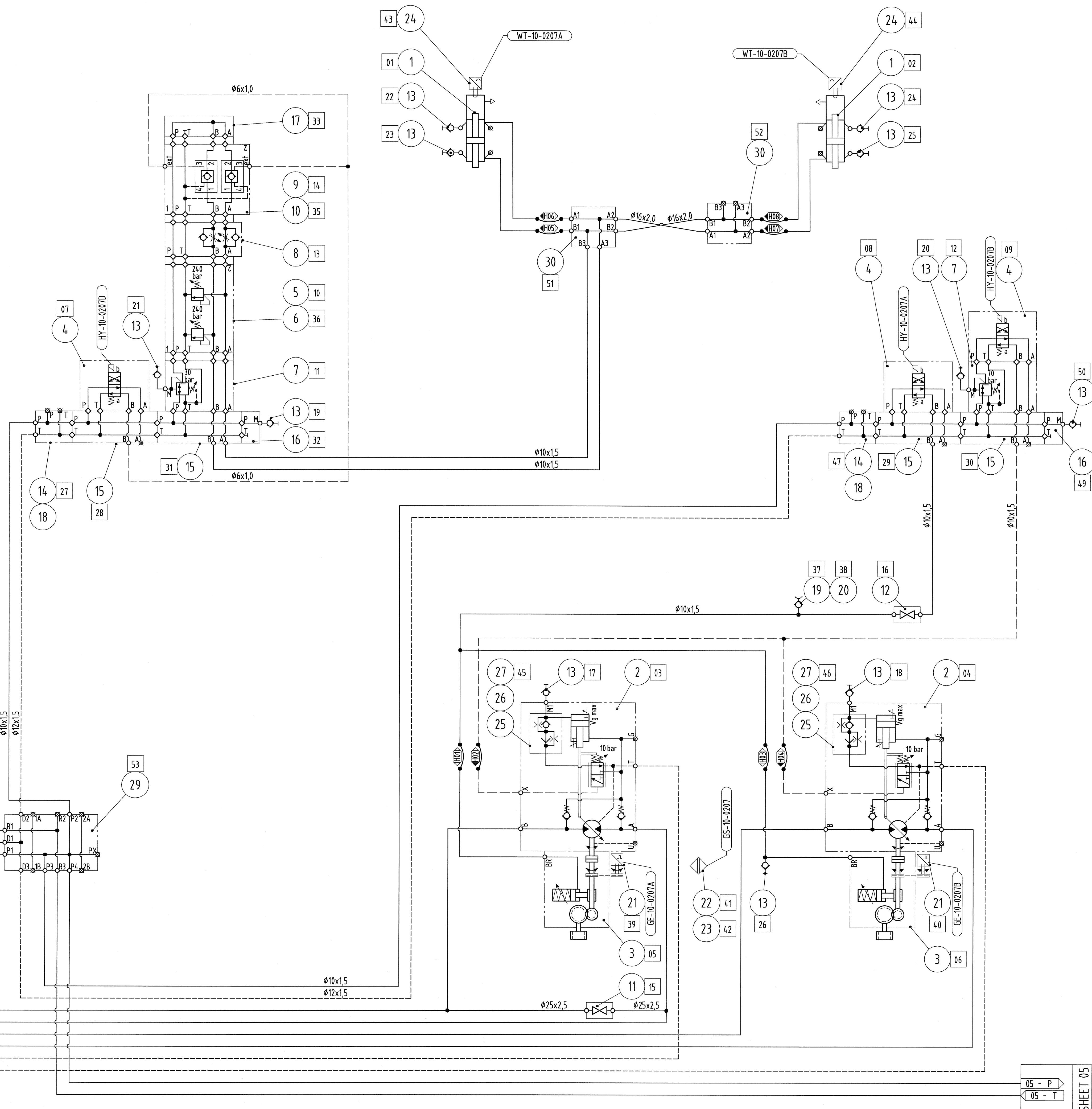


COMP. ID (NN)	FUNCTIONAL DESCRIPTION
01	LHS FLEXIBLE TORQUE ARRESTOR
02	RHS FLEXIBLE TORQUE ARRESTOR
03	LHS MAIN TONG DRIVE MOTOR
04	RHS MAIN TONG DRIVE MOTOR
05	LHS GEAR FOR MOTOR
06	RHS GEAR FOR MOTOR
07	FLEX. TORQUE ARR. EQUALIZER PILOT
08	BRAKE RELEASE VALVE
09	Vg min DISPLACEMENT SHIFT VALVE
10	FLEXIBLE TORQUE ARR. SAFETY VALVES
11	FLEX. TORQUE ARR. PRE-TENSIONING
12	DISPLACEMENT SHIFT PRESSURE LIMITER
13	FLEX. TORQ. ARR. EQUALIZING SPEED LIMIT
14	FLEX. TORQ. ARR. EQUALIZER VALVE
15	EMERGENCY ROTATION BYPASS VALVE
16	EMERGENCY BRAKE RELEASE CONNECTOR
17	TEST POINT LHS DISPL. SHIFT PRESSURE
18	TEST POINT RHS DISPL. SHIFT PRESSURE
19	TEST POINT SUPPLY PRESSURE
20	TEST POINT DISPL. SHIFT PRESSURE
21	TEST POINT FTA PRE-TENSION PRESSURE
22	AIR BLEED LHS FTA CYLINDER
23	AIR BLEED LHS FTA CYLINDER
24	AIR BLEED RHS FTA CYLINDER
25	AIR BLEED RHS FTA CYLINDER
26	TEST POINT BRAKE REL. ACTIVE PRESSURE
27	UTILITY MODULE
28	MODULAR SUBPLATE FOR ID 07
29	MODULAR SUBPLATE FOR ID 08
30	MODULAR SUBPLATE FOR ID 09
31	MOD. SUBPL. - FLEX. TORQUE ARR. CTRL.
32	END MODULE
33	PRE-TENSION DISTRIBUTOR
34	-
35	MANIFOLD FOR ID 14
36	MANIFOLD FOR ID 10
37	EMERGENCY BRAKE RELEASE CONNECTOR
38	DUST PLUG FOR ID 37
39	LHS DRIVE SPEED AND POSITION
40	RHS DRIVE SPEED AND POSITION
41	MAIN TONG DRIVE POSITION RESET SWITCH
42	PLUG & CABLE FOR ID 40
43	LHS TORQUE MEASURING SENSOR
44	RHS TORQUE MEASURING SENSOR
45	LHS DISPLACEMENT SHIFT SPEED LIMIT
46	RHS DISPLACEMENT SHIFT SPEED LIMIT
47	UTILITY MODULE
48	-
49	END MODULE
50	TEST POINT SUPPLY PRESSURE
51	LHS TORQUE ARR. MANIFOLD
52	RHS TORQUE ARRESTOR MANIFOLD
53	MAIN TONG DISTRIBUTION MANIFOLD

COMP. ID (NN)	FUNCTIONAL DESCRIPTION
01	LHS FLEXIBLE TORQUE ARRESTOR
02	RHS FLEXIBLE TORQUE ARRESTOR
03	LHS MAIN TONG DRIVE MOTOR
04	RHS MAIN TONG DRIVE MOTOR
05	LHS GEAR FOR MOTOR
06	RHS GEAR FOR MOTOR
07	FLEX. TORQUE ARR. EQUALIZER PILOT
08	BRAKE RELEASE VALVE
09	Vg min DISPLACEMENT SHIFT VALVE
10	FLEXIBLE TORQUE ARR. SAFETY VALVES
11	FLEX. TORQUE ARR. PRE-TENSIONING
12	DISPLACEMENT SHIFT PRESSURE LIMITER
13	FLEX. TORQ. ARR. EQUALIZING SPEED LIMIT
14	FLEX. TORQ. ARR. EQUALIZER VALVE
15	EMERGENCY ROTATION BYPASS VALVE
16	EMERGENCY BRAKE RELEASE CONNECTOR
17	TEST POINT LHS DISPL. SHIFT PRESSURE
18	TEST POINT RHS DISPL. SHIFT PRESSURE
19	TEST POINT SUPPLY PRESSURE
20	TEST POINT DISPL. SHIFT PRESSURE
21	TEST POINT FTA PRE-TENSION PRESSURE
22	AIR BLEED LHS FTA CYLINDER
23	AIR BLEED LHS FTA CYLINDER
24	AIR BLEED RHS FTA CYLINDER
25	AIR BLEED RHS FTA CYLINDER
26	TEST POINT BRAKE REL. ACTIVE PRESSURE
27	UTILITY MODULE
28	MODULAR SUBPLATE FOR ID 07
29	MODULAR SUBPLATE FOR ID 08
30	MODULAