outlet flow
M:	T34222	dgrC			LP feed heater 3 drain subc outlet temp
N:	H34223	kJ/kg			LP feed heater 3 drain subc outlet enth
O:					
P:					
Q:	V34252	<0-1>			LP feed heater 3 safety valve
R:	G34253	ton/h	L=---	H=0.1	LP feed heater 3 safety valve flow
S:					
T:					

2.284 Page:4210 MD420* * LP FEED HEATERS MICS PARAMETERS

A:					
B:					
C:	C14201	<0-2>			LP feed heater 1 heat area factor
D:	C24201	<0-2>			LP feed heater 2 heat area factor
E:	C34201	<0-2>			LP feed heater 3 heat area factor
F:					
G:	C14001	<0-2>			LP feed heater 0 heat area factor
H:					
I:					
J:					
K:	C14202	m			LP feed heater 1 geo height rel CC
L:	C14203	m			LP feed heater 1 geo height rel HC1
M:	C24202	m			LP feed heater 2 geo height rel LP1
N:	C34202	m			LP feed heater 3 geo height rel LP2
O:					
P:					
Q:					
R:					
S:					
T:					

**2.285 Page:4220 MD420** LP FEED HEATER 1 LEVEL CONTROL**

A:		
B:		
C:	X14230 <0-1>	LP feed heater 1 level contr auto
D:	L14231 m	LP feed heater 1 level contr set point
E:	Z14232 m	LP feed heater 1 level contr feed back
F:	Z14233 %	LP feed heater 1 level contr output
G:		
H:	C14235 %/m	LP feed heater 1 level contr gain
I:	C14236 sec	LP feed heater 1 level contr integr time
J:		
K:	V14245 %	LP feed heater 1 level control valve pos
L:	C14246 sec	LP feed heater 1 level control valve tc
M:		
N:		
O:		
P:		
Q:	X14240 <0-1>	LP feed heater 1 level contr test
R:	C14241 m	LP feed heater 1 level contr step
S:	C14242 sec	LP feed heater 1 level contr periode
T:		

2.286 Page:4221 MD420 LP FEED HEATER 2 LEVEL CONTROL**

A:		
B:		
C:	X24230 <0-1>	LP feed heater 2 level contr auto
D:	L24231 m	LP feed heater 2 level contr set point
E:	Z24232 m	LP feed heater 2 level contr feed back
F:	Z24233 %	LP feed heater 2 level contr output
G:		
H:	C24235 %/m	LP feed heater 2 level contr gain
I:	C24236 sec	LP feed heater 2 level contr integr time
J:		
K:	V24245 %	LP feed heater 2 level control valve pos
L:	C24246 sec	LP feed heater 2 level control valve tc
M:		
N:		
O:		
P:		
Q:	X24240 <0-1>	LP feed heater 2 level contr test
R:	C24241 m	LP feed heater 2 level contr step
S:	C24242 sec	LP feed heater 2 level contr periode
T:		

2.287 Page:4222 MD420* * LP FEED HEATER 3 LEVEL CONTROL

A:		
B:		
C:	X34230 <0-1>	LP feed heater 3 level contr auto
D:	L34231 m	LP feed heater 3 level contr set point
E:	Z34232 m	LP feed heater 3 level contr feed back
F:	Z34233 %	LP feed heater 3 level contr output
G:		
H:	C34235 %/m	LP feed heater 3 level contr gain
I:	C34236 sec	LP feed heater 3 level contr integr time
J:		
K:	V34245 %	LP feed heater 3 level control valve pos
L:	C34246 sec	LP feed heater 3 level control valve tc
M:		
N:		
O:		
P:		
Q:	X34240 <0-1>	LP feed heater 3 level contr test
R:	C34241 m	LP feed heater 3 level contr step
S:	C34242 sec	LP feed heater 3 level contr periode
T:		

2.288 Page:4223 MD420* * CONDENSATE FILTER DP CONTROL

A:		
B:		
C:	X04220 <0-1>	Condensate filter dp contr auto
D:	P04221 bar	Condensate filter dp contr set point
E:	Z04222 bar	Condensate filter dp contr feed back
F:	Z04223 %	Condensate filter dp contr output
G:		
H:	C04225 %/bar	Condensate filter dp contr gain
I:	C04226 sec	Condensate filter dp contr integr time
J:		
K:	V04235 %	Condensate filter dp control valve pos
L:	C04236 sec	Condensate filter dp control valve tc
M:		
N:		
O:		
P:		
Q:	X04230 <0-1>	Condensate filter dp contr test
R:	C04231 m	Condensate filter dp contr step
S:	C04232 sec	Condensate filter dp contr periode
T:		

**2.289 Page:4230 MD420** LP FEED HEATER TRIP**

A:
B:
C: X34256 <0-1> LP feed heaters trip inhibit
D:
E: X34254 <0-1> L=--- H=0.9 LP feed heater 3 trip
F:
G:
H:
I: C34257 m LP feed heater 3 trip limit : high level
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.290 Page:4290 MD42 CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.291 Page:4300 MD430* * FEEDW DEAERATOR (1)

A:					
B:	P04370	bara	L=2.3	H=9.8	Feedw deaerator pressure
C:	P04371	bara			Feedw deaerator air press (partial)
D:					
E:	L04374	m	L=1.5	H=3.0	Feedw deaerator water level
F:	T04375	dgrC			Feedw deaerator water temp
G:	H04377	kJ/kg			Feedw deaerator water enth
H:					
I:	C04368	bara			Feedw deaerator safety valve open
J:	C04369	bara			Feedw deaerator safety valve close
K:	G04368	ton/h	L=---	H=0.1	Feedw deaerator safety valve flow
L:					
M:	V04300	<0-1>			Feedw deaerator condensate inlet valve
N:	P04301	bara			Feedw deaerator condensate inlet pressure
O:	G04302	ton/h			Feedw deaerator condensate inlet flow
P:	T04305	dgrC			Feedw deaerator condensate inlet temp
Q:	H04306	kJ/kg			Feedw deaerator condensate inlet enth
R:					
S:	V04369	<0-1>			Feedw deaerator vent valve
T:					

2.292 Page:4301 MD430* * FEEDW DEAERATOR (2)

A:					
B:	V04310	<0-1>			Feedw deaerator sep drain inlet valve
C:	G04311	ton/h			Feedw deaerator sep drain inlet flow
D:	T04312	dgrC			Feedw deaerator sep drain inlet temp
E:	H04313	kJ/kg			Feedw deaerator sep drain inlet enth
F:					
G:	V04315	<0-1>			Feedw deaerator HP htr drain inlet valve
H:	G04316	ton/h			Feedw deaerator HP htr drain inlet flow
I:	T04317	dgrC			Feedw deaerator HP htr drain inlet temp
J:	H04318	kJ/kg			Feedw deaerator HP htr drain inlet enth
K:					
L:	V04320	<0-1>			Feedw deaerator clean-up line out valve
M:	G04321	ton/h			Feedw deaerator clean-up line out flow
N:					
O:	V04325	<0-1>			Feedw deaerator auxil steam valve
P:	G04326	ton/h			Feedw deaerator auxil steam flow
Q:	T04327	dgrC			Feedw deaerator auxil steam temp
R:	H04328	kJ/kg			Feedw deaerator auxil steam enth
S:					
T:					

**2.293 Page:4302 MD430** FEEDW DEAERATOR (3)**

A:			
B:	V04330	<0-1>	FD ext4 steam shut off valve
C:	G04331	ton/h	FD ext4 steam flow
D:	T04332	dgrC	FD ext4 steam temp
E:	H04333	kJ/kg	FD ext4 steam enth
F:			
G:	V04340	<0-1>	FD IPC line steam shut off valve
H:	G04341	ton/h	FD IPC line steam flow
I:	T04342	dgrC	FD IPC line steam temp
J:	H04343	kJ/kg	FD IPC line steam enth
K:			
L:	V04346	<0-1>	FD MD heating steam supply valve
M:	G04345	ton/h	FD MD heating steam supply flow
N:			
O:	V04350	<0-1>	FD heating steam shut off valve
P:	P04351	bara	FD heating steam pressure
Q:	G04352	ton/h	FD heating steam flow
R:	T04353	dgrC	FD heating steam temp
S:	H04354	kJ/kg	FD heating steam enth
T:			

2.294 Page:4303 MD430 FEEDW DEAERATOR (4)**

A:			
B:	V04360	<0-1>	FD air heater steam supply valve
C:	G04361	ton/h	FD air heater steam flow
D:			
E:	V04362	<0-1>	FD air heater steam x-over valve
F:	G04363	ton/h	FD air heater steam x-over flow
G:			
H:	G04364	ton/h	FD air heater steam flow (total)
I:			
J:			
K:	V04376	<0-1>	Feedw deaerator recirc shut off valve
L:			
M:			
N:	R04390	<0-1> L=0.1 H=---	Feedw pump system sealing water pump
O:	P04392	bar	Feedw pump system sealing water press
P:			
Q:	R04391	<0-1> L=0.1 H=---	Feedw pump system LO coolw pump
R:	T04393	dgrC	Feedw pump system LO supply temp
S:			
T:			

2.295 Page:4304 MD430* * FEED WATER LINE

A:				
B:	P04380	bara	L=85.0 H=290.0	Feedw line pressure (after FW pumps)
C:	T04381	dgrC		Feedw line temperature
D:	H04382	kJ/kg		Feedw line enthalpy
E:				
F:				
G:	G04384	ton/h		Feedw flow to HP feed heaters
H:				
I:	V04386	<0-1>		HP bypass injection water line shut off valve
J:	G04385	ton/h		HP bypass injection water line flow
K:				
L:	V04387	<0-1>		Boiler filling line shut off valve
M:	G04388	ton/h		Boiler filling line flow
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.296 Page:4310 MD430* * FEEDW PUMP 1 (1)

A:				
B:	N14360	rpm		Feedw pump 1 speed
C:	E14361	kW		Feedw pump 1 shaft power
D:	Z14362	%		Feedw pump 1 hydraulic efficiency
E:	T14363	dgrC		Feedw pump 1 water outlet temp
F:	H14364	kJ/kg		Feedw pump 1 water outlet enth
G:				
H:	P14366	bara		Feedw pump 1 suction pressure
I:	P14367	bara	L=80.0 H=---	Feedw pump 1 discharge pressure
J:				
K:				
L:				
M:				
N:	P14370	bara		Feedw pump 1 booster pressure
O:	N14371	rpm		Feedw pump 1 booster shaft speed
P:	E14372	kW		Feedw pump 1 booster shaft power
Q:	Z14373	%		Feedw pump 1 booster hydraulic eff
R:				
S:	Z14375	%		Feedw pump 1 drive gear efficiency
T:				

**2.297 Page:4311 MD430** FEEDW PUMP 1 (2)**

A:		
B:	X14350 <0-2>	Feedw pump 1 auto start
C:		
D:	R14351 <0-1>	Feedw pump 1 start (el motor)
E:	R14352 <0-1>	Feedw pump 1 lub oil pump
F:	R14353 <0-1>	Feedw pump 1 run indication
G:		
H:	V14355 <0-1>	Feedw pump 1 discharge valve
I:	V14356 <0-1>	Feedw pump 1 suction valve
J:	V14357 <0-1>	Feedw pump 1 recirc valve
K:		
L:		
M:	G14358 ton/h	Feedw pump 1 line flow
N:	G14359 ton/h	Feedw pump 1 recirc flow
O:		
P:		
Q:		
R:	X14368 <0-1>	Feedw pump 1 manual speed setting (test)
S:		
T:		

2.298 Page:4312 MD430 FEEDW PUMP 1 (3)**

A:		
B:	X14378 <0-2>	Feedw pump 1 el motor speed control auto
C:	Z14379 %	Feedw pump 1 el motor speed command
D:		
E:	N14380 rpm	Feedw pump 1 el motor speed
F:	N14381 %	Feedw pump 1 el motor slip
G:	N14382 %	Feedw pump 1 el motor slip at max torque
H:	R14383 <1-100>	Feedw pump 1 el motor rotor resistance
I:		
J:	Q14385 kNm	Feedw pump 1 el motor shaft torque
K:	E14386 kW	Feedw pump 1 el motor shaft power
L:	E14387 kW	Feedw pump 1 el motor rotor loss (int)
M:	E14388 kW	Feedw pump 1 el motor rotor loss (ext)
N:		
O:	E14391 kW	Feedw pump 1 el motor line power
P:	I14392 A L=--- H=400.0	Feedw pump 1 el motor line current
Q:	Z14393 <0-1>	Feedw pump 1 el motor line cos(fi)
R:		
S:	Z14394 %	Feedw pump 1 el motor efficiency
T:		

2.299 Page:4313 MD430 FEEDW PUMP 2 (1)**

A:			
B:	N24360	rpm	Feedw pump 2 speed
C:	E24361	kW	Feedw pump 2 shaft power
D:	Z24362	%	Feedw pump 2 hydraulic efficiency
E:	T24363	dgrC	Feedw pump 2 water outlet temp
F:	H24364	kJ/kg	Feedw pump 2 water outlet enth
G:			
H:	P24366	bara	Feedw pump 2 suction pressure
I:	P24367	bara	Feedw pump 2 discharge pressure
J:			
K:			
L:			
M:			
N:	P24370	bara	Feedw pump 2 booster pressure
O:	N24371	rpm	Feedw pump 2 booster shaft speed
P:	E24372	kW	Feedw pump 2 booster shaft power
Q:	Z24373	%	Feedw pump 2 booster hydraulic eff
R:			
S:	Z24375	%	Feedw pump 2 drive gear efficiency
T:			

2.300 Page:4314 MD430 FEEDW PUMP 2 (2)**

A:			
B:	X24350	<0-2>	Feedw pump 2 auto start
C:			
D:	R24351	<0-1>	Feedw pump 2 start (el motor)
E:	R24352	<0-1>	Feedw pump 2 lub oil pump
F:	R24353	<0-1>	Feedw pump 2 run indication
G:			
H:	V24355	<0-1>	Feedw pump 2 discharge valve
I:	V24356	<0-1>	Feedw pump 2 suction valve
J:	V24357	<0-1>	Feedw pump 2 recirc valve
K:			
L:			
M:	G24358	ton/h	Feedw pump 2 line flow
N:	G24359	ton/h	Feedw pump 2 recirc flow
O:			
P:			
Q:			
R:	X24368	<0-1>	Feedw pump 2 manual speed setting (test)
S:			
T:			

**2.301 Page:4315 MD430** FEEDW PUMP 2 (3)**

A:			
B:	X24378	<0-2>	Feedw pump 2 el motor speed control auto
C:	Z24379	%	Feedw pump 2 el motor speed command
D:			
E:	N24380	rpm	Feedw pump 2 el motor speed
F:	N24381	%	Feedw pump 2 el motor slip
G:	N24382	%	Feedw pump 2 el motor slip at max torque
H:	R24383	<1-100>	Feedw pump 2 el motor rotor resistance
I:			
J:	Q24385	kNm	Feedw pump 2 el motor shaft torque
K:	E24386	kW	Feedw pump 2 el motor shaft power
L:	E24387	kW	Feedw pump 2 el motor rotor loss (int)
M:	E24388	kW	Feedw pump 2 el motor rotor loss (ext)
N:			
O:	E24391	kW	Feedw pump 2 el motor line power
P:	I24392	A	L=--- H=400.0 Feedw pump 2 el motor line current
Q:	Z24393	<0-1>	Feedw pump 2 el motor line cos(fi)
R:			
S:	Z24394	%	Feedw pump 2 el motor efficiency
T:			

2.302 Page:4316 MD430 FEEDW PUMP 3 (1)**

A:			
B:	N34360	rpm	Feedw pump 3 speed
C:	E34361	kW	Feedw pump 3 shaft power
D:	Z34362	%	Feedw pump 3 hydraulic efficiency
E:	T34363	dgrC	Feedw pump 3 water outlet temp
F:	H34364	kJ/kg	Feedw pump 3 water outlet enth
G:			
H:	P34366	bara	Feedw pump 3 suction pressure
I:	P34367	bara	L=80.0 H=--- Feedw pump 3 discharge pressure
J:			
K:			
L:			
M:			
N:	P34370	bara	Feedw pump 3 booster pressure
O:	N34371	rpm	Feedw pump 3 booster shaft speed
P:	E34372	kW	Feedw pump 3 booster shaft power
Q:	Z34373	%	Feedw pump 3 booster hydraulic eff
R:			
S:	Z34375	%	Feedw pump 3 drive gear efficiency
T:			

2.303 Page:4317 MD430** FEEDW PUMP 3 (2)

A:		
B:	X34350 <0-2>	Feedw pump 3 auto start
C:		
D:	R34351 <0-1>	Feedw pump 3 start (el motor)
E:	R34352 <0-1>	Feedw pump 3 lub oil pump
F:	R34353 <0-1>	Feedw pump 3 run indication
G:		
H:	V34355 <0-1>	Feedw pump 3 discharge valve
I:	V34356 <0-1>	Feedw pump 3 suction valve
J:	V34357 <0-1>	Feedw pump 3 recirc valve
K:		
L:		
M:	G34358 ton/h	Feedw pump 3 line flow
N:	G34359 ton/h	Feedw pump 3 recirc flow
O:		
P:		
Q:		
R:	X34368 <0-1>	Feedw pump 3 manual speed setting (test)
S:		
T:		

2.304 Page:4318 MD430** FEEDW PUMP 3 (3)

A:			
B:	X34378 <0-1>		Feedw pump 3 el motor speed control auto
C:	Z34379 %		Feedw pump 3 el motor speed command
D:			
E:	N34380 rpm		Feedw pump 3 el motor speed
F:	N34381 %		Feedw pump 3 el motor slip
G:	N34382 %		Feedw pump 3 el motor slip at max torque
H:	R34383 <1-100>		Feedw pump 3 el motor rotor resistance
I:			
J:	Q34385 kNm		Feedw pump 3 el motor shaft torque
K:	E34386 kW		Feedw pump 3 el motor shaft power
L:	E34387 kW		Feedw pump 3 el motor rotor loss (int)
M:	E34388 kW		Feedw pump 3 el motor rotor loss (ext)
N:			
O:	E34391 kW		Feedw pump 3 el motor line power
P:	I34392 A	L=--- H=400.0	Feedw pump 3 el motor line current
Q:	Z34393 <0-1>		Feedw pump 3 el motor line cos(fi)
R:			
S:	Z34394 %		Feedw pump 3 el motor efficiency
T:			

**2.305 Page:4320 MD430** FEEDW DEAERATOR LEVEL CONTROL**

A:		
B:	X14300 <0-1>	Feedw deaerator level contr auto
C:	L14301 m	Feedw deaerator level contr set point
D:	Z14302 m	Feedw deaerator level contr feed back
E:	Z14303 %	Feedw deaerator level contr output
F:	Z14304 m	Feedw deaerator level contr deviation
G:	C14305 %/m	Feedw deaerator level contr gain
H:	C14306 sec	Feedw deaerator level contr integr time
I:	C14307 sec	Feedw deaerator level contr deriv time
J:	C14308 <0-8>	Feedw deaerator level contr deriv range
K:	Z14317 ton/h	Feedw deaerator level contr ff signal
L:	C14318 %/ton/h	Feedw deaerator level contr ff gain
M:		
N:	V14315 %	Feedw deaerator level control valve pos
O:	C14316 sec	Feedw deaerator level control valve tc
P:		
Q:	X14310 <0-1>	Feedw deaerator level contr test
R:	C14311 m	Feedw deaerator level contr step
S:	C14312 sec	Feedw deaerator level contr periode
T:		

2.306 Page:4321 MD430 FEEDW DEAERATOR PRESSURE CONTROL**

A:		
B:	X14320 <0-1>	Feedw deaerator press contr auto
C:	P14321 bara	Feedw deaerator press contr set point
D:	Z14322 bara	Feedw deaerator press contr feed back
E:	Z14323 %	Feedw deaerator press contr output
F:	Z14324 bara	Feedw deaerator press contr deviation
G:	C14325 %/bar	Feedw deaerator press contr gain
H:	C14326 sec	Feedw deaerator press contr integr time
I:	C14327 sec	Feedw deaerator press contr deriv time
J:		
K:	C14337 bara	Feedw deaerator press contr min press
L:	C14338 bara	Feedw deaerator press contr glide dp
M:	C14339 sec	Feedw deaerator press contr glide tc
N:		
O:	V14335 %	Feedw deaerator press control valve pos
P:	C14336 sec	Feedw deaerator press control valve tc
Q:		
R:	X14330 <0-1>	Feedw deaerator press contr test
S:	C14331 bar	Feedw deaerator press contr step
T:	C14332 sec	Feedw deaerator press contr periode

2.307 Page:4330 MD430** FEEDW PUMP 1 TRIP

A:					
B:	X44300	<0-1>	L=---	H=0.9	Feedw pump 1 trip
C:	S44310	<0-3>			Feedw pump 1 trip code
D:					
E:	X04396	<0-1>			Feedw pump trip inhibit (all)
F:					
G:					
H:	C44321	m			Feedw pump 1 trip limit 1 : FD level
I:	C44322	bar			Feedw pump 1 trip limit 2 : sealw press
J:	C44323	dgrC			Feedw pump 1 trip limit 3 : LO temp
K:	C44324	bar			Feedw pump 1 trip limit 4 : LO press
L:	C44325	mm			Feedw pump 1 trip limit 5 : displacement
M:	C44326	W			Feedw pump 1 trip limit 6 : light arc
N:					
O:	P44302	bar	L=---	H=---	Feedw pump 1 sealing water press
P:	T44303	dgrC	L=---	H=70.0	Feedw pump 1 LO temp
Q:	P44304	bar	L=1.5	H=---	Feedw pump 1 LO press
R:	X44305	mm	L=---	H=1.2	Feedw pump 1 axial displacement
S:	E44306	W	L=---	H=30.0	Feedw pump 1 slip ring light arc
T:					

2.308 Page:4331 MD430** FEEDW PUMP 2 TRIP

A:					
B:	X44330	<0-1>	L=---	H=0.9	Feedw pump 2 trip
C:	S44340	<0-3>			Feedw pump 2 trip code
D:					
E:	X04396	<0-1>			Feedw pump trip inhibit (all)
F:					
G:					
H:	C44351	m			Feedw pump 2 trip limit 1 : FD level
I:	C44352	bar			Feedw pump 2 trip limit 2 : sealw press
J:	C44353	dgrC			Feedw pump 2 trip limit 3 : LO temp
K:	C44354	bar			Feedw pump 2 trip limit 4 : LO press
L:	C44355	mm			Feedw pump 2 trip limit 5 : displacement
M:	C44356	W			Feedw pump 2 trip limit 6 : light arc
N:					
O:	P44332	bar	L=---	H=---	Feedw pump 2 sealing water press
P:	T44333	dgrC	L=---	H=70.0	Feedw pump 2 LO temp
Q:	P44334	bar	L=1.5	H=---	Feedw pump 2 LO press
R:	X44335	mm	L=---	H=1.2	Feedw pump 2 axial displacement
S:	E44336	W	L=---	H=30.0	Feedw pump 2 slip ring light arc
T:					

**2.309 Page:4332 MD430** FEEDW PUMP 3 TRIP**

A:
 B: X44360 <0-1> L=--- H=0.9 Feedw pump 3 trip
 C: S44370 <0-3> Feedw pump 3 trip code
 D:
 E: X04396 <0-1> Feedw pump trip inhibit (all)
 F:
 G:
 H: C44381 m Feedw pump 3 trip limit 1 : FD level
 I: C44382 bar Feedw pump 3 trip limit 2 : sealw press
 J: C44383 dgrC Feedw pump 3 trip limit 3 : LO temp
 K: C44384 bar Feedw pump 3 trip limit 4 : LO press
 L: C44385 mm Feedw pump 3 trip limit 5 : displacement
 M: C44386 W Feedw pump 3 trip limit 6 : light arc
 N:
 O: P44362 bar L=--- H=--- Feedw pump 3 sealing water press
 P: T44363 dgrC L=--- H=70.0 Feedw pump 3 LO temp
 Q: P44364 bar L=1.5 H=--- Feedw pump 3 LO press
 R: X44365 mm L=--- H=1.2 Feedw pump 3 axial displacement
 S: E44366 W L=--- H=30.0 Feedw pump 3 slip ring light arc
 T:

2.310 Page:4340 MD430 FEED WATER PUMP CONTROL DATA**

A:
 B: X13820 <0-2> L=--- H=1.9 Auto start : Feed water pump 1
 C: X13821 <0-2> L=--- H=1.9 Auto start : Feed water pump 2
 D: X13822 <0-2> L=--- H=1.9 Auto start : Feed water pump 3
 E:
 F: Z13820 bara Auto start command (low-selected press)
 G:
 H: C13820 bara Auto start press limit
 I: C13821 sec Auto start delay
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.311 Page:4390 MD43** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.312 Page:4400 MD440** FEEDW LINE

A:			
B:	P04401	bara	HP feed htr line feedw inlet pressure
C:	G04402	ton/h	HP feed htr line feedw inlet flow
D:	T04405	dgrC	HP feed htr line feedw inlet temp
E:	H04406	kJ/kg	HP feed htr line feedw inlet enth
F:			
G:	P04411	bara	HP feed htr line feedw outlet pressure
H:	G04412	ton/h	HP feed htr line feedw outlet flow
I:	T04415	dgrC	HP feed htr line feedw outlet temp
J:	H04416	kJ/kg	HP feed htr line feedw outlet enth
K:			
L:	V04420	<0-1>	HP feed htr line inlet shut off valve
M:	V04421	<0-1>	HP feed htr line outlet shut off valve
N:			
O:	V04424	<0-1>	HP feed htr line leakage protect valve 1
P:	V04425	<0-1>	HP feed htr line leakage protect valve 2
Q:			
R:	V04430	<0-1>	HP feed htr line bypass valve
S:	G04431	ton/h	HP feed htr line bypass flow
T:			

**2.313 Page:4401 MD440** HP FEED HEATER 1 (1)**

A:				
B:	V14402	<0-1>		HP feed heater 1 steam shut off valve
C:	G14403	ton/h		HP feed heater 1 steam inlet flow
D:	T14404	dgrC		HP feed heater 1 steam inlet temp
E:	H14405	kJ/kg		HP feed heater 1 steam inlet enth
F:				
G:	G14410	ton/h		HP feed heater 1 feedw inlet flow
H:	T14411	dgrC		HP feed heater 1 feedw inlet temp
I:	H14412	kJ/kg		HP feed heater 1 feedw inlet enth
J:				
K:	T14414	dgrC		HP feed heater 1 feedw outlet temp
L:	H14415	kJ/kg		HP feed heater 1 feedw outlet enth
M:				
N:				
O:	G14416	ton/h		HP feed heater 1 drain inlet flow
P:	T14417	dgrC		HP feed heater 1 drain inlet temp
Q:	H14418	kJ/kg		HP feed heater 1 drain inlet enth
R:				
S:	L14419	m	L=0.1 H=1.2	HP feed heater 1 drain level
T:				

2.314 Page:4402 MD440 HP FEED HEATER 1 (2)**

A:				
B:	P14424	bara	L=--- H=23.0	HP feed heater 1 pressure
C:	P14425	bara		HP feed heater 1 air press (partial)
D:				
E:	V14401	<0-1>		HP feed heater 1 air vent valve
F:				
G:	T14427	dgrC		HP feed heater 1 condensing temp
H:				
I:	Q14428	MW		HP feed heater 1 transfered heat
J:				
K:	V14420	<0-1>		HP feed heater 1 drain outlet valve
L:	G14421	ton/h		HP feed heater 1 drain outlet flow (tot)
M:	T14422	dgrC		HP feed heater 1 drain outlet temp
N:	H14423	kJ/kg		HP feed heater 1 drain outlet enth
O:				
P:	V14406	<0-1>		HP feed heater 1 safety valve
Q:	G14407	ton/h	L=--- H=0.1	HP feed heater 1 safety valve flow
R:	C14407	bara		HP feed heater 1 safety valve open
S:	C14408	bara		HP feed heater 1 safety valve close
T:				

2.315 Page:4403 MD440* * HP FEED HEATER 2 (1)

A:				
B:	V24402	<0-1>		HP feed heater 2 steam shut off valve
C:	G24403	ton/h		HP feed heater 2 steam inlet flow
D:	T24404	dgrC		HP feed heater 2 steam inlet temp
E:	H24405	kJ/kg		HP feed heater 2 steam inlet enth
F:				
G:	G24410	ton/h		HP feed heater 2 feedw inlet flow
H:	T24411	dgrC		HP feed heater 2 feedw inlet temp
I:	H24412	kJ/kg		HP feed heater 2 feedw inlet enth
J:				
K:	T24414	dgrC		HP feed heater 2 feedw outlet temp
L:	H24415	kJ/kg		HP feed heater 2 feedw outlet enth
M:				
N:				
O:				
P:	L24419	m	L=0.1 H=1.2	HP feed heater 2 drain level
Q:				
R:				
S:				
T:				

2.316 Page:4404 MD440* * HP FEED HEATER 2 (2)

A:				
B:	P24424	bara	L=--- H=50.0	HP feed heater 2 pressure
C:	P24425	bara		HP feed heater 2 air press (partial)
D:				
E:	V24401	<0-1>		HP feed heater 2 air vent valve
F:				
G:	T24427	dgrC		HP feed heater 2 condensing temp
H:				
I:	Q24428	MW		HP feed heater 2 transfered heat
J:				
K:	V24420	<0-1>		HP feed heater 2 drain outlet valve
L:	G24421	ton/h		HP feed heater 2 drain outlet flow
M:	T24422	dgrC		HP feed heater 2 drain outlet temp
N:	H24423	kJ/kg		HP feed heater 2 drain outlet enth
O:				
P:	V24406	<0-1>		HP feed heater 2 safety valve
Q:	G24407	ton/h	L=--- H=0.1	HP feed heater 2 safety valve flow
R:	C24407	bara		HP feed heater 2 safety valve open
S:	C24408	bara		HP feed heater 2 safety valve close
T:				

**2.317 Page:4405 MD440** HP FEED HEATER 3 (1)**

A:				
B:	V34402	<0-1>		HP feed heater 3 steam shut off valve
C:	G34403	ton/h		HP feed heater 3 steam inlet flow
D:	T34404	dgrC		HP feed heater 3 steam inlet temp
E:	H34405	kJ/kg		HP feed heater 3 steam inlet enth
F:				
G:	G34410	ton/h		HP feed heater 3 feedw inlet flow
H:	T34411	dgrC		HP feed heater 3 feedw inlet temp
I:	H34412	kJ/kg		HP feed heater 3 feedw inlet enth
J:				
K:	T34414	dgrC		HP feed heater 3 feedw outlet temp
L:	H34415	kJ/kg		HP feed heater 3 feedw outlet enth
M:				
N:				
O:				
P:	L34419	m	L=--- H=0.6	HP feed heater 3 drain level
Q:				
R:				
S:				
T:				

2.318 Page:4406 MD440 HP FEED HEATER 3 (2)**

A:				
B:	P34424	bara	L=--- H=30.0	HP feed heater 3 pressure
C:	P34425	bara		HP feed heater 3 air press (partial)
D:				
E:	V34401	<0-1>		HP feed heater 3 air vent valve
F:				
G:	T34427	dgrC		HP feed heater 3 steam temp
H:				
I:	Q34428	MW		HP feed heater 3 transfered heat
J:				
K:	V34420	<0-1>		HP feed heater 3 steam outlet valve
L:	G34421	ton/h		HP feed heater 3 steam outlet flow
M:	T34422	dgrC		HP feed heater 3 steam outlet temp
N:	H34423	kJ/kg		HP feed heater 3 steam outlet enth
O:				
P:	V34406	<0-1>		HP feed heater 3 safety valve
Q:	G34407	ton/h	L=--- H=0.1	HP feed heater 3 safety valve flow
R:	C34407	bara		HP feed heater 3 safety valve open
S:	C34408	bara		HP feed heater 3 safety valve close
T:				

2.319 Page:4410 MD440* * HP FEED HEATER AREA FACTORS

A:		
B:		
C:	C14401 <0-2>	HP feed heater 1 heat area factor
D:	C24401 <0-2>	HP feed heater 2 heat area factor
E:	C34401 <0-2>	HP feed heater 3 heat area factor
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.320 Page:4420 MD440* * HP FEED HEATER 1 LEVEL CONTROL

A:		
B:		
C:	X14430 <0-1>	HP feed heater 1 level contr auto
D:	L14431 m	HP feed heater 1 level contr set point
E:	Z14432 m	HP feed heater 1 level contr feed back
F:	Z14433 %	HP feed heater 1 level contr output
G:		
H:	C14435 %/m	HP feed heater 1 level contr gain
I:	C14436 sec	HP feed heater 1 level contr integr time
J:		
K:	V14445 %	HP feed heater 1 level contr valve 1 pos
L:	C14447 sec	HP feed heater 1 level contr valve 1 tc
M:		
N:	V14446 %	HP feed heater 1 level contr valve 2 pos
O:	C14448 sec	HP feed heater 1 level contr valve 2 tc
P:		
Q:	X14440 <0-1>	HP feed heater 1 level contr test
R:	C14441 m	HP feed heater 1 level contr step
S:	C14442 sec	HP feed heater 1 level contr periode
T:		

**2.321 Page:4421 MD440** HP FEED HEATER 2 LEVEL CONTROL**

A:			
B:			
C:	X24430	<0-1>	HP feed heater 2 level contr auto
D:	L24431	m	HP feed heater 2 level contr set point
E:	Z24432	m	HP feed heater 2 level contr feed back
F:	Z24433	%	HP feed heater 2 level contr output
G:			
H:	C24435	%/m	HP feed heater 2 level contr gain
I:	C24436	sec	HP feed heater 2 level contr integr time
J:			
K:	V24445	%	HP feed heater 2 level control valve pos
L:	C24446	sec	HP feed heater 2 level control valve tc
M:			
N:			
O:			
P:			
Q:	X24440	<0-1>	HP feed heater 2 level contr test
R:	C24441	m	HP feed heater 2 level contr step
S:	C24442	sec	HP feed heater 2 level contr periode
T:			

2.322 Page:4430 MD440 HP FEED HEATER 1 TRIP**

A:				
B:	X14453	<0-1>		HP feed heaters trip inhibit
C:				
D:	X14454	<0-1>	L=--- H=0.9	HP feed heater 1 trip
E:	C14455	m		HP feed heater 1 trip limit : high level
F:				
G:				
H:				
I:				
J:				
K:				
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.323 Page:4431 MD440* * HP FEED HEATER 2 TRIP

A:
B: X14453 <0-1> HP feed heaters trip inhibit
C:
D: X24454 <0-1> L=--- H=0.9 HP feed heater 2 trip
E: C24455 m HP feed heater 2 trip limit : high level
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.324 Page:4432 MD440* * HP FEED HEATER FW BYPASS TRIP

A:
B: X14453 <0-1> HP feed heaters trip inhibit
C:
D: X14456 <0-1> L=--- H=0.9 HP feed heater FW trip
E: S14457 <0-2> HP feed heater FW trip code
F:
G: C14458 m HP feed heater FW trip 1 : HP 1 level
H: C14459 m HP feed heater FW trip 2 : HP 2 level
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.325 Page:4490 MD44** CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.326 Page:5000 MD500 MAKE UP DEAERATOR (1)**

A:				
B:	P05050	bara		Make up deaerator pressure
C:	P05051	bara		Make up deaerator air press (partial)
D:				
E:	G05053	kg/h		Make up deaerator air outlet flow
F:				
G:	L05055	m	L=1.0 H=2.0	Make up deaerator water level
H:	T05056	dgrC	L=35.0 H=110.0	Make up deaerator water temp
I:	H05057	kJ/kg		Make up deaerator water enth
J:	X05057	micS/m		Make up deaerator water purity
K:	G05059	ton/h	L=--- H=0.1	Make up deaerator safety valve flow
L:	C05058	bara		Make up deaerator safety valve open
M:	C05059	bara		Make up deaerator safety valve close
N:				
O:	V05040	<0-1>		Make up deaerator steam supply valve
P:	P05041	bara		Make up deaerator steam supply pressure
Q:	G05042	ton/h		Make up deaerator steam supply flow
R:	T05043	dgrC		Make up deaerator steam supply temp
S:	H05044	kJ/kg		Make up deaerator steam supply enth
T:				

2.327 Page:5001 MD500* * MAKE UP DEAERATOR (2)

A:		
B:	V05020 <0-1>	MD bottom blow tank inlet valve
C:	G05021 ton/h	MD bottom blow tank inlet flow
D:	T05022 dgrC	MD bottom blow tank inlet temp
E:	H05023 kJ/kg	MD bottom blow tank inlet enth
F:		
G:	V05025 <0-1>	MD prim stgen drain inlet valve
H:	G05026 ton/h	MD prim stgen drain inlet flow
I:	T05027 dgrC	MD prim stgen drain inlet temp
J:	H05028 kJ/kg	MD prim stgen drain inlet enth
K:		
L:		
M:	G05031 ton/h	MD air heater drain inlet flow
N:	T05032 dgrC	MD air heater drain inlet temp
O:	H05033 kJ/kg	MD air heater drain inlet enth
P:		
Q:	G05036 ton/h	MD misc drain inlet flow
R:	T05037 dgrC	MD misc drain inlet temp
S:	H05038 kJ/kg	MD misc drain inlet enth
T:		

2.328 Page:5002 MD500* * MAKE UP DEAERATOR VACUUM PUMPS

A:		
B:	R05060 <0-1>	Make up deaerator vacuum pump 1 s/s
C:	V05061 <0-1>	Make up deaerator vacuum pump 1 suction v
D:	G05062 kg/h	Make up deaerator vacuum pump 1 air flow
E:	E05063 kW	Make up deaerator vacuum pump 1 power
F:		
G:	R05065 <0-1>	Make up deaerator vacuum pump 2 s/s
H:	V05066 <0-1>	Make up deaerator vacuum pump 2 suction v
I:	G05067 kg/h	Make up deaerator vacuum pump 2 air flow
J:	E05068 kW	Make up deaerator vacuum pump 2 power
K:		
L:		
M:	V05070 <0-1>	Make up deaerator vacuum DH1/2 x-valve
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.329 Page:5003 MD500** CONDENSATE TRANSFER PUMPS (1)**

A:		
B:	X25001 <0-2>	Condensate transfer pump 1 auto
C:	R25002 <0-1>	Condensate transfer pump 1 s/s
D:	V25003 <0-1>	Condensate transfer pump 1 inlet valve
E:	V25004 <0-1>	Condensate transfer pump 1 outlet valve
F:	V25005 <0-1>	Condensate transfer pump 1 sealw valve
G:	G25006 ton/h	Condensate transfer pump 1 flow
H:	E25007 kW	Condensate transfer pump 1 power
I:	Z25008 %	Condensate transfer pump 1 eff
J:		
K:		
L:	X25011 <0-2>	Condensate transfer pump 2 auto
M:	R25012 <0-1>	Condensate transfer pump 2 s/s
N:	V25013 <0-1>	Condensate transfer pump 2 inlet valve
O:	V25014 <0-1>	Condensate transfer pump 2 outlet valve
P:	V25015 <0-1>	Condensate transfer pump 2 sealw valve
Q:	G25016 ton/h	Condensate transfer pump 2 flow
R:	E25017 kW	Condensate transfer pump 2 power
S:	Z25018 %	Condensate transfer pump 2 eff
T:		

2.330 Page:5004 MD500 CONDENSATE TRANSFER PUMPS (2)**

A:			
B:	X25021 <0-2>		Condensate transfer pump 3 auto
C:	R25022 <0-1>		Condensate transfer pump 3 s/s
D:	V25023 <0-1>		Condensate transfer pump 3 inlet valve
E:	V25024 <0-1>		Condensate transfer pump 3 outlet valve
F:	V25025 <0-1>		Condensate transfer pump 3 sealw valve
G:	G25026 ton/h		Condensate transfer pump 3 flow
H:	E25027 kW		Condensate transfer pump 3 power
I:	Z25028 %		Condensate transfer pump 3 eff
J:			
K:	P05080 bara	L=1.7 H=---	Condensate transfer line pressure
L:	G05081 ton/h		Condensate transfer line flow
M:	T05082 dgrC		Condensate transfer line temp
N:	H05083 kJ/kg		Condensate transfer line enth
O:			
P:	V05085 <0-1>		Condensate transfer Lake discharge valve
Q:	G05086 ton/h		Condensate transfer Lake discharge flow
R:	C05086 m		Condensate transfer Lake discharge open
S:	C05087 m		Condensate transfer Lake discharge close
T:			

2.331 Page:5006 MD500** CONDENSATE MAKE UP TANK

A:				
B:	P05001	bara		Condensate make up clean water pressure
C:	G05002	ton/h		Condensate make up clean water flow
D:	T05003	dgrC		Condensate make up clean water temp
E:				
F:	G05006	ton/h		Cond make up tank FW pump sealw return flow
G:	T05007	dgrC		Cond make up tank FW pump sealw return temp
H:				
I:	G05010	ton/h		Condensate make up tank water over flow
J:				
K:	L05011	m	L=1.0 H=2.0	Condensate make up tank water level
L:	T05012	dgrC		Condensate make up tank water temp
M:	H05013	kJ/kg		Condensate make up tank water enth
N:				
O:				
P:	P05015	bara		Condensate make up pump discharge pressure
Q:	G05016	ton/h		Condensate make up pump discharge flow
R:	T05017	dgrC		Condensate make up pump discharge temp
S:	H05018	kJ/kg		Condensate make up pump discharge enth
T:				

2.332 Page:5007 MD500** CONDENSATE MAKE UP PUMPS (1)

A:				
B:	X15001	<0-2>		Condensate make up pump 1 auto
C:	R15002	<0-1>		Condensate make up pump 1 s/s
D:	V15003	<0-1>		Condensate make up pump 1 inlet valve
E:	V15004	<0-1>		Condensate make up pump 1 outlet valve
F:				
G:	G15006	ton/h		Condensate make up pump 1 flow
H:	E15007	kW		Condensate make up pump 1 power
I:	Z15008	%		Condensate make up pump 1 eff
J:				
K:				
L:	X15011	<0-2>		Condensate make up pump 2 auto
M:	R15012	<0-1>		Condensate make up pump 2 s/s
N:	V15013	<0-1>		Condensate make up pump 2 inlet valve
O:	V15014	<0-1>		Condensate make up pump 2 outlet valve
P:				
Q:	G15016	ton/h		Condensate make up pump 2 flow
R:	E15017	kW		Condensate make up pump 2 power
S:	Z15018	%		Condensate make up pump 2 eff
T:				



2.333 Page:5008 MD500** CONDENSATE MAKE UP PUMPS (2)

A:		
B:	X15021 <0-2>	Condensate make up pump 3 auto
C:	R15022 <0-1>	Condensate make up pump 3 s/s
D:	V15023 <0-1>	Condensate make up pump 3 inlet valve
E:	V15024 <0-1>	Condensate make up pump 3 outlet valve
F:		
G:	G15026 ton/h	Condensate make up pump 3 flow
H:	E15027 kW	Condensate make up pump 3 power
I:	Z15028 %	Condensate make up pump 3 eff
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.334 Page:5020 MD500** MAKE UP DEAERATOR LEVEL CONTROL

A:		
B:	X15060 <0-1>	Make up deaerator level contr auto
C:	L15061 m	Make up deaerator level contr set point
D:	Z15062 m	Make up deaerator level contr feed back
E:	Z15063 %	Make up deaerator level contr output
F:	Z15064 m	Make up deaerator level contr deviation
G:	C15065 %/m	Make up deaerator level contr gain
H:	C15066 sec	Make up deaerator level contr integr time
I:	C15067 sec	Make up deaerator level contr deriv time
J:	C15068 <0-8>	Make up deaerator level contr deriv range
K:	Z15077 ton/h	Make up deaerator level contr ff signal
L:	C15078 %/ton/h	Make up deaerator level contr ff gain
M:		
N:	V15075 %	Make up deaerator level control valve pos
O:	C15076 sec	Make up deaerator level control valve tc
P:		
Q:	X15070 <0-1>	Make up deaerator level contr test
R:	C15071 m	Make up deaerator level contr step
S:	C15072 sec	Make up deaerator level contr periode
T:		

2.335 Page:5021 MD500* * MAKE UP DEAERATOR TEMP CONTROL

A:		
B:	X15080 <0-1>	Make up deaerator temp contr auto
C:	T15081 dgrC	Make up deaerator temp contr set point
D:	Z15082 dgrC	Make up deaerator temp contr feed back
E:	Z15083 %	Make up deaerator temp contr output
F:		
G:	C15085 %/dgrC	Make up deaerator temp contr gain
H:	C15086 sec	Make up deaerator temp contr integr time
I:		
J:		
K:		
L:	V15095 %	Make up deaerator temp control valve pos
M:	C15096 sec	Make up deaerator temp control valve tc
N:		
O:		
P:	X15090 <0-1>	Make up deaerator temp contr test
Q:	C15091 dgrC	Make up deaerator temp contr step
R:	C15092 sec	Make up deaerator temp contr periode
S:		
T:		

2.336 Page:5022 MD500* * MAKE UP TANK LEVEL CONTROL

A:		
B:	X15040 <0-1>	Cond make up tank level contr auto
C:	L15041 m	Cond make up tank level contr set point
D:	Z15042 m	Cond make up tank level contr feed back
E:	Z15043 %	Cond make up tank level contr output
F:		
G:	C15045 %/m	Cond make up tank level contr gain
H:	C15046 sec	Cond make up tank level contr integr time
I:		
J:		
K:		
L:	V15055 %	Cond make up tank level control valve pos
M:	C15056 sec	Cond make up tank level control valve tc
N:		
O:		
P:	X15050 <0-1>	Cond make up tank level contr test
Q:	C15051 m	Cond make up tank level contr step
R:	C15052 sec	Cond make up tank level contr periode
S:		
T:		

**2.337 Page:5040 MD500** MAKE UP / TRANSFER
PUMP CNTR DATA**

A:
 B: X13823 <0-2> L=--- H=1.9 Auto start : Condensate make up pump 1
 C: X13824 <0-2> L=--- H=1.9 Auto start : Condensate make up pump 2
 D: X13825 <0-2> L=--- H=1.9 Auto start : Condensate make up pump 3
 E:
 F: C13823 bara Auto start press limit
 G: C13824 sec Auto start delay
 H:
 I:
 J:
 K:
 L: X13826 <0-2> L=--- H=1.9 Auto start : Condensate transfer pump 1
 M: X13827 <0-2> L=--- H=1.9 Auto start : Condensate transfer pump 2
 N: X13828 <0-2> L=--- H=1.9 Auto start : Condensate transfer pump 3
 O:
 P: C13826 bara Auto start press limit
 Q: C13827 sec Auto start delay
 R:
 S:
 T:

2.338 Page:5090 MD50 CONFIGURABLE PAGE**

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.339 Page:6000 MD600* * DHW SUPPLY / RETURN LINES

A:				
B:	V06005	<0-1>		DHW supply line shut off valve
C:	G06006	ton/h		DHW supply line flow
D:	T06007	dgrC	L=70.0 H=116.0	DHW supply line temp
E:				
F:	V06001	<0-1>		DHW return line shut off valve
G:	G06002	ton/h		DHW return line flow
H:	T06003	dgrC		DHW return line temp
I:				
J:				
K:				
L:				
M:	G06020	ton/h		DHW direct heater subcooler flow
N:	T06021	dgrC		DHW direct heater subcooler return temp
O:				
P:				
Q:	E01930	MW		District heat water power (to city)
R:				
S:				
T:				

2.340 Page:6001 MD600* * DHW FLOW CONTROL LINES

A:	G06030	ton/h		DHW hot condenser line flow
B:	G06031	ton/h		DHW hot condenser bypass flow
C:				
D:	T06032	dgrC		DHW hot condenser line supply temp
E:	T06033	dgrC		DHW hot condenser line return temp
F:				
G:	G06035	ton/h		DHW direct heater line flow
H:	G06036	ton/h		DHW direct heater bypass flow
I:	V06037	%		DHW direct heater bypass valve
J:				
K:	T06038	dgrC		DHW direct heater line supply temp
L:	T06039	dgrC		DHW direct heater line return temp
M:				
N:	G06040	ton/h		DHW accumulator cold line flow
O:	T06041	dgrC		DHW accumulator cold line flow temp
P:	V06044	<0-1>		DHW accumulator cold line shut off valve
Q:				
R:	G06042	ton/h		DHW accumulator hot line flow
S:	T06043	dgrC		DHW accumulator hot line flow temp
T:	V06045	<0-1>		DHW accumulator hot line shut off valve

**2.341 Page:6002 MD600** DHW RETURN PUMP 1**

A:				
B:	X16009	%		DHW return pump 1 speed setting
C:				
D:	R16001	<0-1>		DHW return pump 1 s/s
E:	V16002	<0-1>		DHW return pump 1 inlet valve
F:	V16003	<0-1>		DHW return pump 1 outlet valve
G:				
H:	N16004	rpm		DHW return pump 1 speed
I:	G16005	ton/h		DHW return pump 1 flow
J:	E16006	kW		DHW return pump 1 power
K:	Z16007	%		DHW return pump 1 eff
L:				
M:	E16008	kW		DHW return pump 1 motor power
N:				
O:				
P:	P06010	bar	L=2.0 H=---	DHW return pump suction pressure
Q:	T06011	dgrC		DHW return pump suction temp
R:				
S:	P06012	bar		DHW return pump discharge pressure
T:				

2.342 Page:6003 MD600 DHW RETURN PUMP 2**

A:				
B:	X16019	%		DHW return pump 2 speed setting
C:				
D:	R16011	<0-1>		DHW return pump 2 s/s
E:	V16012	<0-1>		DHW return pump 2 inlet valve
F:	V16013	<0-1>		DHW return pump 2 outlet valve
G:				
H:	N16014	rpm		DHW return pump 2 speed
I:	G16015	ton/h		DHW return pump 2 flow
J:	E16016	kW		DHW return pump 2 power
K:	Z16017	%		DHW return pump 2 eff
L:				
M:	E16018	kW		DHW return pump 2 motor power
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.343 Page:6004 MD600** DHW SUPPLY PUMP 1

A:				
B:	X16029	%		DHW supply pump 1 speed setting
C:				
D:	R16021	<0-1>		DHW supply pump 1 s/s
E:	V16022	<0-1>		DHW supply pump 1 inlet valve
F:	V16023	<0-1>		DHW supply pump 1 outlet valve
G:				
H:	N16024	rpm		DHW supply pump 1 speed
I:	G16025	ton/h		DHW supply pump 1 flow
J:	E16026	kW		DHW supply pump 1 power
K:	Z16027	%		DHW supply pump 1 eff
L:				
M:	E16028	kW		DHW supply pump 1 motor power
N:				
O:				
P:	P06015	bar	L=7.3 H=8.7	DHW supply pump suction pressure
Q:	T06016	dgrC		DHW supply pump suction temp
R:				
S:	P06017	bar	L=--- H=20.0	DHW supply pump discharge pressure
T:				

2.344 Page:6005 MD600** DHW SUPPLY PUMP 2

A:				
B:	X16039	%		DHW supply pump 2 speed setting
C:				
D:	R16031	<0-1>		DHW supply pump 2 s/s
E:	V16032	<0-1>		DHW supply pump 2 inlet valve
F:	V16033	<0-1>		DHW supply pump 2 outlet valve
G:				
H:	N16034	rpm		DHW supply pump 2 speed
I:	G16035	ton/h		DHW supply pump 2 flow
J:	E16036	kW		DHW supply pump 2 power
K:	Z16037	%		DHW supply pump 2 eff
L:				
M:	E16038	kW		DHW supply pump 2 motor power
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

**2.345 Page:6006 MD600** HOT CONDENSER 1 (1)**

A:				
B:	G06050	ton/h		Hot condenser 1 steam inlet flow
C:	T06051	dgrC		Hot condenser 1 steam inlet temp
D:	H06052	kJ/kg		Hot condenser 1 steam inlet enth
E:				
F:	V06053	<0-1>		Hot condenser 1 HC2 drain inlet valve
G:	G06054	ton/h		Hot condenser 1 HC2 drain inlet flow
H:	T06055	dgrC		Hot condenser 1 HC2 drain inlet temp
I:	H06056	kJ/kg		Hot condenser 1 HC2 drain inlet enth
J:				
K:	V06058	<0-1>		Hot condenser 1 air outlet valve
L:	G06059	kg/h		Hot condenser 1 air outlet flow
M:				
N:	P06060	bara	L=0.2 H=1.3	Hot condenser 1 pressure
O:	P06061	bara		Hot condenser 1 air press (partial)
P:				
Q:	L06062	m	L=0.1 H=0.8	Hot condenser 1 hotwell level
R:	T06063	dgrC		Hot condenser 1 hotwell temp
S:	H06064	kJ/kg		Hot condenser 1 hotwell enth
T:				

2.346 Page:6007 MD600 HOT CONDENSER 1 (2)**

A:				
B:				
C:	V06065	<0-1>		Hot condenser 1 DHW inlet shut off valve
D:	G06066	ton/h		Hot condenser 1 DHW inlet flow
E:				
F:	T06067	dgrC		Hot condenser 1 DHW inlet temp
G:	T06068	dgrC		Hot condenser 1 DHW outlet temp
H:				
I:				
J:	Q06069	MW		Hot condenser 1 DHW heat transfer
K:				
L:				
M:				
N:	V06073	<0-1>		Hot condenser 1 LP1 drain inlet valve
O:				
P:	G06074	ton/h		Hot condenser 1 LP1 drain inlet flow
Q:	T06075	dgrC		Hot condenser 1 LP1 drain inlet temp
R:	H06076	kJ/kg		Hot condenser 1 LP1 drain inlet enth
S:				
T:				

2.347 Page:6008 MD600* * HOT CONDENSER 2 (1)

A:				
B:	G06080	ton/h		Hot condenser 2 steam inlet flow
C:	T06081	dgrC		Hot condenser 2 steam inlet temp
D:	H06082	kJ/kg		Hot condenser 2 steam inlet enth
E:				
F:	G06084	ton/h		Hot condenser 2 drain outlet flow
G:				
H:	V06085	<0-1>		Hot condenser 2 filling valve
I:	C06086	m		Hot condenser 2 filling valve open
J:	C06087	m		Hot condenser 2 filling valve close
K:	V06088	<0-1>		Hot condenser 2 air outlet valve
L:	G06089	kg/h		Hot condenser 2 air outlet flow
M:				
N:	P06090	bara	L=0.4 H=2.0	Hot condenser 2 pressure
O:	P06091	bara		Hot condenser 2 air press (partial)
P:				
Q:	L06092	m	L=0.1 H=0.7	Hot condenser 2 hotwell level
R:	T06093	dgrC		Hot condenser 2 hotwell temp
S:	H06094	kJ/kg		Hot condenser 2 hotwell enth
T:				

2.348 Page:6009 MD600* * HOT CONDENSER 2 (2)

A:				
B:	V06087	%		Hot condenser 1/2 DHW flow adjust valve
C:				
D:	G06096	ton/h		Hot condenser 2 DHW inlet flow
E:				
F:	T06097	dgrC		Hot condenser 2 DHW inlet temp
G:	T06098	dgrC	L=65.0 H=120.0	Hot condenser 2 DHW outlet temp
H:				
I:				
J:	Q06099	MW		Hot condenser 2 DHW heat transfer
K:				
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

**2.349 Page:6010 MD600** HOT CONDENSATE PUMPS
(1)**

A:		
B:	X16041 <0-2>	Hot condensate pump 1 auto
C:	R16042 <0-1>	Hot condensate pump 1 s/s
D:	V16043 <0-1>	Hot condensate pump 1 inlet valve
E:	V16044 <0-1>	Hot condensate pump 1 outlet valve
F:		
G:	G16046 ton/h	Hot condensate pump 1 flow
H:	E16047 kW	Hot condensate pump 1 power
I:	Z16048 %	Hot condensate pump 1 eff
J:		
K:		
L:	X16051 <0-2>	Hot condensate pump 2 auto
M:	R16052 <0-1>	Hot condensate pump 2 s/s
N:	V16053 <0-1>	Hot condensate pump 2 inlet valve
O:	V16054 <0-1>	Hot condensate pump 2 outlet valve
P:		
Q:	G16056 ton/h	Hot condensate pump 2 flow
R:	E16057 kW	Hot condensate pump 2 power
S:	Z16058 %	Hot condensate pump 2 eff
T:		

2.350 Page:6011 MD600 HOT CONDENSATE PUMPS
(2)**

A:		
B:	X16061 <0-2>	Hot condensate pump 3 auto
C:	R16062 <0-1>	Hot condensate pump 3 s/s
D:	V16063 <0-1>	Hot condensate pump 3 inlet valve
E:	V16064 <0-1>	Hot condensate pump 3 outlet valve
F:		
G:	G16066 ton/h	Hot condensate pump 3 flow
H:	E16067 kW	Hot condensate pump 3 power
I:	Z16068 %	Hot condensate pump 3 eff
J:		
K:	P16070 bara L=1.8 H=---	Hot condensate pump discharge pressure
L:		
M:	G16071 ton/h	Hot condensate line flow
N:	T16072 dgrC	Hot condensate line flow temp
O:	H16073 kJ/kg	Hot condensate line flow enth
P:		
Q:		
R:		
S:		
T:		

2.351 Page:6020 MD600** HOT CONDENSER 1 LEVEL CONTROL

A:		
B:	X26000	<0-1> Hot condenser 1 level contr auto
C:	L26001	m Hot condenser 1 level contr set point
D:	Z26002	m Hot condenser 1 level contr feed back
E:	Z26003	% Hot condenser 1 level contr output
F:		
G:	C26005	%/m Hot condenser 1 level contr gain
H:	C26006	sec Hot condenser 1 level contr integr time
I:		
J:		
K:		
L:	V26015	% Hot condenser 1 level control valve pos
M:	C26016	sec Hot condenser 1 level control valve tc
N:		
O:		
P:	X26010	<0-1> Hot condenser 1 level contr test
Q:	C26011	m Hot condenser 1 level contr step
R:	C26012	sec Hot condenser 1 level contr periode
S:		
T:		

2.352 Page:6021 MD600** HOT CONDENSER 2 LEVEL CONTROL

A:		
B:	X26020	<0-1> Hot condenser 2 level contr auto
C:	L26021	m Hot condenser 2 level contr set point
D:	Z26022	m Hot condenser 2 level contr feed back
E:	Z26023	% Hot condenser 2 level contr output
F:		
G:	C26025	%/m Hot condenser 2 level contr gain
H:	C26026	sec Hot condenser 2 level contr integr time
I:		
J:		
K:		
L:	V26035	% Hot condenser 2 level control valve pos
M:	C26036	sec Hot condenser 2 level control valve tc
N:		
O:		
P:	X26030	<0-1> Hot condenser 2 level contr test
Q:	C26031	m Hot condenser 2 level contr step
R:	C26032	sec Hot condenser 2 level contr periode
S:		
T:		

**2.353 Page:6022 MD600** HOT CONDENSER 2 MIN
TEMP CONTROL**

A:		
B:	X26040 <0-1>	DHW temp contr auto
C:	T26041 dgrC	DHW temp contr set point
D:	Z26042 dgrC	DHW temp contr feed back
E:	Z26043 %	DHW temp contr output
F:	Z26044 dgrC	DHW temp contr deviation
G:	C26045 %/dgrC	DHW temp contr gain
H:	C26046 sec	DHW temp contr integr time
I:	C26047 sec	DHW temp contr deriv time
J:	C26048 <0-8>	DHW temp contr deriv range
K:		
L:	V26055 %	DHW temp control valve pos
M:	C26056 sec	DHW temp control valve tc
N:		
O:		
P:	X26050 <0-1>	DHW temp contr test
Q:	C26051 dgrC	DHW temp contr step
R:	C26052 sec	DHW temp contr periode
S:		
T:		

2.354 Page:6023 MD600 DHW LINE DIFF PRESS
CONTROL**

A:		
B:	X26060 <0-1>	DHW line diff press contr auto
C:	P26061 bar	DHW line diff press contr set point
D:	Z26062 bar	DHW line diff press contr feed back
E:	Z26063 %	DHW line diff press contr output
F:	Z26064 bar	DHW line diff press contr deviation
G:	C26065 %/bar	DHW line diff press contr gain
H:	C26066 sec	DHW line diff press contr integr time
I:	C26067 sec	DHW line diff press contr deriv time
J:	C26068 <0-8>	DHW line diff press contr deriv range
K:		
L:	Z26075 %	DHW return/supply pump speed balance
M:	Z26076 %	DHW return pump speed command
N:	Z26077 %	DHW supply pump speed command
O:		
P:	C26078 sec	DHW line diff press control sensor tc
Q:		
R:	X26070 <0-1>	DHW line diff press contr test
S:	C26071 bar	DHW line diff press contr step
T:	C26072 sec	DHW line diff press contr periode

2.355 Page:6030 MD600** HOT CONDENSER 1/2 LEVEL TRIP

A:
B: X16081 <0-1> L=--- H=0.9 Hot condenser 1/2 level trip
C: S16082 <0-4> Hot condenser 1/2 level trip code
D:
E: X16080 <0-1> Hot condenser 1/2 level trip inhibit
F:
G:
H: C16083 m HC trip 1 : hot condenser 1 level
I: C16084 m HC trip 2 : hot condenser 2 level
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.356 Page:6040 MD600** HOT CONDENSATE PUMP CONTROL DATA

A:
B: X13810 <0-2> L=--- H=1.9 Auto start : Hot condensate pump 1
C: X13811 <0-2> L=--- H=1.9 Auto start : Hot condensate pump 2
D: X13812 <0-2> L=--- H=1.9 Auto start : Hot condensate pump 3
E:
F: Z13810 m Auto start command (HC2 hotwell)
G:
H: C13810 m Auto start level limit
I: C13811 sec Auto start delay
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.357 Page:6090 MD60** CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.358 Page:6100 MD600 DIRECT HEATER STEAM SUPPLY**

A:		
B:	P06102	bara
C:	T06103	dgrC
D:	H06104	kJ/kg
E:		
F:	X06120	<0-1>
G:	Z06121	%
H:	V06122	%
I:	C06121	m
J:	C06122	m
K:	X06140	<0-1>
L:	Z06141	%
M:	V06142	%
N:	C06141	m
O:	C06142	m
P:		
Q:		
R:		
S:		
T:		

		Direct heater steam supply pressure
		Direct heater steam supply temp
		Direct heater steam supply enth
		Direct heater 1 steam contr valve auto
		Direct heater 1 steam contr valve command
		Direct heater 1 steam contr valve pos
		Direct heater 1 steam contr valve closed
		Direct heater 1 steam contr valve open
		Direct heater 2 steam contr valve auto
		Direct heater 2 steam contr valve command
		Direct heater 2 steam contr valve pos
		Direct heater 2 steam contr valve closed
		Direct heater 2 steam contr valve open

2.359 Page:6101 MD600* * DIRECT HEATER DHW SUPPLY

A:				
B:	G06110	ton/h		Direct heater DHW supply flow (total)
C:	T06111	dgrC		Direct heater DHW supply temp
D:	T06112	dgrC		Direct heater DHW return temp
E:				
F:	G16121	ton/h	L=120.0 H=7000.0	Direct heater 1 DHW inlet flow
G:	T16122	dgrC		Direct heater 1 DHW inlet temp
H:				
I:	V16124	<0-1>		Direct heater 1 DHW inlet valve
J:	V16125	%		Direct heater 1 DHW outlet valve
K:	T16126	dgrC	L=--- H=130.0	Direct heater 1 DHW outlet temp
L:				
M:				
N:	G26121	ton/h	L=120.0 H=7000.0	Direct heater 2 DHW inlet flow
O:	T26122	dgrC		Direct heater 2 DHW inlet temp
P:				
Q:	V26124	<0-1>		Direct heater 2 DHW inlet valve
R:	V26125	%		Direct heater 2 DHW outlet valve
S:	T26126	dgrC	L=--- H=130.0	Direct heater 2 DHW outlet temp
T:				

2.360 Page:6102 MD600* * DIRECT HEATER 1

A:				
B:	V16130	<0-1>		Direct heater 1 steam shut off valve
C:	V16131	<0-1>		Direct heater 1 steam warm keeping valve
D:	G16132	ton/h		Direct heater 1 steam inlet flow
E:				
F:	P16135	bara		Direct heater 1 steam pressure
G:	P16136	bara		Direct heater 1 air pressure (partial)
H:				
I:	T16140	dgrC		Direct heater 1 condensing temp
J:	L16141	m	L=0.6 H=2.8	Direct heater 1 water level
K:	T16142	dgrC		Direct heater 1 condensate outlet temp
L:	H16143	kJ/kg		Direct heater 1 condensate outlet enth
M:				
N:	Q16144	MW		Direct heater 1 transfered heat
O:				
P:	V16145	<0-1>		Direct heater 1 air vent valve
Q:	V16146	<0-1>		Direct heater 1 condensate drain valve
R:	G16147	ton/h		Direct heater 1 condensate drain flow
S:				
T:				

**2.361 Page:6103 MD600** DIRECT HEATER 2**

A:				
B:	V26130	<0-1>		Direct heater 2 steam shut off valve
C:	V26131	<0-1>		Direct heater 2 steam warm keeping valve
D:	G26132	ton/h		Direct heater 2 steam inlet flow
E:				
F:	P26135	bara		Direct heater 2 steam pressure
G:	P26136	bara		Direct heater 2 air pressure (partial)
H:				
I:	T26140	dgrC		Direct heater 2 condensing temp
J:	L26141	m	L=0.6 H=2.8	Direct heater 2 water level
K:	T26142	dgrC		Direct heater 2 condensate outlet temp
L:	H26143	kJ/kg		Direct heater 2 condensate outlet enth
M:				
N:	Q26144	MW		Direct heater 2 transfered heat
O:				
P:	V26145	<0-1>		Direct heater 2 air vent valve
Q:	V26146	<0-1>		Direct heater 2 condensate drain valve
R:	G26147	ton/h		Direct heater 2 condensate drain flow
S:				
T:				

2.362 Page:6104 MD600 CONDENSATE SUBCOOLER
1**

A:				
B:	V16150	<0-1>		Subcooler 1 condensate inlet valve
C:	G16151	ton/h		Subcooler 1 condensate inlet flow
D:	T16152	dgrC	L=--- H=240.0	Subcooler 1 condensate inlet temp
E:	H16153	kJ/kg		Subcooler 1 condensate inlet enth
F:				
G:	T16154	dgrC	L=--- H=110.0	Subcooler 1 condensate outlet temp
H:	H16155	kJ/kg		Subcooler 1 condensate outlet enth
I:				
J:	V16160	<0-1>		Subcooler 1 DHW inlet valve
K:	G16161	ton/h	L=40.0 H=800.0	Subcooler 1 DHW inlet flow
L:	T16162	dgrC		Subcooler 1 DHW inlet temp
M:				
N:	T16163	dgrC		Subcooler 1 DHW outlet temp
O:				
P:	Q16166	MW		Subcooler 1 transfered heat
Q:				
R:	G06115	ton/h		Subcooler DHW supply flow (total)
S:	T06116	dgrC		Subcooler DHW supply temp
T:	T06117	dgrC		Subcooler DHW return temp

2.363 Page:6105 MD600* * CONDENSATE SUBCOOLER 2

A:					
B:	V26150	<0-1>		Subcooler 2 condensate inlet valve	
C:	G26151	ton/h		Subcooler 2 condensate inlet flow	
D:	T26152	dgrC	L=---	H=240.0	Subcooler 2 condensate inlet temp
E:	H26153	kJ/kg			Subcooler 2 condensate inlet enth
F:					
G:	T26154	dgrC	L=---	H=110.0	Subcooler 2 condensate outlet temp
H:	H26155	kJ/kg			Subcooler 2 condensate outlet enth
I:					
J:	V26160	<0-1>			Subcooler 2 DHW inlet valve
K:	G26161	ton/h	L=80.0	H=720.0	Subcooler 2 DHW inlet flow
L:	T26162	dgrC			Subcooler 2 DHW inlet temp
M:					
N:	T26163	dgrC			Subcooler 2 DHW outlet temp
O:					
P:	Q26166	MW			Subcooler 2 transfered heat
Q:					
R:					
S:					
T:					

2.364 Page:6120 MD610* * DIRECT HEATER 1 LEVEL CONTROL

A:					
B:	X16180	<0-1>			Direct heater 1 level contr auto
C:	L16181	m			Direct heater 1 level contr set point
D:	Z16182	m			Direct heater 1 level contr feed back
E:	Z16183	%			Direct heater 1 level contr output
F:	Z16184	m			Direct heater 1 level contr deviation
G:	C16185	%/m			Direct heater 1 level contr gain
H:	C16186	sec			Direct heater 1 level contr integr time
I:	C16187	sec			Direct heater 1 level contr deriv time
J:	C16188	<0-8>			Direct heater 1 level contr deriv range
K:					
L:	V16193	%			Direct heater 1 level control valve pos
M:	C16194	sec			Direct heater 1 level control valve tc
N:					
O:					
P:	X16190	<0-1>			Direct heater 1 level contr test
Q:	C16191	m			Direct heater 1 level contr step
R:	C16192	sec			Direct heater 1 level contr periode
S:					
T:					

**2.365 Page:6121 MD610** DIRECT HEATER 2 LEVEL CONTROL**

A:		
B:	X26180 <0-1>	Direct heater 2 level contr auto
C:	L26181 m	Direct heater 2 level contr set point
D:	Z26182 m	Direct heater 2 level contr feed back
E:	Z26183 %	Direct heater 2 level contr output
F:	Z26184 m	Direct heater 2 level contr deviation
G:	C26185 %/m	Direct heater 2 level contr gain
H:	C26186 sec	Direct heater 2 level contr integr time
I:	C26187 sec	Direct heater 2 level contr deriv time
J:	C26188 <0-8>	Direct heater 2 level contr deriv range
K:		
L:	V26193 %	Direct heater 2 level control valve pos
M:	C26194 sec	Direct heater 2 level control valve tc
N:		
O:		
P:	X26190 <0-1>	Direct heater 2 level contr test
Q:	C26191 m	Direct heater 2 level contr step
R:	C26192 sec	Direct heater 2 level contr periode
S:		
T:		

2.366 Page:6122 MD610 DIRECT HEATER 1/2 LEVEL SET POINT**

A:		
B:		
C:	X06150 <0-1>	DH level sp command from LPC
D:	X06151 <0-1>	DH level sp command from TMC
E:		
F:	L06154 m	Direct heater 1 level set point (active)
G:	L06155 m	Direct heater 2 level set point (active)
H:		
I:		
J:	L06160 m	DH level sp command (low-selected)
K:	Z06161 %	DH level sp command from TMC
L:	L06161 m	DH level sp command from TMC (converted)
M:	C06161 m	DH level sp at TMC com = 50 %
N:	K06161 m	DH level sp at TMC com = 100 %
O:		
P:	Z06162 %	DH level sp command from LPC
Q:	L06162 m	DH level sp command from LPC (converted)
R:	C06162 m	DH level sp at LPC com = 0 %
S:	K06162 m	DH level sp at LPC com = 100 %
T:		

2.367 Page:6123 MD610* * SUBCOOLER 1 FLOW CONTROL

A:		
B:		
C:	X16100	<0-1> Subcooler 1 flow contr auto
D:	G16101	ton/h Subcooler 1 flow contr set point
E:	Z16102	ton/h Subcooler 1 flow contr feed back
F:	Z16103	% Subcooler 1 flow contr output
G:		
H:	C16105	%/ton/h Subcooler 1 flow contr gain
I:	C16106	sec Subcooler 1 flow contr integr time
J:		
K:	V16113	% Subcooler 1 flow control valve pos
L:	C16114	sec Subcooler 1 flow control valve tc
M:		
N:	C16115	ton/h Subcooler 1 flow setp bias
O:	C16116	ton/ton Subcooler 1 flow setp drain coeff
P:	X16110	<0-1> Subcooler 1 flow contr test
Q:	C16111	ton/h Subcooler 1 flow contr step
R:	C16112	sec Subcooler 1 flow contr periode
S:		
T:		

2.368 Page:6124 MD610* * SUBCOOLER 2 FLOW CONTROL

A:		
B:		
C:	X26100	<0-1> Subcooler 2 flow contr auto
D:	G26101	ton/h Subcooler 2 flow contr set point
E:	Z26102	ton/h Subcooler 2 flow contr feed back
F:	Z26103	% Subcooler 2 flow contr output
G:		
H:	C26105	%/ton/h Subcooler 2 flow contr gain
I:	C26106	sec Subcooler 2 flow contr integr time
J:		
K:	V26113	% Subcooler 2 flow control valve pos
L:	C26114	sec Subcooler 2 flow control valve tc
M:		
N:	C26115	ton/h Subcooler 2 flow setp bias
O:	C26116	ton/ton Subcooler 2 flow setp drain coeff
P:	X26110	<0-1> Subcooler 2 flow contr test
Q:	C26111	ton/h Subcooler 2 flow contr step
R:	C26112	sec Subcooler 2 flow contr periode
S:		
T:		

**2.369 Page:6130 MD610** DIRECT HEATER 1 TRIP**

A:
B: X16170 <0-1> Direct heaters trip inhibit
C:
D: X16171 <0-1> L=--- H=0.9 Direct heater 1 trip
E: S16172 <0-4> Direct heater 1 trip code
F:
G: C16173 m Direct heater 1 trip 1 : level low
H: C16174 m Direct heater 1 trip 2 : level high
I: C16175 dgrC Direct heater 1 trip 3 : DHW outlet temp
J: C16176 ton/h Direct heater 1 trip 4 : DHW flow low
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.370 Page:6131 MD610 DIRECT HEATER 2 TRIP**

A:
B: X16170 <0-1> Direct heaters trip inhibit
C:
D: X26171 <0-1> L=--- H=0.9 Direct heater 2 trip
E: S26172 <0-4> Direct heater 2 trip code
F:
G: C26173 m Direct heater 2 trip 1 : level low
H: C26174 m Direct heater 2 trip 2 : level high
I: C26175 dgrC Direct heater 2 trip 3 : DHW outlet temp
J: C26176 ton/h Direct heater 2 trip 4 : DHW flow low
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.371 Page:6190 MD61** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.372 Page:6200 MD620** ACCUMULATOR TANK (1)

A:					
B:	L06306	m	L=15.7	H=17.3	Accumulator water level
C:	L06307	m			Accumulator cold interface level (70 dgr)
D:	L06308	m			Accumulator hot interface level (85 dgr)
E:					
F:	T06310	min			Time left to full or empty accumulator
G:					
H:	E06310	MWh			Accumulator water energy (> 50 dgr)
I:	E06311	MW			Accumulator heat input
J:	Q06310	kW			Accumulator heat loss to ambient
K:	P06310	mmWL	L=5.0	H=55.0	Accumulator top pressure
L:					
M:	X06311	<0-1>			Accumulator loading (indication)
N:	X06312	<0-1>			Accumulator unloading (indication)
O:					
P:	R06315	<0-1>			Accumulator spray pump
Q:					
R:					
S:	Z06300	<0-300>			Accumulator time speed up factor
T:					

**2.373 Page:6201 MD620** ACCUMULATOR TANK (2)**

A:		
B:	G06300 ton/h	Accumulator bottom inlet flow
C:	G06301 ton/h	Accumulator top inlet flow
D:		
E:		
F:	T06304 dgrC	Accumulator bottom outlet temp
G:	T06305 dgrC	Accumulator top outlet temp
H:		
I:	T06302 dgrC	Accumulator bottom line temp
J:	T06303 dgrC	Accumulator top line temp
K:	V06302 <0-1>	Accumulator bottom shut off valve
L:	V06303 <0-1>	Accumulator top shut off valve
M:		
N:	P06302 bar	Accumulator bottom line pressure
O:	P06303 bar	Accumulator top line pressure
P:		
Q:	V06318 <0-1>	Accumulator fill valve (manual)
R:	G06318 ton/h	Accumulator fill flow
S:	P06318 bar	Accumulator fill press (manual)
T:		

2.374 Page:6202 MD620 ACCUMULATOR TANK
TEMP DISTRIBUTION**

A:		
B:	T16300 dgrC	Accumulator temp sensor 0 m
C:	T16301 dgrC	Accumulator temp sensor 1 m
D:	T16302 dgrC	Accumulator temp sensor 2 m
E:	T16303 dgrC	Accumulator temp sensor 3 m
F:	T16304 dgrC	Accumulator temp sensor 4 m
G:	T16305 dgrC	Accumulator temp sensor 5 m
H:	T16306 dgrC	Accumulator temp sensor 6 m
I:	T16307 dgrC	Accumulator temp sensor 7 m
J:	T16308 dgrC	Accumulator temp sensor 8 m
K:	T16309 dgrC	Accumulator temp sensor 9 m
L:	T16310 dgrC	Accumulator temp sensor 10 m
M:	T16311 dgrC	Accumulator temp sensor 11 m
N:	T16312 dgrC	Accumulator temp sensor 12 m
O:	T16313 dgrC	Accumulator temp sensor 13 m
P:	T16314 dgrC	Accumulator temp sensor 14 m
Q:	T16315 dgrC	Accumulator temp sensor 15 m
R:	T16316 dgrC	Accumulator temp sensor 16 m
S:	T16317 dgrC	Accumulator temp sensor 17 m
T:	T16318 dgrC	Accumulator temp sensor 18 m

2.375 Page:6204 MD620* * FRANCIS TURBINE (1)

A:				
B:	P06320	bar		Francis turbine supply pressure
C:	T06320	dgrC	L=--- H=115.0	Francis turbine supply temp
D:	P06321	bar		Francis turbine discharge pressure
E:	T06321	dgrC	L=--- H=99.0	Francis turbine discharge temp
F:				
G:	V06322	%		Francis turbine inlet damper pos
H:	V06323	<0-1>		Francis turbine shut off valve
I:				
J:				
K:	N06325	rpm	L=--- H=970.0	Francis turbine speed
L:	G06325	ton/h		Francis turbine flow
M:	E06325	kW		Francis turbine shaft power
N:	Q06325	Nm		Francis turbine shaft torque
O:				
P:	Z06325	%		Francis turbine hydraulic efficiency
Q:				
R:	Z06326	-		Francis turbine speed number (mussels)
S:	Z06327	-		Francis turbine flow number (mussels)
T:				

2.376 Page:6205 MD620* * FRANCIS TURBINE (2)

A:				
B:				
C:				
D:	V06330	<0-1>		Francis turbine btm line discharge valve
E:	V06331	<0-1>		Francis turbine top line discharge valve
F:	G06330	ton/h		Francis turbine btm line discharge flow
G:	G06331	ton/h		Francis turbine top line discharge flow
H:				
I:	V06332	<0-1>		Fr turb cold DWH line supply valve
J:	V06333	<0-1>		Fr turb hot DWH line supply valve
K:	G06332	ton/h		Fr turb cold DWH line supply flow
L:	G06333	ton/h		Fr turb hot DWH line supply flow
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

**2.377 Page:6206 MD620** ACCUMULATOR PUMP (1)**

A:		
B:	P06340 bar	Accumulator pump suction pressure
C:	T06340 dgrC	Accumulator pump suction temp
D:		
E:	P06341 bar	Accumulator pump discharge pressure
F:	T06341 dgrC	Accumulator pump discharge temp
G:		
H:		
I:		
J:		
K:	N06345 rpm	Accumulator pump speed
L:	G06347 ton/h	Accumulator pump flow (total)
M:	E06345 kW	Accumulator pump shaft power
N:	Q06345 Nm	Accumulator pump shaft torque
O:		
P:	Z06345 %	Accumulator pump hydraulic efficiency
Q:		
R:	G06346 ton/h	Accumulator pump recirc flow
S:	V06346 %	Accumulator pump recirc valve pos
T:		

2.378 Page:6207 MD620 ACCUMULATOR PUMP (2)**

A:		
B:		
C:		
D:	V06350 <0-1>	Accumulator pump btm line suction valve
E:	V06351 <0-1>	Accumulator pump top line suction valve
F:	G06350 ton/h	Accumulator pump btm line suction flow
G:	G06351 ton/h	Accumulator pump top line suction flow
H:		
I:	V06352 <0-1>	Acc pump cold DWH line discharge valve
J:	V06353 <0-1>	Acc pump hot DWH line discharge valve
K:	G06352 ton/h	Acc pump cold DWH line discharge flow
L:	G06353 ton/h	Acc pump hot DWH line discharge flow
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.379 Page:6208 MD620** ACCUMULATOR PUMP MOTOR

A:			
B:	R06360	<0-1>	Accumulator pump motor s/s
C:			
D:	X06360	%	Accumulator pump motor speed command
E:			
F:	N06360	rpm	Accumulator pump motor speed
G:	E06360	kW	Accumulator pump motor power
H:	Q06360	Nm	Accumulator pump motor torque
I:			
J:			
K:	G06360	ton/h	L=-250.0 H=250.0 turbine / pump flow deviation
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.380 Page:6210 MD620** ACCUMULATOR BLOCK CONNECTION

A:			
B:	V06365	<0-1>	Cold DWH line block connection valve
C:	V06366	<0-1>	Hot DWH line block connection valve
D:			
E:			
F:	G06365	ton/h	Cold DWH line flow to accumulator
G:	G06366	ton/h	Hot DWH line flow to accumulator
H:			
I:	P06365	bar	Cold DWH line pressure
J:	P06366	bar	Hot DWH line pressure
K:			
L:	T06365	dgrC	Cold DWH line temperature
M:	T06366	dgrC	Hot DWH line temperature
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

**2.381 Page:6212 MD620** DHW SYSTEM EXPANSION TANK**

A:					
B:	L06370	m	L=16.1	H=22.0	Expansion tank level
C:					
D:	P06371	baro			Expansion tank top pressure (steam)
E:	P06372	bar			Expansion tank bottom pressure
F:					
G:	G06370	ton/h			Expansion tank inlet flow
H:					
I:					
J:	V06370	<0-1>			Expansion tank block connection valve
K:	V06371	<0-1>			Expansion tank inlet valve
L:					
M:					
N:	P06369	bar			Expansion tank steam press command
O:					
P:	V06379	<0-1>			DHW make up injection valve (manual)
Q:	G06379	ton/h			DHW make up injection flow
R:	P06379	bar			DHW make up injection press (manual)
S:					
T:					

2.382 Page:6215 MD620 DHW SYSTEM MAKE UP PUMPS**

A:	P06373	bar			DHW make up pump discharge pressure
B:	G06373	ton/h	L=---	H=150.0	DHW make up pump discharge flow
C:					
D:	X06374	<0-1>			DHW make up pump 1 auto
E:	R06374	<0-1>			DHW make up pump 1 s/s
F:	V06374	<0-1>			DHW make up pump 1 suction valve
G:	V06375	<0-1>			DHW make up pump 1 discharge valve
H:	G06374	ton/h			DHW make up pump 1 flow
I:	E06374	kW			DHW make up pump 1 power
J:	Z06374	%			DHW make up pump 1 eff
K:					
L:					
M:					
N:	X06376	<0-1>			DHW make up pump 2 auto
O:	R06376	<0-1>			DHW make up pump 2 s/s
P:	V06376	<0-1>			DHW make up pump 2 suction valve
Q:	V06377	<0-1>			DHW make up pump 2 discharge valve
R:	G06376	ton/h			DHW make up pump 2 flow
S:	E06376	kW			DHW make up pump 2 power
T:	Z06376	%			DHW make up pump 2 eff

2.383 Page:6220 MD620* * DHW SYSTEM EXP TANK LEVEL CONTROL

A:		
B:	X16340 <0-1>	Expansion tank level controller auto
C:	L16341 m	Expansion tank level controller setp
D:	Z16342 m	Expansion tank level controller fb
E:	Z16343 %	Expansion tank level controller output
F:		
G:	C16340 %/m	Expansion tank level controller gain
H:	C16341 sec	Expansion tank level controller integr time
I:	C16342 sec	Expansion tank level controller deriv time
J:	C16343 <0-8>	Expansion tank level controller deriv range
K:		
L:	Z16344 t/h	Expansion tank level controller ff signal
M:	C16344 %/%	Expansion tank level controller ff gain
N:		
O:	C16347 sec	Expansion tank level contr flow dev tc
P:	C16348 sec	Expansion tank level contr rheostat tc
Q:		
R:	X16345 <0-1>	Expansion tank level controller test
S:	C16345 m	Expansion tank level controller step
T:	C16346 sec	Expansion tank level controller periode

2.384 Page:6221 MD620* * FRANCIS TURBINE TEMP CONTROL

A:		
B:	X16350 <0-1>	Francis temp controller auto
C:	T16351 dgrC	Francis temp controller set point
D:	Z16352 dgrC	Francis temp controller feed back
E:	Z16353 %	Francis temp controller output
F:		
G:	C16350 %/dgrC	Francis temp controller gain
H:	C16351 sec	Francis temp controller integr time
I:	C16352 sec	Francis temp controller deriv time
J:	C16353 <0-8>	Francis temp controller deriv range
K:		
L:		
M:	X16355 <0-1>	Francis temp controller test
N:	C16355 dgrC	Francis temp controller step
O:	C16356 sec	Francis temp controller periode
P:	C16357 sec	Francis temp controller flush periode
Q:		
R:	V06346 %	Accumulator pump recirc valve pos
S:	C06346 sec	Accumulator pump recirc valve tc
T:		

**2.385 Page:6222 MD620** EXP TANK LOW LEVEL CONTROL**

A:		
B:		
C:		
D:	X16360 <0-1>	Exp tank low level controller auto
E:		
F:	L16361 m	Exp tank low level controller set point
G:	Z16362 m	Exp tank low level controller feed back
H:	Z16363 %	Exp tank low level controller output
I:		
J:		
K:	C16360 %/m	Exp tank low level controller gain
L:		
M:	V16365 %	Exp tank make up contr valve pos
N:		
O:		
P:		
Q:	C16366 %	Exp tank make up cnt valve start switch
R:	C16367 %	Exp tank make up cnt valve stop switch
S:		
T:		

2.386 Page:6223 MD620 EXP TANK HIGH LEVEL CONTROL**

A:		
B:		
C:		
D:	X16370 <0-1>	Exp tank high level controller auto
E:		
F:	L16371 m	Exp tank high level controller set point
G:	Z16372 m	Exp tank high level controller feed back
H:	Z16373 %	Exp tank high level controller output
I:		
J:		
K:	C16370 %/m	Exp tank high level controller gain
L:		
M:	V16375 %	Exp tank dump contr valve pos
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.387 Page:6230 MD620** FRANCIS TURBINE TRIP SYSTEM

A:					
B:	X16300	<0-1>	L=---	H=0.9	Francis turbine trip
C:	S16300	<0-20>			Francis turbine trip code
D:	X16320	<0-1>			Francis turbine trip inhibit
E:					
F:					
G:	C16301	rpm			Francis trip 1 : turbine overspeed
H:	C16302	ton/h			Francis trip 2 : high flow deviation
I:	C16303	m			Francis trip 3 : exp tank level low
J:	C16304	m			Francis trip 4 : exp tank level high
K:	C16305	m			Francis trip 5 : accumulator level low
L:	C16306	m			Francis trip 6 : accumulator level high
M:	C16307	mmWL			Francis trip 7 : accumulator press low
N:	C16308	mmWL			Francis trip 8 : accumulator press high
O:	C16309	dgrC			Francis trip 9 : turbine discharge temp h
P:	C16310	bar			Francis trip 10 : pump bearing LO press l
Q:	C16311	rpm			Francis trip 11 : accu pump not running
R:					
S:	C16321	sec			High flow deviation time filter constant
T:					

2.388 Page:6290 MD62** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.389 Page:6300 MD600** DISTRIC HEAT WATER
LOAD CONTROL**

A:				
B:	X06230	<0-1>		DHW multi block operation
C:	X06211	<0-1>		DHW day/night select (1=day)
D:				
E:	T06201	dgrC		District ambient temperature
F:	E06202	MW		District heat power demand (city)
G:	E06203	MW		District heat power consumed (city)
H:	E06204	MW		District heat power supplied (city)
I:	E06206	MW		District heat power produced (tpp)
J:				
K:	G06006	ton/h		DHW supply line flow
L:	T06007	dgrC	L=70.0 H=116.0	DHW supply line temp
M:				
N:	G06002	ton/h		DHW return line flow
O:	T06003	dgrC		DHW return line temp
P:	T06206	dgrC		DHW supply temp recommendation
Q:				
R:				
S:				
T:				

2.390 Page:6301 MD600 DISTRIC HEAT WATER
CITY GRID**

A:				
B:				
C:	T06240	dgrC		DHW main line supply temperature
D:	T06241	dgrC		DHW main line return temperature
E:				
F:	T06242	dgrC		DHW supply line temperature - near city
G:	T06243	dgrC		DHW return line temperature - near city
H:				
I:	T06244	dgrC		DHW supply line temperature - far city
J:	T06245	dgrC		DHW return line temperature - far city
K:				
L:	P06200	bar	L=4.0 H=8.0	DHW supply/return line diff press
M:				
N:	V06251	<0-1>		DHW city external blocks supply valve
O:	V06252	<0-1>		DHW city external blocks return valve
P:				
Q:				
R:				
S:				
T:				

2.391 Page:6302 MD600** DISTRIC HEAT WATER CONSTANTS

A:		
B:	C06206	dgrC
C:	C06207	dgrC
D:		
E:	C06208	dgrC
F:	C06220	MW
G:	C06221	MW
H:		
I:	C06222	MW
J:	C06223	MW
K:		
L:	C06232	bar
M:	C06233	dgrC
N:		
O:		
P:	Z06212	<1-100>
Q:		
R:		
S:		
T:		

DHW supply temp rec 1 (at -25 dgr)

DHW supply temp rec 2 (at 10 dgr)

DHW supply temp night reduction

DHW day power - low temp (-25 dgr)

DHW night power - low temp (-25 dgr)

DHW day power - high temp (20 dgr)

DHW night power - high temp (20 dgr)

DHW line diff press if multi block op

DHW line return temp if multi block op

DHW time speed up factor

2.392 Page:6390 MD63** CONFIGURABLE PAGE

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.393 Page:6400 MD900** SEQ1 INITIAL
PREPARATION (1/3)**

A:		
B:	A01030 <0-1>	Start permitted
C:	A01031 <0-1>	Turbine speed < 300 rpm
D:		
E:		
F:	A01040 <0-1>	Set permitted
G:	A01041 <0-1>	Turbine turning
H:	A01042 <0-1>	EI-bus 1/2 voltage ok
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.394 Page:6401 MD900 SEQ01 INITIAL
PREPARATION (2/3)**

A:		
B:	A01001 <0-1>	Sequence 01 start
C:	A01002 <0-1>	Sequence 01 stop
D:	A01015 <0-1>	Sequence 01 step
E:	A01003 <0-1>	Sequence 01 set
F:	A01004 <0-1>	Sequence 01 reset
G:	A01005 <0-3>	Sequence 01 ready
H:		
I:	A01009 <999>	Sequence 01 current main/sub step
J:	A01008 <999>	Sequence 01 current model drawing
K:	A01012 sec	Sequence 01 time left
L:	A01013 sec	Sequence 01 running time
M:	A01010 <0-4>	Sequence 01 frame color index
N:	A01014 <999>	Sequence 01 error indication
O:		
P:	A01021 <0-1>	Sequence 01 step type (sub/main)
Q:	A01020 <0-2>	Sequence 01 time speed-up (0,1,2)
R:		
S:	A01022 <0-1>	Sequence 01 deactivated
T:		

2.395 Page:6402 MD900** SEQ01 INITIAL PREPARATION (3/3)

A:
B: S01000 Hint Start Seq 1 from Cold Plant
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.396 Page:6403 MD900** SEQ02 CONDENSATE MAKE UP (1/3)

A:
B: A02030 <0-1> Start permitted
C: A02031 <0-1> Turbine turning/el bus ok
D: A02032 <0-1> Turbine speed < 2700 rpm
E:
F: A02040 <0-1> Set permitted
G: A02041 <0-1> Main condensate tank level > 0.7 m
H: A02042 <0-1> Make-up deaerator level > 0.7 m
I: A02043 <0-1> Some make-up pump running
J: A02044 <0-1> Some vacuum pump running
K: A02045 <0-1> Some transfer pump running
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.397 Page:6404 MD900** SEQ02 CONDENSATE
MAKE UP (2/3)**

A:		
B:	A02001 <0-1>	Sequence 02 start
C:	A02002 <0-1>	Sequence 02 stop
D:	A02015 <0-1>	Sequence 02 step
E:	A02003 <0-1>	Sequence 02 set
F:	A02004 <0-1>	Sequence 02 reset
G:	A02005 <0-3>	Sequence 02 ready
H:		
I:	A02009 <999>	Sequence 02 current main/sub step
J:	A02008 <999>	Sequence 02 current model drawing
K:	A02012 sec	Sequence 02 time left
L:	A02013 sec	Sequence 02 running time
M:	A02010 <0-4>	Sequence 02 frame color index
N:	A02014 <999>	Sequence 02 error indication
O:		
P:	A02021 <0-1>	Sequence 02 step type (sub/main)
Q:	A02020 <0-2>	Sequence 02 time speed-up (0,1,2)
R:		
S:	A02022 <0-1>	Sequence 02 deactivated
T:		

2.398 Page:6405 MD900 SEQ02 CONDENSATE
MAKE UP (3/3)**

A:		
B:	S02000 Hint	Start Seq 2 after Seq 1
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.399 Page:6406 MD900* * SEQ03 SMALL CLEAN UP LOOP (1/3)

A:		
B:	A03030 <0-1>	Start permitted
C:	A03031 <0-1>	Main condensate tank level > 0.8 m
D:	A03032 <0-1>	FW deaerator pressure < 1.1 bara
E:	A03033 <0-1>	Turbine turning/el-bus ok
F:	A03034 <0-1>	Turbine speed < 2700 rpm
G:	A03035 <0-1>	Sequence 2 finished or off
H:		
I:		
J:		
K:	A03040 <0-1>	Set permitted
L:	A03041 <0-1>	Main condensate tank level > 1.1 m
M:	A03042 <0-1>	Some main condensate pump running
N:	A03043 <0-1>	Feedw circulation flow > 100 t/h
O:		
P:		
Q:		
R:		
S:		
T:		

2.400 Page:6407 MD900* * SEQ03 SMALL CLEAN UP LOOP (2/3)

A:		
B:	A03001 <0-1>	Sequence 03 start
C:	A03002 <0-1>	Sequence 03 stop
D:	A03015 <0-1>	Sequence 03 step
E:	A03003 <0-1>	Sequence 03 set
F:	A03004 <0-1>	Sequence 03 reset
G:	A03005 <0-3>	Sequence 03 ready
H:		
I:	A03009 <999>	Sequence 03 current main/sub step
J:	A03008 <999>	Sequence 03 current model drawing
K:	A03012 sec	Sequence 03 time left
L:	A03013 sec	Sequence 03 running time
M:	A03010 <0-4>	Sequence 03 frame color index
N:	A03014 <999>	Sequence 03 error indication
O:		
P:	A03021 <0-1>	Sequence 03 step type (sub/main)
Q:	A03020 <0-2>	Sequence 03 time speed-up (0,1,2)
R:		
S:	A03022 <0-1>	Sequence 03 deactivated
T:		

**2.401 Page:6408 MD900** SEQ03 SMALL CLEAN UP LOOP (3/3)**

A:
B: S03000 Hint Start Seq 3 after Seq 2
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.402 Page:6410 MD900 SEQ04 FUEL OIL SUPPLY HEATING (1/3)**

A:
B: A04030 <0-1> Start permitted
C: A04031 <0-1> No burners started
D: A04032 <0-1> Turbine turning/el bus ok
E: A04033 <0-1> Some main condensate pumps running
F: A04034 <0-1> Sequence 3 finished or off
G:
H:
I:
J:
K: A04040 <0-1> Set permitted
L: A04041 <0-1> HFO flow circulation > 3 t/h
M: A04042 <0-1> HFO flow temperature > 60 dgrC
N: A04043 <0-1> HFO tank level > 2 m
O:
P:
Q:
R:
S:
T:

2.403 Page:6411 MD900** SEQ04 FUEL OIL SUPPLY HEATING (2/3)

A:		
B:	A04001 <0-1>	Sequence 04 start
C:	A04002 <0-1>	Sequence 04 stop
D:	A04015 <0-1>	Sequence 04 step
E:	A04003 <0-1>	Sequence 04 set
F:	A04004 <0-1>	Sequence 04 reset
G:	A04005 <0-3>	Sequence 04 ready
H:		
I:	A04009 <999>	Sequence 04 current main/sub step
J:	A04008 <999>	Sequence 04 current model drawing
K:	A04012 sec	Sequence 04 time left
L:	A04013 sec	Sequence 04 running time
M:	A04010 <0-4>	Sequence 04 frame color index
N:	A04014 <999>	Sequence 04 error indication
O:		
P:	A04021 <0-1>	Sequence 04 step type (sub/main)
Q:	A04020 <0-2>	Sequence 04 time speed-up (0,1,2)
R:		
S:	A04022 <0-1>	Sequence 04 deactivated
T:		

2.404 Page:6412 MD900** SEQ04 FUEL OIL SUPPLY HEATING (3/3)

A:		
B:	S04000 Hint	Start Seq 4 after Seq 3
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.405 Page:6413 MD900** SEQ05 BIG CLEAN UP LOOP (1/3)**

A:		
B:	A05030 <0-1>	Start permitted
C:	A05031 <0-1>	Main condensate tank level > 1.45 m
D:	A05032 <0-1>	Separator steam pressure < 1.1 bara
E:	A05033 <0-1>	Feed water flow < 100 t/h
F:	A05034 <0-1>	Boiler water temperature < 80 dgrC
G:	A05035 <0-1>	Burners not started
H:	A05036 <0-1>	Turbine turning/el bus ok
I:	A05037 <0-1>	Sequence 3 finished or off
J:		
K:	A05040 <0-1>	Set permitted
L:	A05041 <0-1>	Feed water flow > 240 t/h
M:	A05042 <0-1>	Boiler outlet flow > 240 t/h
N:	A05043 <0-1>	Clean-up line flow valve = 0 %
O:	A05044 <0-1>	Turbine turning/el bus ok
P:		
Q:		
R:		
S:		
T:		

2.406 Page:6414 MD900 SEQ05 BIG CLEAN UP LOOP (2/3)**

A:		
B:	A05001 <0-1>	Sequence 05 start
C:	A05002 <0-1>	Sequence 05 stop
D:	A05015 <0-1>	Sequence 05 step
E:	A05003 <0-1>	Sequence 05 set
F:	A05004 <0-1>	Sequence 05 reset
G:	A05005 <0-3>	Sequence 05 ready
H:		
I:	A05009 <999>	Sequence 05 current main/sub step
J:	A05008 <999>	Sequence 05 current model drawing
K:	A05012 sec	Sequence 05 time left
L:	A05013 sec	Sequence 05 running time
M:	A05010 <0-4>	Sequence 05 frame color index
N:	A05014 <999>	Sequence 05 error indication
O:		
P:	A05021 <0-1>	Sequence 05 step type (sub/main)
Q:	A05020 <0-2>	Sequence 05 time speed-up (0,1,2)
R:		
S:	A05022 <0-1>	Sequence 05 deactivated
T:		

2.407 Page:6415 MD900** SEQ05 BIG CLEAN UP LOOP (3/3)

A:
B: S05000 Hint Start Seq 5 after Seq 3
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.408 Page:6416 MD900** SEQ06 BOILER IGNITION (1/3)

A:
B: A06030 <0-1> Start permitted
C: A06031 <0-1> Separator steam pressure < 1.1 bara
D: A06032 <0-1> Boiler feed water flow > 250 t/h
E: A06033 <0-1> Boiler outlet flow > 250 t/h
F: A06034 <0-1> HFO circulation flow > 2 t/h
G: A06035 <0-1> HFO supply pressure > 15 barA
H: A06036 <0-1> HFO supply temperature > 60 dgrC
I: A06037 <0-1> Steam cooling tank pressure > 9 bara
J: A06038 <0-1> No burners started
K: A06039 <0-1> Turbine turning/el bus ok
L:
M:
N:
O:
P: A06040 <0-1> Set permitted
Q: A06041 <0-1> Boiler feed water flow > 200 t/h
R: A06042 <0-1> Boiler outlet flow > 250 t/h
S: A06043 <0-1> Some burners started
T:

**2.409 Page:6417 MD900** SEQ06 BOILER IGNITION
(2/3)**

A:		
B:	A06001 <0-1>	Sequence 06 start
C:	A06002 <0-1>	Sequence 06 stop
D:	A06015 <0-1>	Sequence 06 step
E:	A06003 <0-1>	Sequence 06 set
F:	A06004 <0-1>	Sequence 06 reset
G:	A06005 <0-3>	Sequence 06 ready
H:		
I:	A06009 <999>	Sequence 06 current main/sub step
J:	A06008 <999>	Sequence 06 current model drawing
K:	A06012 sec	Sequence 06 time left
L:	A06013 sec	Sequence 06 running time
M:	A06010 <0-4>	Sequence 06 frame color index
N:	A06014 <999>	Sequence 06 error indication
O:		
P:	A06021 <0-1>	Sequence 06 step type (sub/main)
Q:	A06020 <0-2>	Sequence 06 time speed-up (0,1,2)
R:		
S:	A06022 <0-1>	Sequence 06 deactivated
T:		

2.410 Page:6418 MD900 SEQ06 BOILER IGNITION
(3/3)**

A:		
B:	S06000 Hint	Start Seq 6 after Seq 5
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.411 Page:6420 MD900** SEQ07 PRESSURE RISING TO 15 BAR (1/3)

A:		
B:	A07030 <0-1>	Start permitted
C:	A07031 <0-1>	Separator steam pressure < 4 bara
D:	A07032 <0-1>	Boiler feed water flow > 250 t/h
E:	A07033 <0-1>	Boiler outlet flow > 250 t/h
F:	A07034 <0-1>	Some burners started
G:	A07035 <0-1>	FMC controller in auto
H:	A07036 <0-1>	Oxygen controller in auto
I:	A07037 <0-1>	Oxygen controller setpoint in auto
J:	A07038 <0-1>	Sequence 6 finished or off
K:		
L:	A07040 <0-1>	Set permitted
M:	A07041 <0-1>	Separator steam pressure > 5 bara
N:	A07042 <0-1>	Boiler feed water flow > 200 t/h
O:	A07043 <0-1>	Boiler outlet flow > 200 t/h
P:	A07044 <0-1>	Some burners started
Q:	A07045 <0-1>	Combustion controllers in auto
R:		
S:		
T:		

2.412 Page:6421 MD900** SEQ07 PRESSURE RISING TO 15 BAR (2/3)

A:		
B:	A07001 <0-1>	Sequence 07 start
C:	A07002 <0-1>	Sequence 07 stop
D:	A07015 <0-1>	Sequence 07 step
E:	A07003 <0-1>	Sequence 07 set
F:	A07004 <0-1>	Sequence 07 reset
G:	A07005 <0-3>	Sequence 07 ready
H:		
I:	A07009 <999>	Sequence 07 current main/sub step
J:	A07008 <999>	Sequence 07 current model drawing
K:	A07012 sec	Sequence 07 time left
L:	A07013 sec	Sequence 07 running time
M:	A07010 <0-4>	Sequence 07 frame color index
N:	A07014 <999>	Sequence 07 error indication
O:		
P:	A07021 <0-1>	Sequence 07 step type (sub/main)
Q:	A07020 <0-2>	Sequence 07 time speed-up (0,1,2)
R:		
S:	A07022 <0-1>	Sequence 07 deactivated
T:		

**2.413 Page:6422 MD900** SEQ07 PRESSURE RISING
TO 15 BAR (3/3)**

A:
B: S07000 Hint Start Seq 7 after Seq 6
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.414 Page:6423 MD901 SEQ08 COLD CONDENSER
VACUUM (1/3)**

A:
B: A08030 <0-1> Start permitted
C: A08031 <0-1> Some burners started
D: A08032 <0-1> Turbine turning/el bus ok
E: A08033 <0-1> Turbine speed < 2700 rpm
F: A08034 <0-1> Sequence 6 finished or off
G:
H:
I: A08040 <0-1> Set permitted
J: A08041 <0-1> Sealing steam pressure > 3.0 bara
K: A08042 <0-1> Condenser hotwell level > 0.20 m
L: A08043 <0-1> Condenser coolw flow > 1200 t/h
M: A08044 <0-1> Condenser pressure < 300 mbar
N: A08045 <0-1> Some vacuum pump running
O: A08046 <0-1> Some cold condensate pump running
P: A08047 <0-1> LP steam dump coolw supply valve open
Q: A08048 <0-1> LP steam dump inlet valve open
R:
S:
T:

2.415 Page:6424 MD901** SEQ08 COLD CONDENSER VACUUM (2/3)

A:		
B:	A08001 <0-1>	Sequence 08 start
C:	A08002 <0-1>	Sequence 08 stop
D:	A08015 <0-1>	Sequence 08 step
E:	A08003 <0-1>	Sequence 08 set
F:	A08004 <0-1>	Sequence 08 reset
G:	A08005 <0-3>	Sequence 08 ready
H:		
I:	A08009 <999>	Sequence 08 current main/sub step
J:	A08008 <999>	Sequence 08 current model drawing
K:	A08012 sec	Sequence 08 time left
L:	A08013 sec	Sequence 08 running time
M:	A08010 <0-4>	Sequence 08 frame color index
N:	A08014 <999>	Sequence 08 error indication
O:		
P:	A08021 <0-1>	Sequence 08 step type (sub/main)
Q:	A08020 <0-2>	Sequence 08 time speed-up (0,1,2)
R:		
S:	A08022 <0-1>	Sequence 08 deactivated
T:		

2.416 Page:6425 MD901** SEQ08 COLD CONDENSER VACUUM (3/3)

A:		
B:	S08000 Hint	Start Seq 8 after Seq 7 is started
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.417 Page:6426 MD900** SEQ09 FEEDW
DEAERATOR HEATING (1/3)**

A:		
B:	A09030 <0-1>	Start permitted
C:	A09031 <0-1>	Separator steam pressure > 1.1 bara
D:	A09032 <0-1>	Boiler feed water flow > 240 t/h
E:	A09033 <0-1>	FW deaerator pressure < 2.5 bara
F:	A09034 <0-1>	FW deaerator level > 1.5 m
G:	A09035 <0-1>	Some burners started
H:		
I:		
J:		
K:	A09040 <0-1>	Set permitted
L:	A09041 <0-1>	Separator steam pressure > 2.0 bara
M:	A09042 <0-1>	Boiler feed water flow > 240 t/h
N:	A09043 <0-1>	FW deaerator temperature > 75 dgrC
O:	A09044 <0-1>	FW deaerator level > 1.5 m
P:		
Q:		
R:		
S:		
T:		

2.418 Page:6427 MD900 SEQ09 FEEDW
DEAERATOR HEATING (2/3)**

A:		
B:	A09001 <0-1>	Sequence 09 start
C:	A09002 <0-1>	Sequence 09 stop
D:	A09015 <0-1>	Sequence 09 step
E:	A09003 <0-1>	Sequence 09 set
F:	A09004 <0-1>	Sequence 09 reset
G:	A09005 <0-3>	Sequence 09 ready
H:		
I:	A09009 <999>	Sequence 09 current main/sub step
J:	A09008 <999>	Sequence 09 current model drawing
K:	A09012 sec	Sequence 09 time left
L:	A09013 sec	Sequence 09 running time
M:	A09010 <0-4>	Sequence 09 frame color index
N:	A09014 <999>	Sequence 09 error indication
O:		
P:	A09021 <0-1>	Sequence 09 step type (sub/main)
Q:	A09020 <0-2>	Sequence 09 time speed-up (0,1,2)
R:		
S:	A09022 <0-1>	Sequence 09 deactivated
T:		

2.419 Page:6428 MD900** SEQ09 FEEDW DEAERATOR HEATING (3/3)

A:
B: S09000 Hint Start Seq 9 after Seq 7 is started
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.420 Page:6430 MD901** SEQ10 PRESSURE RISING TO 30 BAR (1/3)

A:
B: A10030 <0-1> Start permitted
C: A10031 <0-1> IPH line steam pressure > 2.0 bara
D: A10032 <0-1> HP line steam pressure < 35 bara
E: A10033 <0-1> Condenser hotwell level > 0.20 m
F: A10034 <0-1> Condenser coolw flow > 1200 t/h
G: A10035 <0-1> Some cold condensate pump running
H: A10036 <0-1> Turbine speed < 2700 rpm
I: A10037 <0-1> Sequence 7 finished or off
J:
K: A10040 <0-1> Set permitted
L: A10041 <0-1> IPH line steam pressure > 5.0 bara
M: A10042 <0-1> HP line steam pressure > 23 bara
N: A10043 <0-1> Condenser hotwell level > 0.20 m
O: A10044 <0-1> Condenser coolw flow > 1200 t/h
P: A10045 <0-1> Condenser pressure < 400 mbar
Q: A10046 <0-1> Some cold condensate pump running
R:
S:
T:

**2.421 Page:6431 MD901 ** SEQ10 PRESSURE RISING
TO 30 BAR (2/3)**

A:		
B:	A10001 <0-1>	Sequence 10 start
C:	A10002 <0-1>	Sequence 10 stop
D:	A10015 <0-1>	Sequence 10 step
E:	A10003 <0-1>	Sequence 10 set
F:	A10004 <0-1>	Sequence 10 reset
G:	A10005 <0-3>	Sequence 10 ready
H:		
I:	A10009 <999>	Sequence 10 current main/sub step
J:	A10008 <999>	Sequence 10 current model drawing
K:	A10012 sec	Sequence 10 time left
L:	A10013 sec	Sequence 10 running time
M:	A10010 <0-4>	Sequence 10 frame color index
N:	A10014 <999>	Sequence 10 error indication
O:		
P:	A10021 <0-1>	Sequence 10 step type (sub/main)
Q:	A10020 <0-2>	Sequence 10 time speed-up (0,1,2)
R:		
S:	A10022 <0-1>	Sequence 10 deactivated
T:		

**2.422 Page:6432 MD901 ** SEQ10 PRESSURE RISING
TO 30 BAR (3/3)**

A:		
B:	S10000 Hint	Start Seq 10 after Seq 9
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.423 Page:6433 MD901** SEQ11 PREPARING LP FEED HEATERS (1/3)

A:		
B:	A11030 <0-1>	Start permitted
C:	A11031 <0-1>	IPH line steam pressure > 5.0 bara
D:	A11032 <0-1>	Condenser coolw flow > 1200 t/h
E:	A11033 <0-1>	Condenser pressure < 250 mbar
F:	A11034 <0-1>	Some cold condensate pump running
G:	A11035 <0-1>	Some main condensate pump running
H:		
I:		
J:		
K:	A11040 <0-1>	Set permitted
L:	A11041 <0-1>	Seq start conditions ok
M:	A11042 <0-1>	LP0-LP3 steam shut off valves open
N:	A11043 <0-1>	LP0-LP3 drain level controllers in auto
O:	A11044 <0-1>	LP0-LP3 air vent valves open
P:		
Q:		
R:		
S:		
T:		

2.424 Page:6434 MD901** SEQ11 PREPARING LP FEED HEATERS (2/3)

A:		
B:	A11001 <0-1>	Sequence 11 start
C:	A11002 <0-1>	Sequence 11 stop
D:	A11015 <0-1>	Sequence 11 step
E:	A11003 <0-1>	Sequence 11 set
F:	A11004 <0-1>	Sequence 11 reset
G:	A11005 <0-3>	Sequence 11 ready
H:		
I:	A11009 <999>	Sequence 11 current main/sub step
J:	A11008 <999>	Sequence 11 current model drawing
K:	A11012 sec	Sequence 11 time left
L:	A11013 sec	Sequence 11 running time
M:	A11010 <0-4>	Sequence 11 frame color index
N:	A11014 <999>	Sequence 11 error indication
O:		
P:	A11021 <0-1>	Sequence 11 step type (sub/main)
Q:	A11020 <0-2>	Sequence 11 time speed-up (0,1,2)
R:		
S:	A11022 <0-1>	Sequence 11 deactivated
T:		

**2.425 Page:6435 MD901 ** SEQ11 PREPARING LP
FEED HEATERS (3/3)**

A:
B: S11000 Hint Start Seq 11 after Seq 10
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.426 Page:6436 MD901 ** SEQ12 TURBINE ROLLING
UP (1/3)**

A:
B: A12030 <0-1> Start permitted
C: A12031 <0-1> IPH line steam pressure > 7.0 bara
D: A12032 <0-1> HP line steam pressure > 25 bara
E: A12033 <0-1> Condenser pressure < 250 mbar
F: A12034 <0-1> Turbine speed < 1000 rpm
G: A12035 <0-1> Turbine turning/el bus ok
H: A12036 <0-1> Sequence 10 finished or off
I:
J:
K: A12040 <0-1> Set permitted
L: A12041 <0-1> IPH line steam pressure > 7.0 bara
M: A12042 <0-1> HP line steam pressure > 25 bara
N: A12043 <0-1> Condenser pressure < 80 mbar
O: A12044 <0-1> Turbine speed > 2800 rpm
P: A12045 <0-1> Turbine vibration < 20 %
Q: A12046 <0-1> or main circuit breaker connected
R:
S:
T:

2.427 Page:6437 MD901 ** SEQ12 TURBINE ROLLING UP (2/3)

A:		
B:	A12001 <0-1>	Sequence 12 start
C:	A12002 <0-1>	Sequence 12 stop
D:	A12015 <0-1>	Sequence 12 step
E:	A12003 <0-1>	Sequence 12 set
F:	A12004 <0-1>	Sequence 12 reset
G:	A12005 <0-3>	Sequence 12 ready
H:		
I:	A12009 <999>	Sequence 12 current main/sub step
J:	A12008 <999>	Sequence 12 current model drawing
K:	A12012 sec	Sequence 12 time left
L:	A12013 sec	Sequence 12 running time
M:	A12010 <0-4>	Sequence 12 frame color index
N:	A12014 <999>	Sequence 12 error indication
O:		
P:	A12021 <0-1>	Sequence 12 step type (sub/main)
Q:	A12020 <0-2>	Sequence 12 time speed-up (0,1,2)
R:		
S:	A12022 <0-1>	Sequence 12 deactivated
T:		

2.428 Page:6438 MD901 ** SEQ12 TURBINE ROLLING UP (3/3)

A:		
B:	S12000 Hint	Start Seq 12 after Seq 11
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.429 Page:6440 MD901 ** SEQ13 TURBINE CONNECTION (1/3)**

A:		
B:	A13030 <0-1>	Start permitted
C:	A13031 <0-1>	IPH line steam pressure 8-12 bara
D:	A13032 <0-1>	HP line steam pressure 27-33 bara
E:	A13033 <0-1>	Turbine speed 2960-3100 rpm
F:	A13034 <0-1>	Condenser pressure < 80 mbar
G:	A13035 <0-1>	Main circuit breaker disconnected
H:	A13036 <0-1>	Sequence 12 finished or off
I:		
J:		
K:	A13040 <0-1>	Set permitted
L:	A13041 <0-1>	Main circuit breaker connected
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.430 Page:6441 MD901 ** SEQ13 TURBINE CONNECTION (2/3)

A:		
B:	A13001 <0-1>	Sequence 13 start
C:	A13002 <0-1>	Sequence 13 stop
D:	A13015 <0-1>	Sequence 13 step
E:	A13003 <0-1>	Sequence 13 set
F:	A13004 <0-1>	Sequence 13 reset
G:	A13005 <0-3>	Sequence 13 ready
H:		
I:	A13009 <999>	Sequence 13 current main/sub step
J:	A13008 <999>	Sequence 13 current model drawing
K:	A13012 sec	Sequence 13 time left
L:	A13013 sec	Sequence 13 running time
M:	A13010 <0-4>	Sequence 13 frame color index
N:	A13014 <999>	Sequence 13 error indication
O:		
P:	A13021 <0-1>	Sequence 13 step type (sub/main)
Q:	A13020 <0-2>	Sequence 13 time speed-up (0,1,2)
R:		
S:	A13022 <0-1>	Sequence 13 deactivated
T:		

2.431 Page:6442 MD901** SEQ13 TURBINE CONNECTION (3/3)

A:
B: S13000 Hint Start Seq 13 after Seq 12
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.432 Page:6443 MD901** SEQ14 BLOCK BINDING (1/3)

A:
B: A14030 <0-1> Start permitted
C: A14031 <0-1> IPH line steam pressure > 7.0 bara
D: A14032 <0-1> HP line steam pressure > 26 bara
E: A14033 <0-1> Condenser pressure < 80 mbar
F: A14034 <0-1> Auxil circuit breaker disconnected
G: A14035 <0-1> Main circuit breaker connected
H: A14036 <0-1> Sequence 13 finished or off
I:
J:
K: A14040 <0-1> Set permitted
L: A14041 <0-1> Auxil circuit breaker connected
M:
N:
O:
P:
Q:
R:
S:
T:

**2.433 Page:6444 MD901 ** SEQ14 BLOCK BINDING
(2/3)**

A:		
B:	A14001 <0-1>	Sequence 14 start
C:	A14002 <0-1>	Sequence 14 stop
D:	A14015 <0-1>	Sequence 14 step
E:	A14003 <0-1>	Sequence 14 set
F:	A14004 <0-1>	Sequence 14 reset
G:	A14005 <0-3>	Sequence 14 ready
H:		
I:	A14009 <999>	Sequence 14 current main/sub step
J:	A14008 <999>	Sequence 14 current model drawing
K:	A14012 sec	Sequence 14 time left
L:	A14013 sec	Sequence 14 running time
M:	A14010 <0-4>	Sequence 14 frame color index
N:	A14014 <999>	Sequence 14 error indication
O:		
P:	A14021 <0-1>	Sequence 14 step type (sub/main)
Q:	A14020 <0-2>	Sequence 14 time speed-up (0,1,2)
R:		
S:	A14022 <0-1>	Sequence 14 deactivated
T:		

**2.434 Page:6445 MD901 ** SEQ14 BLOCK BINDING
(3/3)**

A:		
B:	S14000 Hint	Start Seq 14 after Seq 13
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.435 Page:6446 MD901** SEQ15 PREPARING HP FEED HEATERS (1/3)

A:		
B:	A15030 <0-1>	Start permitted
C:	A15031 <0-1>	IPH line steam pressure > 7.0 bara
D:	A15032 <0-1>	HP line steam pressure > 26 bara
E:	A15033 <0-1>	Net electric power > 5.0 MW
F:	A15034 <0-1>	Auxil circuit breaker connected
G:	A15035 <0-1>	Main circuit breaker connected
H:		
I:		
J:		
K:	A15040 <0-1>	Set permitted
L:	A15041 <0-1>	IHP line steam pressure > 5.0 bara
M:	A15042 <0-1>	HP line steam pressure > 23 bara
N:	A15043 <0-1>	HP1/2 level cntrollers in auto
O:	A15044 <0-1>	HP1/2 vent valves open
P:	A15045 <0-1>	HP2/3 steam valves open
Q:	A15046 <0-1>	Auxil circuit breaker connected
R:		
S:		
T:		

2.436 Page:6447 MD901** SEQ15 PREPARING HP FEED HEATERS (2/3)

A:		
B:	A15001 <0-1>	Sequence 15 start
C:	A15002 <0-1>	Sequence 15 stop
D:	A15015 <0-1>	Sequence 15 step
E:	A15003 <0-1>	Sequence 15 set
F:	A15004 <0-1>	Sequence 15 reset
G:	A15005 <0-3>	Sequence 15 ready
H:		
I:	A15009 <999>	Sequence 15 current main/sub step
J:	A15008 <999>	Sequence 15 current model drawing
K:	A15012 sec	Sequence 15 time left
L:	A15013 sec	Sequence 15 running time
M:	A15010 <0-4>	Sequence 15 frame color index
N:	A15014 <999>	Sequence 15 error indication
O:		
P:	A15021 <0-1>	Sequence 15 step type (sub/main)
Q:	A15020 <0-2>	Sequence 15 time speed-up (0,1,2)
R:		
S:	A15022 <0-1>	Sequence 15 deactivated
T:		

**2.437 Page:6448 MD901 ** SEQ15 PREPARING HP
FEED HEATERS (3/3)**

A:
 B: S15000 Hint Start Seq 15 after Seq 14
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

**2.438 Page:6450 MD901 ** SEQ16 PRESSURE RISING
TO 70 BAR (1/3)**

A:
 B: A16030 <0-1> Start permitted
 C: A16031 <0-1> HP line steam pressure 26-80 bara
 D: A16032 <0-1> Net electric power > 5 MW
 E: A16033 <0-1> Block Load Master setting < 45 %
 F: A16034 <0-1> Auxil circuit breaker connected
 G: A16035 <0-1> LP bypass control in manual/off
 H: A16036 <0-1> LP turbine damper cntr in local
 I: A16037 <0-1> HC 1 DHW inlet valve shut off
 J: A16039 <0-1> Sequence 15 finished or off
 K:
 L: A16040 <0-1> Set permitted
 M: A16041 <0-1> HP line steam pressure > 40 bara
 N: A16042 <0-1> Net electric power > 5 MW
 O: A16043 <0-1> Auxil circuit breaker connected
 P: A16044 <0-1> LP steam dump control in stby
 Q: A16045 <0-1> LP bypass control in manual/off
 R: A16046 <0-1> LP turbine damper cntr in local
 S: A16047 <0-1> HC 1 DHW inlet valve shut off
 T:

2.439 Page:6451 MD901** SEQ16 PRESSURE RISING TO 70 BAR (2/3)

A:		
B:	A16001 <0-1>	Sequence 16 start
C:	A16002 <0-1>	Sequence 16 stop
D:	A16015 <0-1>	Sequence 16 step
E:	A16003 <0-1>	Sequence 16 set
F:	A16004 <0-1>	Sequence 16 reset
G:	A16005 <0-3>	Sequence 16 ready
H:		
I:	A16009 <999>	Sequence 16 current main/sub step
J:	A16008 <999>	Sequence 16 current model drawing
K:	A16012 sec	Sequence 16 time left
L:	A16013 sec	Sequence 16 running time
M:	A16010 <0-4>	Sequence 16 frame color index
N:	A16014 <999>	Sequence 16 error indication
O:		
P:	A16021 <0-1>	Sequence 16 step type (sub/main)
Q:	A16020 <0-2>	Sequence 16 time speed-up (0,1,2)
R:		
S:	A16022 <0-1>	Sequence 16 deactivated
T:		

2.440 Page:6452 MD901** SEQ16 PRESSURE RISING TO 70 BAR (3/3)

A:		
B:	S16000 Hint	Start Seq 16 after Seq 15
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.441 Page:6453 MD902** SEQ17 DISTRICT HEAT
WATER SYSTEM (1/3)**

A:		
B:	A17030 <0-1>	Start permitted
C:	A17031 <0-1>	HP line steam pressure > 1.2 bara
D:	A17032 <0-1>	DHW line supply flow < 100 t/h
E:	A17036 <0-1>	Net electric power < 100 MW
F:	A17033 <0-1>	Direct heater 1 steam flow < 10 t/h
G:	A17034 <0-1>	Direct heater 2 steam flow < 10 t/h
H:	A17035 <0-1>	Turbine turning/el bus ok
I:		
J:		
K:	A17040 <0-1>	Set permitted
L:	A17041 <0-1>	HP line steam pressure > 2.0 bara
M:	A17042 <0-1>	DHW line supply flow > 1000 t/h
N:	A17043 <0-1>	Some DHW supply pump running
O:	A17044 <0-1>	Some DHW return pump running
P:		
Q:		
R:		
S:		
T:		

2.442 Page:6454 MD902 SEQ17 DISTRICT HEAT
WATER SYSTEM (2/3)**

A:		
B:	A17001 <0-1>	Sequence 17 start
C:	A17002 <0-1>	Sequence 17 stop
D:	A17015 <0-1>	Sequence 17 step
E:	A17003 <0-1>	Sequence 17 set
F:	A17004 <0-1>	Sequence 17 reset
G:	A17005 <0-3>	Sequence 17 ready
H:		
I:	A17009 <999>	Sequence 02 current main/sub step
J:	A17008 <999>	Sequence 17 current model drawing
K:	A17012 sec	Sequence 17 time left
L:	A17013 sec	Sequence 17 running time
M:	A17010 <0-4>	Sequence 17 frame color index
N:	A17014 <999>	Sequence 17 error indication
O:		
P:	A17021 <0-1>	Sequence 17 step type (sub/main)
Q:	A17020 <0-2>	Sequence 17 time speed-up (0,1,2)
R:		
S:	A17022 <0-1>	Sequence 17 deactivated
T:		

2.443 Page:6455 MD902** SEQ17 DISTRICT HEAT WATER SYSTEM (3/3)

A:
B: S17000 Hint Start Seq 17 after Seq 15 (09)
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.444 Page:6456 MD902** SEQ18 HOT CONDENSERS (1/3)

A:
B: A18030 <0-1> Start permitted
C: A18031 <0-1> IHP line steam pressure > 7.0 bara
D: A18032 <0-1> HP line stema pressure > 26 bara
E: A18033 <0-1> Condenser pressure < 200 mbar
F: A18034 <0-1> DHW line supply flow > 1000 t/h
G: A18035 <0-1> Main or auxil cbr connected
H: A18036 <0-1> LP steam dump control in stby
I: A18037 <0-1> Net electric power < 100 MW
J:
K: A18040 <0-1> Set permitted
L: A18041 <0-1> Hot condenser 1/2 coolw flow > 500 t/h
M: A18042 <0-1> Hot condenser 1 level cntr in auto
N: A18043 <0-1> Hot condenser 2 level cntr in auto
O: A18044 <0-1> Some hot condensate pump running
P: A18045 <0-1> HP line steam pressure > 25 bara
Q:
R:
S:
T:

**2.445 Page:6457 MD902** SEQ18 HOT CONDENSERS
(2/3)**

A:		
B:	A18001 <0-1>	Sequence 18 start
C:	A18002 <0-1>	Sequence 18 stop
D:	A18015 <0-1>	Sequence 18 step
E:	A18003 <0-1>	Sequence 18 set
F:	A18004 <0-1>	Sequence 18 reset
G:	A18005 <0-3>	Sequence 18 ready
H:		
I:	A18009 <999>	Sequence 18 current main/sub step
J:	A18008 <999>	Sequence 18 current model drawing
K:	A18012 sec	Sequence 18 time left
L:	A18013 sec	Sequence 18 running time
M:	A18010 <0-4>	Sequence 18 frame color index
N:	A18014 <999>	Sequence 18 error indication
O:		
P:	A18021 <0-1>	Sequence 18 step type (sub/main)
Q:	A18020 <0-2>	Sequence 18 time speed-up (0,1,2)
R:		
S:	A18022 <0-1>	Sequence 18 deactivated
T:		

2.446 Page:6458 MD902 SEQ18 HOT CONDENSERS
(3/3)**

A:		
B:	S18000 Hint	Start Seq 18 after Seq 17
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.447 Page:6460 MD902** SEQ19 EL POWER+DHW PRODUCTION (1/3)

A:		
B:	A19030 <0-1>	Start permitted
C:	A19031 <0-1>	IPH line steam pressure > 7.0 bara
D:	A19032 <0-1>	HP line steam pressure > 26 bara
E:	A19033 <0-1>	DHW line supply flow > 3000 t/h
F:	A19034 <0-1>	Hot condenser coolw flow > 500 t/h
G:	A19035 <0-1>	Block Load Master setting < 50 %
H:	A19036 <0-1>	LP steam dump control in stby
I:	A19037 <0-1>	Net electric power 5-100 MW
J:		
K:	A19040 <0-1>	Set permitted
L:	A19041 <0-1>	HP line steam pressure > 32 bara
M:	A19042 <0-1>	Hot condenser coolw flow > 500 t/h
N:	A19043 <0-1>	Block Load Master setting > 10 %
O:	A19044 <0-1>	BLM controller in auto
P:	A19045 <0-1>	BLW controller in auto
Q:	A19046 <0-1>	TMC controller in auto
R:	A19047 <0-1>	LP steam dump control in stby
S:	A19048 <0-1>	LP bypass control in stby
T:		

2.448 Page:6461 MD902** SEQ19 EL POWER+DHW PRODUCTION (2/3)

A:		
B:	A19001 <0-1>	Sequence 19 start
C:	A19002 <0-1>	Sequence 19 stop
D:	A19015 <0-1>	Sequence 19 step
E:	A19003 <0-1>	Sequence 19 set
F:	A19004 <0-1>	Sequence 19 reset
G:	A19005 <0-3>	Sequence 19 ready
H:		
I:	A19009 <999>	Sequence 19 current main/sub step
J:	A19008 <0-1>	Sequence 19 current model drawing
K:	A19012 sec	Sequence 19 time left
L:	A19013 sec	Sequence 19 running time
M:	A19010 <0-4>	Sequence 19 frame color index
N:	A19014 <999>	Sequence 19 error indication
O:		
P:	A19021 <0-1>	Sequence 19 step type (sub/main)
Q:	A19020 <0-2>	Sequence 19 time speed-up (0,1,2)
R:		
S:	A19022 <0-1>	Sequence 19 deactivated
T:		

**2.449 Page:6462 MD902** SEQ19 EL POWER+DHW
PRODUCTION (3/3)**

A:
B: S19000 Hint Start Seq 19 after Seq 18
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.450 Page:6463 MD902 SEQ20 FULL DHW
PRODUCTION/COAL (1/3)**

A:
B: A20030 <0-1> Start permitted
C: A20031 <0-1> IPH line steam pressure > 8 bara
D: A20032 <0-1> HP line steam pressure > 55 bara
E: A20033 <0-1> District air temperature 0-10 dgrC
F: A20034 <0-1> Block Load Master setting 25-42 %
G: A20035 <0-1> Net electric power > 40 MW
H: A20036 <0-1> Burner Management in auto (C+D on)
I: A20037 <0-1> Coal mill C and D ready
J: A20038 <0-1> BLW/TMC auto, LP dump/bypass stby
K:
L: A20040 <0-1> Set permitted
M: A20041 <0-1> District air temp { -17,-23 } dgrC
N: A20042 <0-1> Block Load Master setting > 70 %
O: A20043 <0-1> DHW supply temperature > 104 dgrC
P: A20044 <0-1> DHW heating power > 280 MW
Q: A20045 <0-1> TMC controller in balance 46-54 %
R: A20046 <0-1> BLM,BLW and TMC controllers in auto
S: A20047 <0-1> All coal mills in operation
T:

2.451 Page:6464 MD902** SEQ20 FULL DHW PRODUCTION/COAL (2/3)

A:		
B:	A20001 <0-1>	Sequence 20 start
C:	A20002 <0-1>	Sequence 20 stop
D:	A20015 <0-1>	Sequence 20 step
E:	A20003 <0-1>	Sequence 20 set
F:	A20004 <0-1>	Sequence 20 reset
G:	A20005 <0-3>	Sequence 20 ready
H:		
I:	A20009 <999>	Sequence 20 current main/sub step
J:	A20008 <999>	Sequence 20 current model drawing
K:	A20012 sec	Sequence 20 time left
L:	A20013 sec	Sequence 20 running time
M:	A20010 <0-4>	Sequence 20 frame color index
N:	A20014 <999>	Sequence 20 error indication
O:		
P:	A20021 <0-1>	Sequence 20 step type (sub/main)
Q:	A20020 <0-2>	Sequence 20 time speed-up (0,1,2)
R:		
S:	A20022 <0-1>	Sequence 20 deactivated
T:		

2.452 Page:6465 MD901** SEQ20 FULL DHW PRODUCTION/COAL (3/3)

A:		
B:	S20000 Hint	Start Seq 20 after Seq 19
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.453 Page:6466 MD902** SEQ21 ACCUMULATOR SYSTEM (1/3)**

A:		
B:	A21030 <0-1>	Start permitted
C:	A21031 <0-1>	District air temperature > -5 dgrC
D:	A21032 <0-1>	DHW line supply flow > 1000 t/h
E:	A21033 <0-1>	Block Load Master setting > 30 %
F:	A21034 <0-1>	Net electric power > 20 MW
G:	A21035 <0-1>	BLM controller in auto
H:	A21036 <0-1>	BLW controller in auto
I:	A21037 <0-1>	TCM controller in auto
J:	A21038 <0-1>	LP dump/bypass control in stby
K:		
L:		
M:	A21040 <0-1>	Set permitted
N:	A21041 <0-1>	Accumulator load > 5 MW
O:	A21042 <0-1>	Expansion tank level 17.5-18.5 m
P:	A21043 <0-1>	Turbine/pump flow deviation < 120 t/h
Q:	A21044 <0-1>	Turbine controller in auto
R:		
S:		
T:		

2.454 Page:6467 MD902 SEQ21 ACCUMULATOR SYSTEM (2/3)**

A:		
B:	A21001 <0-1>	Sequence 21 start
C:	A21002 <0-1>	Sequence 21 stop
D:	A21015 <0-1>	Sequence 21 step
E:	A21003 <0-1>	Sequence 21 set
F:	A21004 <0-1>	Sequence 21 reset
G:	A21005 <0-3>	Sequence 21 ready
H:		
I:	A21009 <999>	Sequence 21 current main/sub step
J:	A21008 <999>	Sequence 21 current model drawing
K:	A21012 sec	Sequence 21 time left
L:	A21013 sec	Sequence 21 running time
M:	A21010 <0-4>	Sequence 21 frame color index
N:	A21014 <999>	Sequence 21 error indication
O:		
P:	A21021 <0-1>	Sequence 21 step type (sub/main)
Q:	A21020 <0-2>	Sequence 21 time speed-up (0,1,2)
R:		
S:	A21022 <0-1>	Sequence 21 deactivated
T:		

2.455 Page:6468 MD902** SEQ21 ACCUMULATOR SYSTEM (3/3)

A:
B: S21000 Hint Start Seq 21 after Seq 19
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.456 Page:6470 MD902** SEQ22 ACCU DAY/NIGHT OPERATION (1/3)

A:
B: A22030 <0-1> Start permitted
C: A22031 <0-1> Accumulator load > 50 MW
D: A22032 <0-1> Net electric power > 10 MW
E: A22033 <0-1> Expansion tank level 17.5-18.5 m
F: A22034 <0-1> Block Load Master setting > 30 %
G: A22035 <0-1> BLW,BLM and TMC controllers in auto
H: A22038 <0-1> LP dump/bypass control in stby
I: A22036 <0-1> Francis turbine/pump in auto
J: A22037 <0-1> Day time selection
K:
L: A22040 <0-1> Set permitted
M: A22041 <0-1> Accumulator load > 30 MW
N: A22042 <0-1> Expansion tank level 17.5-18.5 m
O: A22043 <0-1> Turbine/pump flow deviation < 100 t/h
P: A22044 <0-1> Block Load Master setting > 30 %
Q: A22045 <0-1> BLW,BLM and TMC controllers in auto
R: A22046 <0-1> Francis turbine/pump in auto
S: A22047 <0-1> Day time selection
T:

**2.457 Page:6471 MD902** SEQ22 ACCU DAY/NIGHT
OPERATION (2/3)**

A:		
B:	A22001 <0-1>	Sequence 22 start
C:	A22002 <0-1>	Sequence 22 stop
D:	A22015 <0-1>	Sequence 22 step
E:	A22003 <0-1>	Sequence 22 set
F:	A22004 <0-1>	Sequence 22 reset
G:	A22005 <0-3>	Sequence 22 ready
H:		
I:	A22009 <999>	Sequence 22 current main/sub step
J:	A22008 <999>	Sequence 22 current model drawing
K:	A22012 sec	Sequence 22 time left
L:	A22013 sec	Sequence 22 running time
M:	A22010 <0-4>	Sequence 22 frame color index
N:	A22014 <999>	Sequence 22 error indication
O:		
P:	A22021 <0-1>	Sequence 22 step type (sub/main)
Q:	A22020 <0-2>	Sequence 22 time speed-up (0,1,2)
R:		
S:	A22022 <0-1>	Sequence 22 deactivated
T:		

2.458 Page:6472 MD902 SEQ22 ACCU DAY/NIGHT
OPERATION (3/3)**

A:		
B:	S22000 Hint	Start Seq 22 after Seq 21
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.459 Page:6473 MD902** SEQ23 FULL EL POWER PRODUCTION (1/3)

A:		
B:	A23030 <0-1>	Start permitted
C:	A23031 <0-1>	HP line steam pressure > 60 bara
D:	A23032 <0-1>	LP turbine dampers > 99 %
E:	A23033 <0-1>	DHW line supply flow < 50 t/h
F:	A23034 <0-1>	Steam separator level < 1.99 m
G:	A23035 <0-1>	Net electric power > 50 MW
H:	A23036 <0-1>	Main circuit breaker connected
I:	A23037 <0-1>	Auxil circuit breaker connected
J:	A23038 <0-1>	LP steam dump control in stby
K:	A23039 <0-1>	LP bypass control in manual/off
L:		
M:		
N:	A23040 <0-1>	Set permitted
O:	A23041 <0-1>	Net electric power > 220 MW
P:	A23042 <0-1>	Frequency support control on
Q:	A23043 <0-1>	BLE controller in auto
R:	A23044 <0-1>	BLM controller in auto
S:		
T:		

2.460 Page:6474 MD902** SEQ23 FULL EL POWER PRODUCTION (2/3)

A:		
B:	A23001 <0-1>	Sequence 23 start
C:	A23002 <0-1>	Sequence 23 stop
D:	A23015 <0-1>	Sequence 23 step
E:	A23003 <0-1>	Sequence 23 set
F:	A23004 <0-1>	Sequence 23 reset
G:	A23005 <0-3>	Sequence 23 ready
H:		
I:	A23009 <999>	Sequence 23 current main/sub step
J:	A23008 <999>	Sequence 23 current model drawing
K:	A23012 sec	Sequence 23 time left
L:	A23013 sec	Sequence 23 running time
M:	A23010 <0-4>	Sequence 23 frame color index
N:	A23014 <999>	Sequence 23 error indication
O:		
P:	A23021 <0-1>	Sequence 23 step type (sub/main)
Q:	A23020 <0-2>	Sequence 23 time speed-up (0,1,2)
R:		
S:	A23022 <0-1>	Sequence 23 deactivated
T:		

**2.461 Page:6475 MD902** SEQ23 FULL EL POWER
PRODUCTION (3/3)**

A:
B: S23000 Hint Start Seq 23 after Seq 16
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.462 Page:6476 MD902 SEQ24 COLD PLANT TO
MAX POWER (1/3)**

A:
B: A24030 <0-1> Start permitted
C: A24031 <0-1> IPH line steam pressure < 1.1 bara
D: A24032 <0-1> HP line steam pressure < 1.1 bara
E: A24033 <0-1> Turbine speed < 10 rpm
F: A24034 <0-1> No burners started
G:
H:
I:
J:
K: A24040 <0-1> Set permitted
L: A24041 <0-1> Net electric power > 250 MW
M: A24042 <0-1> Frequency support control on
N: A24043 <0-1> BLE controller in auto
O: A24044 <0-1> BLM controller in auto
P: A24045 <0-1> LP steam dump control in stby
Q: A24046 <0-1> LP bypass control in manual/off
R:
S:
T:

2.463 Page:6477 MD902** SEQ24 COLD PLANT TO MAX POWER (2/3)

A:		
B:	A24001 <0-1>	Sequence 24 start
C:	A24002 <0-1>	Sequence 24 stop
D:	A24015 <0-1>	Sequence 24 step
E:	A24003 <0-1>	Sequence 24 set
F:	A24004 <0-1>	Sequence 24 reset
G:	A24005 <0-3>	Sequence 24 ready
H:		
I:	A24009 <999>	Sequence 24 current main/sub step
J:	A24008 <999>	Sequence 24 current model drawing
K:	A24012 sec	Sequence 24 time left
L:	A24013 sec	Sequence 24 running time
M:	A24010 <0-4>	Sequence 24 frame color index
N:	A24014 <999>	Sequence 24 error indication
O:		
P:	A24021 <0-1>	Sequence 24 step type (sub/main)
Q:	A24020 <0-2>	Sequence 24 time speed-up (0,1,2)
R:		
S:	A24022 <0-1>	Sequence 24 deactivated
T:		

2.464 Page:6478 MD902** SEQ24 COLD PLANT TO MAX POWER (3/3)

A:		
B:	S24000 Hint	Start Seq 24 from Cold Plant
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

**2.465 Page:6500 MD903** SEQ25 DESOX PLANT
START-UP (1/3)**

A:		
B:	A25030 <0-1>	Start permitted
C:	A25031 <0-1>	El-bus 1/2 voltage ok
D:	A25032 <0-1>	Absorber not running
E:	A25033 <0-1>	Desox plant not shutting down
F:		
G:	A25040 <0-1>	Set permitted
H:	A25041 <0-1>	Some burners started
I:	A25042 <0-1>	Absorber running
J:	A25043 <0-1>	Flue gas SO2 content < 50 mg/Nm3
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.466 Page:6501 MD903 SEQ25 DESOX PLANT
START-UP (2/3)**

A:		
B:	A25001 <0-1>	Sequence 25 start
C:	A25002 <0-1>	Sequence 25 stop
D:	A25015 <0-1>	Sequence 25 step
E:	A25003 <0-1>	Sequence 25 set
F:	A25004 <0-1>	Sequence 25 reset
G:	A25005 <0-3>	Sequence 25 ready
H:		
I:	A25009 <999>	Sequence 25 current main/sub step
J:	A25008 <999>	Sequence 25 current model drawing
K:	A25012 sec	Sequence 25 time left
L:	A25013 sec	Sequence 25 running time
M:	A25010 <0-4>	Sequence 25 frame color index
N:	A25014 <999>	Sequence 25 error indication
O:		
P:	A25021 <0-1>	Sequence 25 step type (sub/main)
Q:	A25020 <0-2>	Sequence 25 time speed-up (0,1,2)
R:		
S:	A25022 <0-1>	Sequence 25 deactivated
T:		

2.467 Page:6502 MD903** SEQ25 DESOX PLANT START-UP (3/3)

A:
B: S25000 Hint Start Seq 25 before boiler light off
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.468 Page:6503 MD903** SEQ26 DESOX PLANT SHUT-DOWN (1/3)

A:
B: A26030 <0-1> Start permitted
C: A26031 <0-1> El-bus 1/2 voltage ok
D: A26032 <0-1> Absorber inlet dampers open
E: A26033 <0-1> Desox plant not starting up
F:
G: A26040 <0-1> Set permitted
H: A26041 <0-1> Absorber not running
I: A26042 <0-1> Absorber bypass damper open
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.469 Page:6504 MD903** SEQ26 DESOX PLANT
SHUT-DOWN (2/3)**

A:		
B:	A26001 <0-1>	Sequence 26 start
C:	A26002 <0-1>	Sequence 26 stop
D:	A26015 <0-1>	Sequence 26 step
E:	A26003 <0-1>	Sequence 26 set
F:	A26004 <0-1>	Sequence 26 reset
G:	A26005 <0-3>	Sequence 26 ready
H:		
I:	A26009 <999>	Sequence 26 current main/sub step
J:	A26008 <999>	Sequence 26 current model drawing
K:	A26012 sec	Sequence 26 time left
L:	A26013 sec	Sequence 26 running time
M:	A26010 <0-4>	Sequence 26 frame color index
N:	A26014 <999>	Sequence 26 error indication
O:		
P:	A26021 <0-1>	Sequence 26 step type (sub/main)
Q:	A26020 <0-2>	Sequence 26 time speed-up (0,1,2)
R:		
S:	A26022 <0-1>	Sequence 26 deactivated
T:		

2.470 Page:6505 MD903 SEQ26 DESOX PLANT
SHUT-DOWN (3/3)**

A:		
B:	S26000 Hint	Start Seq 26 before boiler shut down
C:		
D:		
E:		
F:		
G:		
H:		
I:		
J:		
K:		
L:		
M:		
N:		
O:		
P:		
Q:		
R:		
S:		
T:		

2.471 Page:6506 MD903 SEQ27 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.472 Page:6507 MD903 SEQ27 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:



2.473 Page:6508 MD903 SEQ27 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.474 Page:6510 MD903 SEQ28 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.475 Page:6511 MD903 SEQ28 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.476 Page:6512 MD903 SEQ28 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:



2.477 Page:6513 MD903 SEQ29 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.478 Page:6514 MD903 SEQ29 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.479 Page:6515 MD903 SEQ29 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.480 Page:6516 MD903 SEQ30 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:



2.481 Page:6517 MD903 SEQ30 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.482 Page:6518 MD903 SEQ30 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.483 Page:6520 MD903 SEQ31 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.484 Page:6521 MD903 SEQ31 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:



2.485 Page:6522 MD903 SEQ31 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.486 Page:6523 MD903 SEQ32 SPARE (1/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.487 Page:6524 MD903 SEQ32 SPARE (2/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

2.488 Page:6525 MD903 SEQ32 SPARE (3/3)**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T:

**2.489 Page:7100 MD700** SCR1 DAMPERS**

A:	V17701	%	SCR1 Damper After Economizer pos
B:	V17702	%	SCR1 Damper Before Economizer pos
C:			
D:	V17710	%	SCR1 Reactor Inlet Damper
E:	V17711	%	SCR1 Reactor Outlet Damper
F:	V17712	<0-1>	SCR1 Heating Inlet Damper
G:	V17713	<0-1>	SCR1 Heating Outlet Damper Before Fan
H:	V17714	<0-1>	SCR1 Heating Outlet Damper After Fan
I:	V17715	<0-1>	SCR1 Dehydration Circuit Damper
J:	V17717	%	SCR1 Reactor By-pass Damper
K:			
L:	V17401	%	SCR1 NH3 injection control valve
M:	V17402	<0-1>	SCR1 NH3 injection shut off valve
N:	V17750	<0-1>	SCR1 Reactor soot blowing valve
O:			
P:	V17501	<0-1>	SCR1 Product drain Damper
Q:	V17502	<0-1>	SCR1 Product transport air supply
R:			
S:	V07610	<0-1>	SCR Intermediate prod. tk outlet Damper
T:			

2.490 Page:7101 MD700 SCR1 DAMPERS
AUTO/MAN**

A:	X17708	<0-1>	SCR1 Reactor Inlet Damper auto
B:	X17709	<0-1>	SCR1 Reactor Outlet Damper auto
C:	X17716	<0-1>	SCR1 Reactor By-pass Damper auto
D:			
E:	V17703	%	SCR1 Damper After Economizer setp
F:	V17704	%	SCR1 Damper Before Economizer setp
G:	V17708	%	SCR1 Reactor Inlet Damper setp
H:	V17709	%	SCR1 Reactor Outlet Damper setp
I:	V17716	%	SCR1 Reactor By-pass Damper setp
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.491 Page:7102 MD700** SCR2 DAMPERS

A:	V27701	%	SCR2 Damper After Economizer pos
B:	V27702	%	SCR2 Damper Before Economizer pos
C:			
D:	V27710	%	SCR2 Reactor Inlet Damper
E:	V27711	%	SCR2 Reactor Outlet Damper
F:	V27712	<0-1>	SCR2 Heating Inlet Damper
G:	V27713	<0-1>	SCR2 Heating Outlet Damper Before Fan
H:	V27714	<0-1>	SCR2 Heating Outlet Damper After Fan
I:	V27715	<0-1>	SCR2 Dehydration Circuit Damper
J:	V27717	%	SCR2 Reactor By-pass Damper
K:			
L:	V27401	%	SCR2 NH3 injection control valve
M:	V27402	<0-1>	SCR2 NH3 injection shut off valve
N:	V27750	<0-1>	SCR2 Reactor soot blowing valve
O:			
P:	V27501	<0-1>	SCR2 Product drain Damper
Q:	V27502	<0-1>	SCR2 Product transport air supply
R:			
S:	V07610	<0-1>	SCR Intermediate prod. tk outlet Damper
T:			

2.492 Page:7103 MD700** SCR2 DAMPERS AUTO/MAN

A:	X27708	<0-1>	SCR2 Reactor Inlet Damper auto
B:	X27709	<0-1>	SCR2 Reactor Outlet Damper auto
C:	X27716	<0-1>	SCR2 Reactor By-pass Damper auto
D:			
E:	V27703	%	SCR2 Damper After Economizer setp
F:	V27704	%	SCR2 Damper Before Economizer setp
G:	V27708	%	SCR2 Reactor Inlet Damper setp
H:	V27709	%	SCR2 Reactor Outlet Damper setp
I:	V27716	%	SCR2 Reactor By-pass Damper setp
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

**2.493 Page:7104 MD700** SCR1 FANS**

A:	R17418	<0-1>	SCR1 Dehydration fan s/s (8.9kW)
B:	R17317	<0-1>	SCR1 NH3 Injection fan s/s (11.0kW)
C:	R17417	<0-1>	SCR1 Heating fan s/s (18.5kW)
D:			
E:			
F:			
G:			
H:			
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.494 Page:7105 MD700 SCR2 FANS**

A:	R27418	<0-1>	SCR2 Dehydration fan s/s (8.9kW)
B:	R27317	<0-1>	SCR2 NH3 Injection fan s/s (11.0kW)
C:	R27417	<0-1>	SCR2 Heating fan s/s (18.5kW)
D:			
E:			
F:			
G:			
H:			
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.495 Page:7106 MD700** COMBUSTION AIR FAN RATIO CONTROLLER

A:	X07050	<0-1>		Comb. Air Fan Ratio contr	auto switch
B:	C07050	%		Comb. Air Fan Ratio contr	set point
C:	C07054	%		Comb. Air Fan Ratio contr	input
D:	D07050	%		Comb. Air Fan Ratio contr	deviation
E:	Z07050	%		Comb. Air Fan Ratio contr	output
F:					
G:	C07051	%/%		Comb. Air Fan Ratio contr	gain
H:	C07052	sec		Comb. Air Fan Ratio contr	integr time
I:	C07053	sec		Comb. Air Fan Ratio contr	deriv. time
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.496 Page:7107 MD700** SCR TEMP CONTROLLERS

A:	X17601	<0-1>		Boiler Out temp 1 contr	auto switch
B:	T17601	dgrC		Boiler Out temp 1 contr	set point
C:	T17202	dgrC	L=--- H=420.0	SCR 1 Flue gas temperature	
D:	D17601	dgrC		Boiler Out temp 1 contr	deviation
E:	Z17601	%		Boiler Out temp 1 contr	output
F:	C17601	%/dgrC		Boiler Out temp 1 contr	gain
G:	C17602	sec		Boiler Out temp 1 contr	integr time
H:	C17603	sec		Boiler Out temp 1 contr	deriv. time
I:					
J:	X27601	<0-1>		Boiler Out temp 2 contr	auto switch
K:	T27601	dgrC		Boiler Out temp 2 contr	set point
L:	T27202	dgrC	L=--- H=420.0	SCR 2 Flue gas temperature	
M:	D27601	dgrC		Boiler Out temp 2 contr	deviation
N:	Z27601	%		Boiler Out temp 2 contr	output
O:	C27601	%/dgrC		Boiler Out temp 2 contr	gain
P:	C27602	sec		Boiler Out temp 2 contr	integr time
Q:	C27603	sec		Boiler Out temp 2 contr	deriv. time
R:					
S:					
T:					

**2.497 Page:7108 MD700** SCR NH3 CONTROLLERS**

A:	X17801	<0-1>	SCR 1 NH3 contr auto switch
B:	E17801	%	SCR 1 NH3 contr set point
C:	F17801	%	SCR 1 NH3 contr feed back
D:	D17801	kg/h	SCR 1 NH3 contr deviation
E:	Z17801	%	SCR 1 NH3 contr output
F:			
G:	C17801	%/kg/h	SCR 1 NH3 contr gain
H:	C17802	sec	SCR 1 NH3 contr integr time
I:	C17803	sec	SCR 1 NH3 contr deriv. time
J:			
K:	X27801	<0-1>	SCR 2 NH3 contr auto switch
L:	E27801	%	SCR 2 NH3 contr set point
M:	F27801	%	SCR 2 NH3 contr feed back
N:	D27801	kg/h	SCR 2 NH3 contr deviation
O:	Z27801	%	SCR 2 NH3 contr output
P:			
Q:	C27801	%/kg/h	SCR 2 NH3 contr gain
R:	C27802	sec	SCR 2 NH3 contr integr time
S:	C27803	sec	SCR 2 NH3 contr deriv. time
T:			

2.498 Page:7109 MD700 SCR1 OPERATIONAL DATA**

A:	E17101	%	L=70.0	H=99.5	SCR 1 Efficiency
B:	T17102	dgrC			SCR 1 Temp in
C:	T17103	dgrC	L=---	H=420.0	SCR 1 Temp out
D:	D17104	mmH2O	L=---	H=76.5	SCR 1 Diff press
E:	X17105	ppm			SCR 1 NOx in
F:	X17106	ppm	L=---	H=130.0	SCR 1 NOx out
G:	G17107	kg/h	L=1.0	H=170.0	SCR 1 NH3 in
H:	G17108	ppm			SCR 1 NH3 out
I:	G17109	%			SCR 1 O2 in
J:	G17110	%			SCR 1 O2 out
K:					
L:	T17111	dgrC			SCR 1 NH3/Air Temp
M:	G17820	kg/h			SCR 1 NH3/Air flow
N:	X17821	%	L=---	H=7.0	SCR 1 NH3 content in NH3/Air flow
O:					
P:	C17822	%			SCR 1 NH3 slip coefficient
Q:	C17823	%			SCR 1 SCR Reactor efficiency adjust
R:					
S:	X17841	%			SCR 1 Fouling
T:					

2.499 Page:7110 MD700** SCR2 OPERATIONAL DATA

A:	E27101	%	L=70.0	H=99.5	SCR 2 Efficiency
B:	T27102	dgrC			SCR 2 Temp in
C:	T27103	dgrC	L=---	H=420.0	SCR 2 Temp out
D:	D27104	mmH2O	L=---	H=76.5	SCR 2 Diff press
E:	X27105	ppm			SCR 2 NOx in
F:	X27106	ppm	L=---	H=130.0	SCR 2 NOx out
G:	G27107	kg/h	L=1.0	H=170.0	SCR 2 NH3 in
H:	G27108	ppm			SCR 2 NH3 out
I:	G27109	%			SCR 2 O2 in
J:	G27110	%			SCR 2 O2 out
K:					
L:	T27111	dgrC			SCR 1 NH3/Air Temp
M:	G27820	kg/h			SCR 2 NH3/Air flow
N:	X27821	%	L=---	H=7.0	SCR 2 NH3 content in NH3/Air flow
O:					
P:	C27822	%			SCR 2 NH3 slip coefficient
Q:	C27823	%			SCR 2 SCR Reactor efficiency adjust
R:					
S:	X27841	%			SCR 2 Fouling
T:					

2.500 Page:7111 MD700** OTHER DENOX PROCESS DATA

A:	G17201	ton/h	L=---	H=500.0	Boiler outlet 1 Flue gas flow
B:	T17202	dgrC	L=---	H=420.0	SCR 1 Flue gas temperature
C:	G72163	ton/h			Flue gas flow outlet denox unit 1
D:	G17164	kg/h			NOX gas flow outlet denox unit 1
E:	L17600	m	L=---	H=2.0	SCR 1 product level
F:	M17610	kg			SCR 1 product Mass
G:					
H:	G27201	ton/h	L=---	H=500.0	Boiler outlet 2 Flue gas flow
I:	T27202	dgrC	L=---	H=420.0	SCR 2 Flue gas temperature
J:	G72168	ton/h			Flue gas flow outlet denox unit 2
K:	G27164	kg/h			NOX gas flow outlet denox unit 2
L:	L27600	m	L=---	H=2.0	SCR 2 product level
M:	M27610	kg			SCR 2 product Mass
N:					
O:	T72201	dgrC			Ring channel air temp
P:					
Q:					
R:					
S:					
T:					

**2.501 Page:7800 MD700** BOILER WHEN ISOLATION**

A:	Z07800	<0-1>		deNOx/deSOx Isolation
B:				
C:	T72202	dgrC		ISOL Ring channel air temp
D:	T72409	dgrC		ISOL Economizer gas inlet temp
E:	T72411	dgrC		ISOL Economizer gas outlet temp
F:	Z78001	<0-1>		ISOL Boiler Burner Status
G:				
H:	G78011	t/h		ISOL COx in flue gas
I:	G78012	t/h		ISOL SOx in flue gas
J:	G78013	t/h		ISOL NOx in flue gas
K:	G78014	t/h		ISOL N2 in flue gas
L:	G78015	t/h		ISOL O2 in flue gas
M:	G78016	t/h		ISOL H2O in flue gas
N:	G78017	t/h		ISOL ASH in flue gas
O:				
P:				
Q:				
R:				
S:				
T:				

2.502 Page:7801 MD700 BOILER WHEN NORMAL OPERATION**

A:	Z07800	<0-1>		deNOx/deSOx Isolation
B:				
C:	T02201	dgrC	L=80.0 H=400.0	Ring channel air temp
D:	T02408	dgrC		Economizer gas inlet temp
E:	T02410	dgrC		Economizer gas outlet temp
F:	Z78101	<0-1>		Boiler Burner Status
G:				
H:	G78111	t/h		COx in flue gas
I:	G78112	t/h		SOx in flue gas
J:	G78113	t/h		NOx in flue gas
K:	G78114	t/h		N2 in flue gas
L:	G78115	t/h		O2 in flue gas
M:	G78116	t/h		H2O in flue gas
N:	G78117	t/h		ASH in flue gas
O:				
P:				
Q:				
R:				
S:				
T:				

2.503 Page:7802 MD700** ACTUAL BOILER DATA

A:	Z07800	<0-1>		deNOx/deSOx Isolation
B:				
C:	T72201	dgrC		Ring channel air temp
D:	T72408	dgrC		Economizer gas inlet temp
E:	T72410	dgrC		Economizer gas outlet temp
F:	Z78201	<0-1>		Boiler Burner Status
G:				
H:	G78211	t/h		COx in flue gas
I:	G78212	t/h		SOx in flue gas
J:	G78213	t/h		NOx in flue gas
K:	G78214	t/h		N2 in flue gas
L:	G78215	t/h		O2 in flue gas
M:	G78216	t/h		H2O in flue gas
N:	G78217	t/h		ASH in flue gas
O:				
P:				
Q:				
R:				
S:				
T:				

2.504 Page:7901 MD700** SCR 1/2 PURGE SEQUENCE

A:	A07901	<0-1>	L=---	H=1.0	S701 Alarm
B:	R07901	<0-1>			S701 SCR 1/2 Purge Sequence
C:	M07901	<0-1>			S701 Mode - (0-Man 1-Auto)
D:	S07901	<0-99>			S701 Step Number
E:	T07901	sec			S701 Timer
F:	X07901	<0-1>			S701 Execute Man Actions
G:	W07901	sec			S701 Max Wait
H:	Q07901	sec			S701 Min Wait
I:					
J:	C07081	<0-2>			Select Reactor
K:					
L:	Z07080	<0-1>			Purge Ready
M:	X07080	<0-1>			Purge started
N:					
O:					
P:					
Q:					
R:					
S:					
T:					



2.505 Page:7902 MD700** SCR 1 START/STOP SEQUENCE

A:	A07902	<0-1>	L=---	H=1.0	S702 Alarm
B:	R07902	<0-1>			S702 SCR 1 Start/Stop Sequence
C:	M07902	<0-1>			S702 Mode - (0-Man 1-Auto)
D:	S07902	<0-99>			S702 Step Number
E:	T07902	sec			S702 Timer
F:	X07902	<0-1>			S702 Execute Man Actions
G:	W07902	sec			S702 Max Wait
H:	Q07902	sec			S702 Min Wait
I:					
J:	C07081	<0-2>			Select Reactor
K:	P07903	<0-1>			SCR2 In operation
L:	G72103	ton/h			Rotary air preheater 1 air outlet flow
M:	G72133	ton/h			Rotary air preheater 2 air outlet flow
N:	G72163	ton/h			Flue gas flow outlet denox unit 1
O:	G72168	ton/h			Flue gas flow outlet denox unit 2
P:	T17202	dgrC	L=---	H=420.0	SCR 1 Flue gas temperature
Q:					
R:					
S:					
T:					

2.506 Page:7903 MD700** SCR 2 START/STOP SEQUENCE

A:	A07903	<0-1>	L=---	H=1.0	S703 Alarm
B:	R07903	<0-1>			S703 SCR 2 Start/Stop Sequence
C:	M07903	<0-1>			S703 Mode - (0-Man 1-Auto)
D:	S07903	<0-99>			S703 Step Number
E:	T07903	sec			S703 Timer
F:	X07903	<0-1>			S703 Execute Man Actions
G:	W07903	sec			S703 Max Wait
H:	Q07903	sec			S703 Min Wait
I:					
J:	C07081	<0-2>			Select Reactor
K:	P07902	<0-1>			SCR1 In operation
L:	G72103	ton/h			Rotary air preheater 1 air outlet flow
M:	G72133	ton/h			Rotary air preheater 2 air outlet flow
N:	G72163	ton/h			Flue gas flow outlet denox unit 1
O:	G72168	ton/h			Flue gas flow outlet denox unit 2
P:	T27202	dgrC	L=---	H=420.0	SCR 2 Flue gas temperature
Q:					
R:					
S:					
T:					

2.507 Page:7904 MD700** SCR 1 HEATING SEQUENCE

A: A07904 <0-1> L=--- H=1.0 S704 Alarm
B: R07904 <0-1> S704 SCR 1 Heating Sequence
C: M07904 <0-1> S704 Mode - (0-Man 1-Auto)
D: S07904 <0-99> S704 Step Number
E: T07904 sec S704 Timer
F: X07904 <0-1> S704 Execute Man Actions
G: W07904 sec S704 Max Wait
H: Q07904 sec S704 Min Wait
I:
J: Z78201 <0-1> Boiler Burner Status
K: T72201 dgrC Ring channel air temp
L: T17103 dgrC L=--- H=420.0 SCR 1 Temp out
M:
N:
O:
P:
Q:
R:
S:
T:

2.508 Page:7905 MD700** SCR 2 HEATING SEQUENCE

A: A07905 <0-1> L=--- H=1.0 S705 Alarm
B: R07905 <0-1> S705 SCR 2 Heating Sequence
C: M07905 <0-1> S705 Mode - (0-Man 1-Auto)
D: S07905 <0-99> S705 Step Number
E: T07905 sec S705 Timer
F: X07905 <0-1> S705 Execute Man Actions
G: W07905 sec S705 Max Wait
H: Q07905 sec S705 Min Wait
I:
J: Z78201 <0-1> Boiler Burner Status
K: T72201 dgrC Ring channel air temp
L: T27103 dgrC L=--- H=420.0 SCR 2 Temp out
M:
N:
O:
P:
Q:
R:
S:
T:

**2.509 Page:7906 MD700** SCR 1 NH3 INJECTION SEQUENCE**

A:	A07906	<0-1>	L=---	H=1.0	S706 Alarm
B:	R07906	<0-1>			S706 SCR 1 NH3 Injection Sequence
C:	M07906	<0-1>			S706 Mode - (0-Man 1-Auto)
D:	S07906	<0-99>			S706 Step Number
E:	T07906	sec			S706 Timer
F:	X07906	<0-1>			S706 Execute Man Actions
G:	W07906	sec			S706 Max Wait
H:	Q07906	sec			S706 Min Wait
I:					
J:	Z78201	<0-1>			Boiler Burner Status
K:	V17401	%			SCR1 NH3 injection control valve
L:	V17402	<0-1>			SCR1 NH3 injection shut off valve
M:	R17317	<0-1>			SCR1 NH3 Injection fan s/s (11.0kW)
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.510 Page:7907 MD700 SCR 2 NH3 INJECTION SEQUENCE**

A:	A07907	<0-1>	L=---	H=1.0	S707 Alarm
B:	R07907	<0-1>			S707 SCR 2 NH3 Injection Sequence
C:	M07907	<0-1>			S707 Mode - (0-Man 1-Auto)
D:	S07907	<0-99>			S707 Step Number
E:	T07907	sec			S707 Timer
F:	X07907	<0-1>			S707 Execute Man Actions
G:	W07907	sec			S707 Max Wait
H:	Q07907	sec			S707 Min Wait
I:					
J:	Z78201	<0-1>			Boiler Burner Status
K:	V27401	%			SCR2 NH3 injection control valve
L:	V27402	<0-1>			SCR2 NH3 injection shut off valve
M:	R27317	<0-1>			SCR2 NH3 Injection fan s/s (11.0kW)
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.511 Page:7908 MD700** SCR 1 PRODUCT HANDLING SEQUENCE

A:	A07908	<0-1>	L=---	H=1.0	S708 Alarm
B:	R07908	<0-1>			S708 SCR 1 Product Handling Sequence
C:	M07908	<0-1>			S708 Mode - (0-Man 1-Auto)
D:	S07908	<0-99>			S708 Step Number
E:	T07908	sec			S708 Timer
F:	X07908	<0-1>			S708 Execute Man Actions
G:	W07908	sec			S708 Max Wait
H:	Q07908	sec			S708 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.512 Page:7909 MD700** SCR 2 PRODUCT HANDLING SEQUENCE

A:	A07909	<0-1>	L=---	H=1.0	S709 Alarm
B:	R07909	<0-1>			S709 SCR 2 Product Handling Sequence
C:	M07909	<0-1>			S709 Mode - (0-Man 1-Auto)
D:	S07909	<0-99>			S709 Step Number
E:	T07909	sec			S709 Timer
F:	X07909	<0-1>			S709 Execute Man Actions
G:	W07909	sec			S709 Max Wait
H:	Q07909	sec			S709 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					



2.513 Page:7910 MD700** SCR 1 SOOT BLOWING SEQUENCE

A:	A07910	<0-1>	L=---	H=1.0	S710 Alarm
B:	R07910	<0-1>			S710 SCR 1 Soot blowing Sequence
C:	M07910	<0-1>			S710 Mode - (0-Man 1-Auto)
D:	S07910	<0-99>			S710 Step Number
E:	T07910	sec			S710 Timer
F:	X07910	<0-1>			S710 Execute Man Actions
G:	W07910	sec			S710 Max Wait
H:	Q07910	sec			S710 Min Wait
I:					
J:	T17751	sec			SCR1 Soot blowing duration
K:	P07911	<0-1>			SCR2 Soot blowing active
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.514 Page:7911 MD700** SCR 2 SOOT BLOWING SEQUENCE

A:	A07911	<0-1>	L=---	H=1.0	S711 Alarm
B:	R07911	<0-1>			S711 SCR 2 Soot blowing Sequence
C:	M07911	<0-1>			S711 Mode - (0-Man 1-Auto)
D:	S07911	<0-99>			S711 Step Number
E:	T07911	sec			S711 Timer
F:	X07911	<0-1>			S711 Execute Man Actions
G:	W07911	sec			S711 Max Wait
H:	Q07911	sec			S711 Min Wait
I:					
J:	T27751	sec			SCR2 Soot blowing duration
K:	P07910	<0-1>			SCR1 Soot blowing active
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.515 Page:7930 MD700** SETTING OF MAXWAIT FOR SEQUENCES

A:	W07990	sec	Common Maxwait for all Sequences
B:	Z07990	<0-1>	Set common Maxwait for all deNOx sequences
C:			
D:	W07901	sec	S701 Max Wait
E:	W07902	sec	S702 Max Wait
F:	W07903	sec	S703 Max Wait
G:	W07904	sec	S704 Max Wait
H:	W07905	sec	S705 Max Wait
I:	W07906	sec	S706 Max Wait
J:	W07907	sec	S707 Max Wait
K:	W07908	sec	S708 Max Wait
L:	W07909	sec	S709 Max Wait
M:	W07910	sec	S710 Max Wait
N:	W07911	sec	S711 Max Wait
O:			
P:			
Q:			
R:			
S:			
T:			

2.516 Page:7931 MD700** SETTING OF MINWAIT FOR SEQUENCES

A:	W07991	sec	Common Minwait for all Sequences
B:	Z07991	<0-1>	Set common Minwait for all deNOx sequences
C:			
D:	Q07901	sec	S701 Min Wait
E:	Q07902	sec	S702 Min Wait
F:	Q07903	sec	S703 Min Wait
G:	Q07904	sec	S704 Min Wait
H:	Q07905	sec	S705 Min Wait
I:	Q07906	sec	S706 Min Wait
J:	Q07907	sec	S707 Min Wait
K:	Q07908	sec	S708 Min Wait
L:	Q07909	sec	S709 Min Wait
M:	Q07910	sec	S710 Min Wait
N:	Q07911	sec	S711 Min Wait
O:			
P:			
Q:			
R:			
S:			
T:			

**2.517 Page:7932 MD700** SETTING OF MANACT FOR SEQUENCES**

A:	X07999	<0-1>	Common Man Act for all Sequences
B:	Z07999	<0-1>	Set common Man Act for all deNOx sequences
C:			
D:	X07901	<0-1>	S701 Execute Man Actions
E:	X07902	<0-1>	S702 Execute Man Actions
F:	X07903	<0-1>	S703 Execute Man Actions
G:	X07904	<0-1>	S704 Execute Man Actions
H:	X07905	<0-1>	S705 Execute Man Actions
I:	X07906	<0-1>	S706 Execute Man Actions
J:	X07907	<0-1>	S707 Execute Man Actions
K:	X07908	<0-1>	S708 Execute Man Actions
L:	X07909	<0-1>	S709 Execute Man Actions
M:	X07910	<0-1>	S710 Execute Man Actions
N:	X07911	<0-1>	S711 Execute Man Actions
O:			
P:			
Q:			
R:			
S:			
T:			

2.518 Page:7980 MD700 SUMMARY OF SEQUENCE ALARMS**

A:	A07901	<0-1>	L=---	H=1.0	S701 Alarm
B:	A07902	<0-1>	L=---	H=1.0	S702 Alarm
C:	A07903	<0-1>	L=---	H=1.0	S703 Alarm
D:	A07904	<0-1>	L=---	H=1.0	S704 Alarm
E:	A07905	<0-1>	L=---	H=1.0	S705 Alarm
F:	A07906	<0-1>	L=---	H=1.0	S706 Alarm
G:	A07907	<0-1>	L=---	H=1.0	S707 Alarm
H:	A07908	<0-1>	L=---	H=1.0	S708 Alarm
I:	A07909	<0-1>	L=---	H=1.0	S709 Alarm
J:	A07910	<0-1>	L=---	H=1.0	S710 Alarm
K:	A07911	<0-1>	L=---	H=1.0	S711 Alarm
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.519 Page:7990 MD700 CONFIGURABLE PAGE**

A:
 B:
 C:
 D:
 E:
 F:
 G:
 H:
 I:
 J:
 K:
 L:
 M:
 N:
 O:
 P:
 Q:
 R:
 S:
 T:

2.520 Page:8100 MD800 LIME SILO**

A:	X08100	<0-1>		Lime Cab present
B:	V08101	<0-1>		Lime Filling Station shut-off valve
C:	V08102	<0-1>		Lime Filling Station control valve
D:	G08103	ton/h		Lime to Lime silo flow
E:	V08111	<0-1>		Lime silo shut-off valve
F:	V08112	<0-1>		Lime silo control valve
G:	R08150	<0-1>		Lime silo fluidized bed fan s/s (30.0kW)
H:	V08113	<0-1>		Lime silo fluidized bed fan shut off valve
I:	V08114	<0-1>		Lime conveyor air fan shut off valve
J:	V08115	%		Lime Conveyor Control valve
K:	R08160	<0-1>		Lime conveyor air fan s/s (30.0kW)
L:	R08140	<0-1>		Lime silo filter fan s/s (4.0kW)
M:				
N:	M08151	ton		Lime silo mass
O:	L08152	%	L=30.0 H=80.0	Lime silo level
P:				
Q:				
R:				
S:				
T:				

**2.521 Page:8101 MD800** LIME DAY SILO**

A:	V18121	<0-1>		Lime day silo shut-off valve 1
B:	V28121	<0-1>		Lime day silo shut-off valve 2
C:	R08190	<0-1>		Lime Day silo fluidized bed fan (30.0kW)
D:	V08122	<0-1>		Lime Day silo fluidized bed shut off valve
E:	G08153	ton/h	L=-100.0 H=100.0	Lime to Lime day silo flow
F:	R08170	<0-1>		Scoop lift s/s (3.0kW)
G:	R08180	<0-1>		Lime Day silo filter fan s/s (2.2kW)
H:	V18201	<0-1>		Lime day silo outlet valve 1
I:	V28201	<0-1>		Lime day silo outlet valve 2
J:				
K:	M08161	ton		Lime day silo mass
L:	L08162	%	L=15.0 H=95.0	Lime day silo level
M:	L08163	%		Lime day silo stop scoop lift level
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.522 Page:8200 MD800 SLAKE WATER HEATING**

A:	X08210	<0-1>		Slake water Inlet temp contr auto switch
B:	T08210	dgrC		Slake water Inlet temp contr set point
C:	T08211	dgrC		Slake water Inlet temp
D:	D08210	dgrC		Slake water Inlet temp contr deviation
E:	Z08210	%		Slake water Inlet temp contr output
F:				
G:	C08210	%/dgrC		Slake water Inlet temp contr gain
H:	C08211	sec		Slake water Inlet temp contr integr time
I:	C08212	sec		Slake water Inlet temp contr deriv. time
J:				
K:	V08214	%		Slake water temp control valve
L:	V08211	<0-1>		Slake Heatex cold inlet shut-off valve
M:	V08212	<0-1>		Slake Heatex cold outlet shut-off valve
N:	V08215	<0-1>		Slake Heatex hot inlet shut-off valve
O:	V08216	<0-1>		Slake Heatex hot outlet shut-off valve
P:				
Q:	T08205	dgrC		Lake water temperature
R:	T08206	dgrC		Heating water temperature
S:	G08265	m3/h		Hot water to slake tanks inlet flow
T:				

2.523 Page:8201 MD800** SLAKE TANK 1

A:	V18217	%			Slake tank 1 water flow control valve
B:	G18255	m3/h			Hot water to slake tank 1 inlet flow
C:	R18230	<0-1>			Slake feeder weight 1
D:	R18231	<0-1>			Slake feeder motor 1 (1.4kW)
E:	C18233	%			Slake tank 1 water/lime ratio
F:	G18236	kg/h	L=0.0	H=---	Lime flow to Slake tank 1
G:	R18240	<0-1>			Slake tank 1 mixer (5.5kW)
H:	V18241	<0-1>			Slake tank 1 Drain valve
I:	G18247	m3/h			Slake tank 1 Drain flow
J:	T18242	dgrC	L=---	H=93.0	Slake tank 1 Temperature
K:	R18245	<0-1>			Slake tank 1 filter fan s/s (2.2kW)
L:	G18248	m3/h			Slake suspension flow from Slake tank 1
M:	V18249	<0-1>			Slake tank 1 filter water valve
N:	L18262	%			Slake tank 1 level
O:					
P:					
Q:					
R:					
S:					
T:					

2.524 Page:8202 MD800** SLAKE TANK 1 CONTROLLERS

A:	X18250	<0-1>			Slake tank 1 water flow contr auto switch
B:	G18250	m3/h			Slake tank 1 water flow contr set point
C:	G18255	m3/h			Hot water to slake tank 1 inlet flow
D:	D18250	m3/h			Slake tank 1 water flow contr deviation
E:	Z18250	%			Slake tank 1 water flow contr output
F:					
G:	C18250	%/m3/h			Slake tank 1 water flow contr gain
H:	C18251	sec			Slake tank 1 water flow contr integr time
I:	C18252	sec			Slake tank 1 water flow contr deriv. time
J:					
K:	X18232	<0-1>			Slake tank 1 lime flow contr auto switch
L:	G18232	kg/h			Slake tank 1 lime flow contr set point
M:	G18236	kg/h	L=0.0	H=---	Lime flow to Slake tank 1
N:	D18232	kg/h			Slake tank 1 lime flow contr deviation
O:	Z18232	%			Slake tank 1 lime flow contr output
P:					
Q:	C18232	%/kg/h			Slake tank 1 lime flow contr gain
R:	C18234	sec			Slake tank 1 lime flow contr integr time
S:	C18235	sec			Slake tank 1 lime flow contr deriv. time
T:					

**2.525 Page:8203 MD800** SLAKE TANK 2**

A:	V28217	%			Slake tank 2 water flow control valve
B:	G28255	m3/h			Hot water to slake tank 2 inlet flow
C:	R28230	<0-1>			Slake feeder weight 2 (1.4kW)
D:	R28231	<0-1>			Slake feeder motor 2
E:	C28233	%			Slake tank 2 water/lime ratio
F:	G28236	kg/h	L=0.0	H=---	Lime flow to Slake tank 2
G:	R28240	<0-1>			Slake tank 2 mixer (5.5kW)
H:	V28241	<0-1>			Slake tank 2 Drain valve
I:	G28247	m3/h			Slake tank 2 Drain flow
J:	T28242	dgrC	L=---	H=93.0	Slake tank 2 Temperature
K:	R28245	<0-1>			Slake tank 2 filter fan s/s (2.2kW)
L:	G28248	m3/h			Slake suspension flow from Slake tank 2
M:	V28249	<0-1>			Slake tank 2 filter water valve
N:	L28262	%			Slake tank 2 level
O:					
P:					
Q:					
R:					
S:					
T:					

2.526 Page:8204 MD800 SLAKE TANK 2 CONTROLLERS**

A:	X28250	<0-1>			Slake tank 2 water flow contr auto switch
B:	G28250	m3/h			Slake tank 2 water flow contr set point
C:	G28255	m3/h			Hot water to slake tank 2 inlet flow
D:	D28250	m3/h			Slake tank 2 water flow contr deviation
E:	Z28250	%			Slake tank 2 water flow contr output
F:					
G:	C28250	%/m3/h			Slake tank 2 water flow contr gain
H:	C28251	sec			Slake tank 2 water flow contr integr time
I:	C28252	sec			Slake tank 2 water flow contr deriv. time
J:					
K:	X28232	<0-1>			Slake tank 2 lime flow contr auto switch
L:	G28232	kg/h			Slake tank 2 lime flow contr set point
M:	G28236	kg/h	L=0.0	H=---	Lime flow to Slake tank 2
N:	D28232	kg/h			Slake tank 2 lime flow contr deviation
O:	Z28232	%			Slake tank 2 lime flow contr output
P:					
Q:	C28232	%/kg/h			Slake tank 2 lime flow contr gain
R:	C28234	sec			Slake tank 2 lime flow contr integr time
S:	C28235	sec			Slake tank 2 lime flow contr deriv. time
T:					

2.527 Page:8205 MD800* * SLAKE SUSPENSION TANK

A:	V08213	%			Slake susp. tank water flow control valve
B:	G08285	m3/h			Slake suspension tank water inlet flow
C:	V18221	<0-1>			Slake Suspension tank shut-off valve 1
D:	V18225	<0-1>			Slake Suspension tank 1 drain valve
E:	V28221	<0-1>			Slake Suspension tank shut-off valve 2
F:	V28225	<0-1>			Slake Suspension tank 2 drain valve
G:	R08260	<0-1>			Slake suspension tank mixer (3.0kW)
H:	L08262	%	L=25.0	H=90.0	Slake suspension tank level
I:	Z08247	%			Slake suspension tank Pulp Fraction
J:					
K:	V08255	<0-1>			Slake Suspension shut-off valve
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.528 Page:8206 MD800* * SLAKE SUSPENSION TANK CONTROLLERS

A:	X08261	<0-1>			Slake susp. tank level contr auto switch
B:	L08261	%			Slake susp. tank level contr set point
C:	L08262	%	L=25.0	H=90.0	Slake suspension tank level
D:	D08261	%			Slake susp. tank level contr deviation
E:	Z08261	%			Slake susp. tank level contr output
F:	C08261	%/%			Slake susp. tank level contr gain
G:	C08263	sec			Slake susp. tank level contr integr time
H:	C08264	sec			Slake susp. tank level contr deriv. time
I:					
J:	C08280	%			Slake susp. water/slake ratio set point
K:					
L:	X08281	<0-1>			Slake susp. tk water flow contr auto switch
M:	G08281	m3/h			Slake susp. tk water flow contr set point
N:	G08285	m3/h			Slake suspension tank water inlet flow
O:	D08281	m3/h			Slake susp. tk water flow contr deviation
P:	Z08281	%			Slake susp. tk water flow contr output
Q:					
R:	C08281	%/m3/h			Slake susp. tk water flow contr gain
S:	C08282	sec			Slake susp. tk water flow contr integr time
T:	C08283	sec			Slake susp. tk water flow contr deriv. time

**2.529 Page:8207 MD800** SLAKE SUSPENSION PUMPS**

A:	V18222	<0-1>	Slake Suspension pump 1 discharge valve
B:	V18223	<0-1>	Slake Suspension pump 1 washing valve
C:	V18224	<0-1>	Slake Suspension pump 1 drain valve
D:	V18226	<0-1>	Slake Suspension pump 1 sealing water valve
E:	R18270	<0-1>	Slake suspension pump 1 s/s (5.5kW)
F:	X18270	<0-1>	Slake suspension pump 1 auto
G:			
H:			
I:			
J:			
K:	V28222	<0-1>	Slake Suspension pump 2 discharge valve
L:	V28223	<0-1>	Slake Suspension pump 2 washing valve
M:	V28224	<0-1>	Slake Suspension pump 2 drain valve
N:	V28226	<0-1>	Slake Suspension pump 2 sealing water valve
O:	R28270	<0-1>	Slake suspension pump 2 s/s (5.5kW)
P:	X28270	<0-1>	Slake suspension pump 2 auto
Q:			
R:			
S:			
T:			

2.530 Page:8300 MD800 FEEDER TANK (1 OF 2)**

A:	V08301	%	Slake flow Control valve
B:	V08302	<0-1>	Slake to feeder tank supply valve
C:	V08303	<0-1>	Slake line water washing supply valve
D:	R08371	<0-1>	Slake Feeder Strainer (0.5kW)
E:	V08305	<0-1>	Slake to slake strainer supply valve
F:	V08304	<0-1>	Water to slake strainer supply valve
G:	G08355	m3/h L=-1.0 H=30.0	Slake suspension flow to feeder tank
H:			
I:	V08306	<0-1>	Slurry to feeder tank supply valve
J:	R08372	<0-1>	Slurry Feeder Strainer (1.0kW)
K:	V08307	<0-1>	Slurry to slurry strainer supply valve
L:	V08308	<0-1>	Water to slurry strainer supply valve
M:	V08309	<0-1>	Water to slake Feeder tank supply valve
N:			
O:	V18311	%	Product Slurry Control valve 1
P:	V28311	%	Product Slurry Control valve 2
Q:	V18312	<0-1>	Slurry from mix tank 1 shut-off valve
R:	V28312	<0-1>	Slurry from mix tank 2 shut-off valve
S:	G18385	m3/h L=-1.0 H=30.0	Product Slurry flow from mix tank 1
T:	G28385	m3/h L=-1.0 H=30.0	Product Slurry flow from mix tank 2

2.531 Page:8301 MD800* * FEEDER TANK (2 OF 2)

A:	X08361	<0-1>			Feeder tank level contr auto switch
B:	L08361	%			Feeder tank level contr set point
C:	L08362	%	L=25.0	H=90.0	Feeder tank level
D:	D08362	%			Feeder tank level contr deviation
E:	Z08361	%			Feeder tank level contr output
F:					
G:	C08361	%/%			Feeder tank level contr gain
H:	C08364	sec			Feeder tank level contr integr time
I:	C08365	sec			Feeder tank level contr deriv. time
J:					
K:					
L:					
M:					
N:	R08360	<0-1>			Feeder tank mixer (11.0kW)
O:	V18321	<0-1>			Feeder tank shut-off valve 1
P:	V18325	<0-1>			Feeder tank drain valve 1
Q:	V28321	<0-1>			Feeder tank shut-off valve 2
R:	V28325	<0-1>			Feeder tank drain valve 2
S:					
T:	Z08347	%	L=20.0	H=60.0	Feeder tank Pulp Fraction

2.532 Page:8302 MD800* * SO2 CONTROLLER

A:	X08310	<0-1>			SO2 contr auto switch
B:	C08310	mg/Nm3			SO2 contr set point
C:	C08400	ppm			SO2 concentration in Stack (ppm)
D:	C08407	mg/Nm3	L=---	H=45.0	SO2 concentration in Stack (mg/Nm3)
E:	D08311	mg/Nm3			SO2 contr deviation
F:	Z08310	%			SO2 contr output
G:					
H:	C08311	%/ppm			SO2 contr gain
I:	C08312	sec			SO2 contr integr time
J:	C08313	sec			SO2 contr deriv. time
K:					
L:	C08362	-			SO2 contr integration time coeff.
M:	C08363	-			SO2 contr Slake flow/Power coeff.
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.533 Page:8303 MD800** SLAKE SUSPENSION FLOW CONTROLLER**

A:	X08350	<0-1>			Slake Suspension flow contr auto switch
B:	G08350	m3/h			Slake Suspension flow contr set point
C:	G08355	m3/h	L=-1.0	H=30.0	Slake suspension flow to feeder tank
D:	D08351	m3/h			Slake Suspension flow contr deviation
E:	Z08350	%			Slake Suspension flow contr output
F:					
G:	C08350	%/m3/h			Slake Suspension flow contr gain
H:	C08351	sec			Slake Suspension flow contr integr time
I:	C08352	sec			Slake Suspension flow contr deriv. time
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.534 Page:8304 MD800 PRODUCT SLURRY FLOW CONTROLLERS**

A:	X18380	<0-1>			Product Slurry flow contr 1 auto switch
B:	G18380	m3/h			Product Slurry flow contr 1 set point
C:	G18385	m3/h	L=-1.0	H=30.0	Product Slurry flow from mix tank 1
D:	D18381	m3/h			Product Slurry flow contr 1 deviation
E:	Z18380	%			Product Slurry flow contr 1 output
F:					
G:	C18380	%/m3/h			Product Slurry flow contr 1 gain
H:	C18381	sec			Product Slurry flow contr 1 integr time
I:	C18382	sec			Product Slurry flow contr 1 deriv. time
J:					
K:	X28380	<0-1>			Product Slurry flow contr 2 auto switch
L:	G28380	m3/h			Product Slurry flow contr 2 set point
M:	G28385	m3/h	L=-1.0	H=30.0	Product Slurry flow from mix tank 2
N:	D28381	m3/h			Product Slurry flow contr 2 deviation
O:	Z28380	%			Product Slurry flow contr 2 output
P:					
Q:	C28380	%/m3/h			Product Slurry flow contr 2 gain
R:	C28381	sec			Product Slurry flow contr 2 integr time
S:	C28382	sec			Product Slurry flow contr 2 deriv. time
T:					

2.535 Page:8305 MD800* * SLURRY FEEDER PUMPS

A:	V18322	<0-1>		Slurry Feeder pump 1 discharge valve
B:	V18323	<0-1>		Slurry Feeder pump 1 washing valve
C:	V18324	<0-1>		Slurry Feeder pump 1 drain valve
D:	V18326	<0-1>		Slurry Feeder pump 1 sealing water valve
E:	R18370	<0-1>		Slurry Feeder pump 1 s/s (18.5kW)
F:	X18370	<0-1>		Slurry Feeder pump 1 auto
G:				
H:				
I:				
J:				
K:	V28322	<0-1>		Slurry Feeder pump 2 discharge valve
L:	V28323	<0-1>		Slurry Feeder pump 2 washing valve
M:	V28324	<0-1>		Slurry Feeder pump 2 drain valve
N:	V28326	<0-1>		Slurry Feeder pump 2 sealing water valve
O:	R28370	<0-1>		Slurry Feeder pump 2 s/s (18.5kW)
P:	X28370	<0-1>		Slurry Feeder pump 2 auto
Q:				
R:				
S:				
T:				

2.536 Page:8400 MD800* * ABSORBER

A:	V08401	<0-1>		Absorber Inlet Damper
B:	V08402	<0-1>		Absorber Outlet Damper
C:	V08403	<0-1>		Absorber By-pass Damper
D:				
E:	V08413	%		Absorber Slurry Control valve
F:	V08416	<0-1>		Filter Emergency Cooling Air valve
G:	V08501	<0-1>		Absorber product cell feeder inlet valve
H:	V08502	<0-1>		Absorber product cell feeder outlet valve
I:				
J:	G82171	kNm3/h	L=-100.0 H=900.0	Absorber flue gas inlet flow
K:	G82172	kNm3/h		Absorber flue gas outlet flow
L:	T82178	dgrC	L=105.0 H=155.0	Absorber flue gas inlet temp
M:	T82179	dgrC	L=65.0 H=---	Absorber flue gas outlet temp
N:				
O:	G08434	m3/h	L=-100.0 H=40.0	Absorber Slurry flow
P:	C08404	ppm		Absorber inlet SO2 concentration
Q:	C08406	ppm		Absorber outlet SO2 concentration
R:	C08405	mg/Nm3		Absorber outlet SO2 concentration (mg/Nm3)
S:	P08429	mmH2O	L=-100.0 H=180.0	Absorber Diff Pressure
T:	T08427	dgrC		Dew Point Temperature in Stack

**2.537 Page:8401 MD800** ABSORBER OUTLET TEMP CONTROLLER**

A:	X08420	<0-1>		Absorber Outlet Temp. contr auto switch
B:	T08420	dgrC		Absorber Outlet Temp. contr set point
C:	D08420	DgrC/m		Absorber Outlet Temp. derivative limit
D:	T82179	dgrC	L=65.0 H=---	Absorber flue gas outlet temp
E:	D08421	dgrC		Absorber Outlet Temp. contr deviation
F:	Z08420	%		Absorber Outlet Temp. contr output
G:				
H:	C08420	%/dgrC		Absorber Outlet Temp. contr gain
I:	C08421	sec		Absorber Outlet Temp. contr integr time
J:	C08422	sec		Absorber Outlet Temp. contr deriv. time
K:				
L:	C08423	dgrC		Absorber Outlet Temp. contr Dew Point coeff
M:	T08426	dgrC		Absorber Outlet Temp. contr Dew Point setp
N:	T08424	dgrC		Dew Point Temperature margin
O:				
P:				
Q:				
R:				
S:				
T:				

2.538 Page:8402 MD800 ABSORBER SLURRY CONTROLLER**

A:	X08430	<0-1>		Absorber Slurry contr auto switch
B:	G08430	kW		Absorber Slurry contr set point
C:	D08430	kW		Absorber Slurry contr delta set point
D:	G08435	kW		Absorber Spreader Net Power
E:	D08431	kW		Absorber Slurry contr deviation
F:	Z08430	%		Absorber Slurry contr output
G:				
H:	C08430	%/m3/h		Absorber Slurry contr gain
I:	C08431	sec		Absorber Slurry contr integr time
J:	C08432	sec		Absorber Slurry contr deriv. time
K:				
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.539 Page:8403 MD800** ABSORBER SPREADER

A:	L08410	%		Absorber Spreader Tank Level
B:	V08411	<0-1>		Spreader Tank outlet shut-off valve
C:	R08460	<0-1>		Absorber Spreader
D:	N08461	rpm	L=--- H=12000.0	Absorber Spreader Speed
E:	E08471	kW	L=-100.0 H=530.0	Absorber Spreader Power
F:	G08435	kW		Absorber Spreader Net Power
G:	L08472	mym	L=--- H=40.0	Absorber Spreader Vibration
H:	V08412	<0-1>		Absorber Spreader Washing Water Valve
I:	V08414	<0-1>		Absorber Spreader inlet shut-off valve
J:	V08415	<0-1>		Absorber Spreader Oil Cooling Water Valve
K:				
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.540 Page:8404 MD800** ABSORBER INPUT DATA

A:	M18401	kg/h		N2 gas input flow
B:	M18402	kg/h		CO2 gas input flow
C:	M18403	kg/h		CO gas input flow
D:	M18404	kg/h		H2O gas input flow
E:	M18405	kg/h		O2 gas input flow
F:	M18406	kg/h		NO gas input flow
G:	M18407	kg/h		NO2 gas input flow
H:	M18408	kg/h		SO2 gas input flow
I:	M18409	kg/h		SO3 gas input flow
J:	M18410	kg/h		NH3 gas input flow
K:	M18411	kg/h		Ash gas input flow
L:	M18412	dgrC		Gas Input temp
M:	M18413	ppm		SO2 inlet concentration
N:	M18414	Nm3/h		Total gas input flow
O:	M18415	kg/h		Ca(OH)2 slurry input flow
P:	M18416	kg/h		Ash slurry input flow
Q:	M18417	kg/h		water slurry input flow
R:	M18418	kg/h		CaSO3 slurry input flow
S:	M18419	kg/h		CaSO4 slurry input flow
T:	M18420	dgrC		slurry temp

**2.541 Page:8405 MD800** ABSORBER OUTPUT DATA**

A:	M28401	kg/h	N2	gas output flow
B:	M28402	kg/h	CO2	gas output flow
C:	M28403	kg/h	CO	gas output flow
D:	M28404	kg/h	H2O	gas output flow
E:	M28405	kg/h	O2	gas output flow
F:	M28406	kg/h	NO	gas output flow
G:	M28407	kg/h	NO2	gas output flow
H:	M28408	kg/h	SO2	gas output flow
I:	M28409	kg/h	SO3	gas output flow
J:	M28410	kg/h	NH3	gas output flow
K:	M28411	kg/h	Ash	gas output flow
L:	M28412	dgrC	gas output temp	
M:	M28413	ppm	SO2 outlet concentration	
N:	M28414	kg/h	CASO3	gas output flow
O:	M28415	kg/h	CASO4	gas output flow
P:	M28416	kg/h	Ca(OH)2	gas output flow
Q:				
R:	M38414	kg/h	CASO3	flow to absorber bottom
S:	M38415	kg/h	CASO4	flow to absorber bottom
T:	M38416	kg/h	Ca(OH)2	flow to absorber bottom

2.542 Page:8450 MD800 STACK DATA**

A:	G08444	kg/h	NOX	flow inlet Stack
B:	G08443	kg/h	SOX	flow inlet Stack
C:	C08400	ppm	SO2	concentration in Stack (ppm)
D:	C08407	mg/Nm3	L=---	H=45.0
E:	G08445	%	SO2	concentration in Stack (mg/Nm3)
F:	T08427	dgrC	O2	gas output flow
G:			Dew Point Temperature	in Stack
H:				
I:				
J:				
K:				
L:				
M:				
N:				
O:				
P:				
Q:				
R:				
S:				
T:				

2.543 Page:8500 MD800* * ABSORBER PRODUCT HANDLING

A:	R08530	<0-1>		Absorber Product Mill	(18.0kW)
B:	R08531	<0-1>		Absorber Product cell feeder	(0.6kW)
C:	R08532	<0-1>		Absorber Product conveyor	(15.0kW)
D:	V08503	<0-1>		Absorber Product to Ash silo inlet damper	
E:	L08580	%	L=--- H=85.0	Ash silo level	
F:	M08583	ton		Ash silo mass	
G:	V08581	<0-1>		Ash Silo Shut-off valve	
H:	G08582	t/h		Ash Silo Discharge Flow	
I:	R08585	<0-1>		Ash Cab	
J:	V08504	<0-1>		Absorber Product to Product Silo damper	
K:	V08505	<0-1>		Product silo inlet damper	
L:	V08506	<0-1>		Product to Ash Silo damper	
M:	V08510	<0-1>		Air supply to Absorber Product transport	
N:	V08511	<0-1>		Air supply to Filter conveyer	
O:	V08512	<0-1>		Air supply to Filter Product transport	
P:					
Q:					
R:					
S:					
T:					

2.544 Page:8501 MD800* * PRODUCT SILO

A:	V08513	<0-1>		Product silo fluidized bed shut off valve	
B:	V18521	<0-1>		Product silo control valve 1	
C:	V28521	<0-1>		Product silo control valve 2	
D:	V18522	<0-1>		Product silo shut-off valve 1	
E:	V28522	<0-1>		Product silo shut-off valve 2	
F:	R08550	<0-1>		Product silo inlet conveyor	(45.0kW)
G:	R08551	<0-1>		Product transport air fan s/s	(80.0kW)
H:	L08562	%	L=12.0 H=---	Product silo level	
I:	M08563	ton		Product silo mass	
J:	R08570	<0-1>		Product silo filter fan s/s	(8.0kW)
K:	R08571	<0-1>		Product silo fluidized bed fan s/s	(30.0kW)
L:	R18572	<0-1>		Product Transporter 1	(0.25kW)
M:	R28572	<0-1>		Product Transporter 2	(0.25kW)
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.545 Page:8502 MD800** PRODUCT TRANSPORT**

A:	V18523	<0-1>	Air supply to Product conveyor 1b
B:	V28523	<0-1>	Air supply to Product conveyor 2b
C:	V18524	<0-1>	Air supply to Product conveyor 1a
D:	V28524	<0-1>	Air supply to Product conveyor 2a
E:	R08533	<0-1>	Absorber Product Conveyor air fan (30.0kW)
F:	V18540	<0-1>	Filter Outlet Damper 1 (0.25kW)
G:	V28540	<0-1>	Filter Outlet Damper 2 (0.25kW)
H:	V38540	<0-1>	Filter Outlet Damper 3 (0.25kW)
I:	V48540	<0-1>	Filter Outlet Damper 4 (0.25kW)
J:	V18541	<0-1>	Filter Outlet 1 Manual Shut-off
K:	V28541	<0-1>	Filter Outlet 2 Manual Shut-off
L:	V38541	<0-1>	Filter Outlet 3 Manual Shut-off
M:	V48541	<0-1>	Filter Outlet 4 Manual Shut-off
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.546 Page:8600 MD800 MIXER TANK 1 (1 OF 2)**

A:	V18611	%	Water to Mixer tank 1 control valve
B:	V18621	<0-1>	Mixer tank 1 shut-off valve
C:	V18625	<0-1>	Mixer tank 1 suction drain valve
D:	R18640	<0-1>	Mixer tank 1 mixer (7.5kW)
E:	R18645	<0-1>	Mixer tank 1 filter fan s/s (2.2kW)
F:	V18648	<0-1>	Mixer tank 1 filter water valve
G:			
H:	L18662	% L=25.0 H=90.0	Mixer tank 1 level
I:	G18631	kg/h	Mixer tank 1 inlet product flow
J:	Z18647	% L=30.0 H=60.0	Mixer tank 1 outlet pulp fraction
K:			
L:	X18641	<0-1>	Mixer tank 1 water supply contr auto switch
M:	G18641	m3/h	Mixer tank 1 water supply contr set point
N:	G18644	m3/h	Mixer tank 1 inlet water flow
O:	D18642	m3/h	Mixer tank 1 water supply contr deviation
P:	Z18641	%	Mixer tank 1 water supply contr output
Q:			
R:	C18641	%/kg/h	Mixer tank 1 water supply contr gain
S:	C18642	sec	Mixer tank 1 water supply contr integr time
T:	C18643	sec	Mixer tank 1 water supply contr deriv. time

2.547 Page:8601 MD800 MIXER TANK 1 (2 OF 2)**

A:	X18660	<0-1>			Mixer tank 1 level contr auto switch
B:	L18660	%			Mixer tank 1 level contr set point
C:	L18662	%	L=25.0	H=90.0	Mixer tank 1 level
D:	D18661	%			Mixer tank 1 level contr deviation
E:	Z18660	%			Mixer tank 1 level contr output
F:					
G:	C18660	%/%			Mixer tank 1 level contr gain
H:	C18661	sec			Mixer tank 1 level contr integr time
I:	C18662	sec			Mixer tank 1 level contr deriv. time
J:					
K:	X18650	<0-1>			Mixer tank 1 density controller auto switch
L:	D18650	%			Mixer tank 1 density controller set point
M:	Z18647	%	L=30.0	H=60.0	Mixer tank 1 outlet pulp fraction
N:	D18651	%			Mixer tank 1 density controller deviation
O:	Z18650	%			Mixer tank 1 density controller output
P:					
Q:	C18650	%/kg/h			Mixer tank 1 density controller gain
R:	C18651	sec			Mixer tank 1 density controller integr time
S:	C18652	sec			Mixer tank 1 density controller deriv. time
T:					

2.548 Page:8602 MD800 MIXER TANK 2 (1 OF 2)**

A:	V28611	%			Water to Mixer tank 2 control valve
B:	V28621	<0-1>			Mixer tank 2 shut-off valve
C:	V28625	<0-1>			Mixer tank 2 suction drain valve
D:	R28640	<0-1>			Mixer tank 2 mixer (7.5kW)
E:	R28645	<0-1>			Mixer tank 2 filter fan s/s (2.2kW)
F:	V28648	<0-1>			Mixer tank 2 filter water valve
G:					
H:	L28662	%	L=25.0	H=90.0	Mixer tank 2 level
I:	G28631	kg/h			Mixer tank 2 inlet product flow
J:	Z28647	%	L=30.0	H=60.0	Mixer tank 2 outlet pulp fraction
K:					
L:	X28641	<0-1>			Mixer tank 2 water supply contr auto switch
M:	G28641	m3/h			Mixer tank 2 water supply contr set point
N:	G28644	m3/h			Mixer tank 2 inlet water flow
O:	D28642	m3/h			Mixer tank 2 water supply contr deviation
P:	Z28641	%			Mixer tank 2 water supply contr output
Q:					
R:	C28641	%/kg/h			Mixer tank 2 water supply contr gain
S:	C28642	sec			Mixer tank 2 water supply contr integr time
T:	C28643	sec			Mixer tank 2 water supply contr deriv. time

**2.549 Page:8603 MD800** MIXER TANK 2 (2 OF 2)**

A:	X28660	<0-1>			Mixer tank 2 level contr auto switch
B:	L28660	%			Mixer tank 2 level contr set point
C:	L28662	%	L=25.0	H=90.0	Mixer tank 2 level
D:	D28661	%			Mixer tank 2 level contr deviation
E:	Z28660	%			Mixer tank 2 level contr output
F:					
G:	C28660	%/%			Mixer tank 2 level contr gain
H:	C28661	sec			Mixer tank 2 level contr integr time
I:	C28662	sec			Mixer tank 2 level contr deriv. time
J:					
K:	X28650	<0-1>			Mixer tank 2 density controller auto switch
L:	D28650	%			Mixer tank 2 density controller set point
M:	Z28647	%	L=30.0	H=60.0	Mixer tank 2 outlet pulp fraction
N:	D28651	%			Mixer tank 2 density controller deviation
O:	Z28650	%			Mixer tank 2 density controller output
P:					
Q:	C28650	%/kg/h			Mixer tank 2 density controller gain
R:	C28651	sec			Mixer tank 2 density controller integr time
S:	C28652	sec			Mixer tank 2 density controller deriv. time
T:					

2.550 Page:8604 MD800 MIXER TANK PUMPS**

A:	V18601	<0-1>			Mixer pump 1 return flow valve
B:	V18622	<0-1>			Mixer pump 1 discharge valve
C:	V18623	<0-1>			Mixer pump 1 washing valve
D:	V18624	<0-1>			Mixer pump 1 discharge drain valve
E:	V18626	<0-1>			Mixer pump 1 sealing water valve
F:					
G:	V28601	<0-1>			Mixer pump 2 return flow valve
H:	V28622	<0-1>			Mixer pump 2 discharge valve
I:	V28623	<0-1>			Mixer pump 2 washing valve
J:	V28624	<0-1>			Mixer pump 2 discharge drain valve
K:	V28626	<0-1>			Mixer pump 2 sealing water valve
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.551 Page:8605 MD800* * PRODUCT CELL FEEDERS

A:	L18562	%	Product Transporter Tank 1 level
B:	R18630	<0-1>	Product Cell feeder 1 (1.5kW)
C:	G18631	kg/h	Mixer tank 1 inlet product flow
D:			
E:	L28562	%	Product Transporter Tank 2 level
F:	R28630	<0-1>	Product Cell feeder 2 (1.5kW)
G:	G28631	kg/h	Mixer tank 2 inlet product flow
H:			
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

2.552 Page:8606 MD800* * PRODUCT SLURRY PUMPS

A:	R18670	<0-1>	Product slurry pump 1 s/s (7.5kW)
B:	X18670	<0-1>	Product slurry pump 1 auto
C:			
D:	R28670	<0-1>	Product slurry pump 2 s/s (7.5kW)
E:	X28670	<0-1>	Product slurry pump 2 auto
F:			
G:			
H:			
I:			
J:			
K:			
L:			
M:			
N:			
O:			
P:			
Q:			
R:			
S:			
T:			

**2.553 Page:8901 MD800** FILLING OF LIME DAY
SILO**

A:	A08901	<0-1>	L=---	H=1.0	S801 Alarm
B:	R08901	<0-1>			S801 Filling of Lime Day Silo
C:	M08901	<0-1>			S801 Mode - (0-Man 1-Auto)
D:	S08901	<0-99>			S801 Step Number
E:	T08901	sec			S801 Timer
F:	X08901	<0-1>			S801 Execute Man Actions
G:	W08901	sec			S801 Max Wait
H:	Q08901	sec			S801 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.554 Page:8902 MD800 FILLING OF SLAKE SUSP
TANK FROM SLAKE TANK 1**

A:	A08902	<0-1>	L=---	H=1.0	S802 Alarm
B:	R08902	<0-1>			S802 Fill Slake Susp tk from Slake tk 1
C:	M08902	<0-1>			S802 Mode - (0-Man 1-Auto)
D:	S08902	<0-99>			S802 Step Number
E:	T08902	sec			S802 Timer
F:	X08902	<0-1>			S802 Execute Man Actions
G:	W08902	sec			S802 Max Wait
H:	Q08902	sec			S802 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.555 Page:8903 MD800** FILLING OF SLAKE SUSP TANK FROM SLAKE TANK 2

A:	A08903	<0-1>	L=---	H=1.0	S803 Alarm
B:	R08903	<0-1>			S803 Fill Slake Susp tk from Slake tk 2
C:	M08903	<0-1>			S803 Mode - (0-Man 1-Auto)
D:	S08903	<0-99>			S803 Step Number
E:	T08903	sec			S803 Timer
F:	X08903	<0-1>			S803 Execute Man Actions
G:	W08903	sec			S803 Max Wait
H:	Q08903	sec			S803 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.556 Page:8904 MD800** OPERATION OF SLAKE SUSPENSION PUMP 1

A:	A08904	<0-1>	L=---	H=1.0	S804 Alarm
B:	R08904	<0-1>			S804 Operation of Slake Suspension Pump 1
C:	M08904	<0-1>			S804 Mode - (0-Man 1-Auto)
D:	S08904	<0-99>			S804 Step Number
E:	T08904	sec			S804 Timer
F:	X08904	<0-1>			S804 Execute Man Actions
G:	W08904	sec			S804 Max Wait
H:	Q08904	sec			S804 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.557 Page:8905 MD800** OPERATION OF SLAKE
SUSPENSION PUMP 2**

A:	A08905	<0-1>	L=---	H=1.0	S805 Alarm
B:	R08905	<0-1>			S805 Operation of Slake Suspension Pump 2
C:	M08905	<0-1>			S805 Mode - (0-Man 1-Auto)
D:	S08905	<0-99>			S805 Step Number
E:	T08905	sec			S805 Timer
F:	X08905	<0-1>			S805 Execute Man Actions
G:	W08905	sec			S805 Max Wait
H:	Q08905	sec			S805 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.558 Page:8906 MD800 FILLING OF MIXING TANK
1**

A:	A08906	<0-1>	L=---	H=1.0	S806 Alarm
B:	R08906	<0-1>			S806 Filling of Mixing Tank 1
C:	M08906	<0-1>			S806 Mode - (0-Man 1-Auto)
D:	S08906	<0-99>			S806 Step Number
E:	T08906	sec			S806 Timer
F:	X08906	<0-1>			S806 Execute Man Actions
G:	W08906	sec			S806 Max Wait
H:	Q08906	sec			S806 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.559 Page:8907 MD800** OPERATION OF MIXING TANK 1 PUMP

A:	A08907	<0-1>	L=---	H=1.0	S807 Alarm
B:	R08907	<0-1>			S807 Operation of Mixing Tank 1 Pump
C:	M08907	<0-1>			S807 Mode - (0-Man 1-Auto)
D:	S08907	<0-99>			S807 Step Number
E:	T08907	sec			S807 Timer
F:	X08907	<0-1>			S807 Execute Man Actions
G:	W08907	sec			S807 Max Wait
H:	Q08907	sec			S807 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.560 Page:8908 MD800** FILLING OF MIXING TANK 2

A:	A08908	<0-1>	L=---	H=1.0	S808 Alarm
B:	R08908	<0-1>			S808 Filling of Mixing Tank 2
C:	M08908	<0-1>			S808 Mode - (0-Man 1-Auto)
D:	S08908	<0-99>			S808 Step Number
E:	T08908	sec			S808 Timer
F:	X08908	<0-1>			S808 Execute Man Actions
G:	W08908	sec			S808 Max Wait
H:	Q08908	sec			S808 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.561 Page:8909 MD800** OPERATION OF MIXING
TANK 2 PUMP**

A:	A08909	<0-1>	L=---	H=1.0	S809 Alarm
B:	R08909	<0-1>			S809 Operation of Mixing Tank 2 Pump
C:	M08909	<0-1>			S809 Mode - (0-Man 1-Auto)
D:	S08909	<0-99>			S809 Step Number
E:	T08909	sec			S809 Timer
F:	X08909	<0-1>			S809 Execute Man Actions
G:	W08909	sec			S809 Max Wait
H:	Q08909	sec			S809 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.562 Page:8910 MD800 FILLING OF FEEDER TANK
FROM MIX TANK 1**

A:	A08910	<0-1>	L=---	H=1.0	S810 Alarm
B:	R08910	<0-1>			S810 Fill Feeder Tank from Mix Tank 1
C:	M08910	<0-1>			S810 Mode - (0-Man 1-Auto)
D:	S08910	<0-99>			S810 Step Number
E:	T08910	sec			S810 Timer
F:	X08910	<0-1>			S810 Execute Man Actions
G:	W08910	sec			S810 Max Wait
H:	Q08910	sec			S810 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.563 Page:8911 MD800* * OPERATION OF FEEDER TANK PUMP 1

A:	A08911	<0-1>	L=---	H=1.0	S811 Alarm
B:	R08911	<0-1>			S811 Operation of Feeder Tank Pump 1
C:	M08911	<0-1>			S811 Mode - (0-Man 1-Auto)
D:	S08911	<0-99>			S811 Step Number
E:	T08911	sec			S811 Timer
F:	X08911	<0-1>			S811 Execute Man Actions
G:	W08911	sec			S811 Max Wait
H:	Q08911	sec			S811 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.564 Page:8912 MD800* * OPERATION OF FEEDER TANK PUMP 2

A:	A08912	<0-1>	L=---	H=1.0	S812 Alarm
B:	R08912	<0-1>			S812 Operation of Feeder Tank Pump 2
C:	M08912	<0-1>			S812 Mode - (0-Man 1-Auto)
D:	S08912	<0-99>			S812 Step Number
E:	T08912	sec			S812 Timer
F:	X08912	<0-1>			S812 Execute Man Actions
G:	W08912	sec			S812 Max Wait
H:	Q08912	sec			S812 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.565 Page:8913 MD800** OPERATION OF SPREADER**

A:	A08913	<0-1>	L=---	H=1.0	S813 Alarm
B:	R08913	<0-1>			S813 Operation of Spreader
C:	M08913	<0-1>			S813 Mode - (0-Man 1-Auto)
D:	S08913	<0-99>			S813 Step Number
E:	T08913	sec			S813 Timer
F:	X08913	<0-1>			S813 Execute Man Actions
G:	W08913	sec			S813 Max Wait
H:	Q08913	sec			S813 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.566 Page:8914 MD800 OPERATION OF ABSORBER**

A:	A08914	<0-1>	L=---	H=1.0	S814 Alarm
B:	R08914	<0-1>			S814 Operation of Absorber
C:	M08914	<0-1>			S814 Mode - (0-Man 1-Auto)
D:	S08914	<0-99>			S814 Step Number
E:	T08914	sec			S814 Timer
F:	X08914	<0-1>			S814 Execute Man Actions
G:	W08914	sec			S814 Max Wait
H:	Q08914	sec			S814 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.567 Page:8915 MD800* * DISCHARGE OF ABSORBER PRODUCT

A:	A08915	<0-1>	L=---	H=1.0	S815 Alarm
B:	R08915	<0-1>			S815 Discharge of Absorber Product
C:	M08915	<0-1>			S815 Mode - (0-Man 1-Auto)
D:	S08915	<0-99>			S815 Step Number
E:	T08915	sec			S815 Timer
F:	X08915	<0-1>			S815 Execute Man Actions
G:	W08915	sec			S815 Max Wait
H:	Q08915	sec			S815 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.568 Page:8916 MD800* * PRODUCT TRANSPORT

A:	A08916	<0-1>	L=---	H=1.0	S816 Alarm
B:	R08916	<0-1>			S816 Product Transport
C:	M08916	<0-1>			S816 Mode - (0-Man 1-Auto)
D:	S08916	<0-99>			S816 Step Number
E:	T08916	sec			S816 Timer
F:	X08916	<0-1>			S816 Execute Man Actions
G:	W08916	sec			S816 Max Wait
H:	Q08916	sec			S816 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

**2.569 Page:8920 MD800** FILLING OF FEEDER TANK
FROM MIX TANK 2**

A:	A08920	<0-1>	L=---	H=1.0	S820 Alarm
B:	R08920	<0-1>			S820 Fill Feeder Tank from Mix Tank 2
C:	M08920	<0-1>			S820 Mode - (0-Man 1-Auto)
D:	S08920	<0-99>			S820 Step Number
E:	T08920	sec			S820 Timer
F:	X08920	<0-1>			S820 Execute Man Actions
G:	W08920	sec			S820 Max Wait
H:	Q08920	sec			S820 Min Wait
I:					
J:					
K:					
L:					
M:					
N:					
O:					
P:					
Q:					
R:					
S:					
T:					

2.570 Page:8930 MD800 SETTING OF MAXWAIT
FOR SEQUENCES**

A:	W08990	sec			Common Maxwait for all Sequences
B:	Z08990	<0-1>			Set common Maxwait for all deSOx sequences
C:					
D:	W08901	sec			S801 Max Wait
E:	W08902	sec			S802 Max Wait
F:	W08903	sec			S803 Max Wait
G:	W08904	sec			S804 Max Wait
H:	W08905	sec			S805 Max Wait
I:	W08906	sec			S806 Max Wait
J:	W08907	sec			S807 Max Wait
K:	W08908	sec			S808 Max Wait
L:	W08909	sec			S809 Max Wait
M:	W08910	sec			S810 Max Wait
N:	W08911	sec			S811 Max Wait
O:	W08912	sec			S812 Max Wait
P:	W08913	sec			S813 Max Wait
Q:	W08914	sec			S814 Max Wait
R:	W08915	sec			S815 Max Wait
S:	W08916	sec			S816 Max Wait
T:	W08920	sec			S820 Max Wait

2.571 Page:8931 MD800** SETTING OF MINWAIT FOR SEQUENCES

A:	W08991	sec	Common Minwait for all Sequences
B:	Z08991	<0-1>	Set common Minwait for all deSOx sequences
C:			
D:	Q08901	sec	S801 Min Wait
E:	Q08902	sec	S802 Min Wait
F:	Q08903	sec	S803 Min Wait
G:	Q08904	sec	S804 Min Wait
H:	Q08905	sec	S805 Min Wait
I:	Q08906	sec	S806 Min Wait
J:	Q08907	sec	S807 Min Wait
K:	Q08908	sec	S808 Min Wait
L:	Q08909	sec	S809 Min Wait
M:	Q08910	sec	S810 Min Wait
N:	Q08911	sec	S811 Min Wait
O:	Q08912	sec	S812 Min Wait
P:	Q08913	sec	S813 Min Wait
Q:	Q08914	sec	S814 Min Wait
R:	Q08915	sec	S815 Min Wait
S:	Q08916	sec	S816 Min Wait
T:	Q08920	sec	S820 Min Wait

2.572 Page:8932 MD800** SETTING OF MANACT FOR SEQUENCES

A:	X08999	<0-1>	Common Man Act for all Sequences
B:	Z08999	<0-1>	Set common Man Act for all deSOx sequences
C:			
D:	X08901	<0-1>	S801 Execute Man Actions
E:	X08902	<0-1>	S802 Execute Man Actions
F:	X08903	<0-1>	S803 Execute Man Actions
G:	X08904	<0-1>	S804 Execute Man Actions
H:	X08905	<0-1>	S805 Execute Man Actions
I:	X08906	<0-1>	S806 Execute Man Actions
J:	X08907	<0-1>	S807 Execute Man Actions
K:	X08908	<0-1>	S808 Execute Man Actions
L:	X08909	<0-1>	S809 Execute Man Actions
M:	X08910	<0-1>	S810 Execute Man Actions
N:	X08911	<0-1>	S811 Execute Man Actions
O:	X08912	<0-1>	S812 Execute Man Actions
P:	X08913	<0-1>	S813 Execute Man Actions
Q:	X08914	<0-1>	S814 Execute Man Actions
R:	X08915	<0-1>	S815 Execute Man Actions
S:	X08916	<0-1>	S816 Execute Man Actions
T:	X08920	<0-1>	S820 Execute Man Actions

**2.573 Page:8980 MD700** SUMMARY OF SEQUENCE ALARMS**

A:	A08901	<0-1>	L=---	H=1.0	S801 Alarm
B:	A08902	<0-1>	L=---	H=1.0	S802 Alarm
C:	A08903	<0-1>	L=---	H=1.0	S803 Alarm
D:	A08904	<0-1>	L=---	H=1.0	S804 Alarm
E:	A08905	<0-1>	L=---	H=1.0	S805 Alarm
F:	A08906	<0-1>	L=---	H=1.0	S806 Alarm
G:	A08907	<0-1>	L=---	H=1.0	S807 Alarm
H:	A08908	<0-1>	L=---	H=1.0	S808 Alarm
I:	A08909	<0-1>	L=---	H=1.0	S809 Alarm
J:	A08910	<0-1>	L=---	H=1.0	S810 Alarm
K:	A08911	<0-1>	L=---	H=1.0	S811 Alarm
L:	A08912	<0-1>	L=---	H=1.0	S812 Alarm
M:	A08913	<0-1>	L=---	H=1.0	S813 Alarm
N:	A08914	<0-1>	L=---	H=1.0	S814 Alarm
O:	A08915	<0-1>	L=---	H=1.0	S815 Alarm
P:	A08916	<0-1>	L=---	H=1.0	S816 Alarm
Q:	A08920	<0-1>	L=---	H=1.0	S820 Alarm
R:					
S:					
T:					

2.574 Page:8990 MD800 CONFIGURABLE PAGE**

A:
B:
C:
D:
E:
F:
G:
H:
I:
J:
K:
L:
M:
N:
O:
P:
Q:
R:
S:
T: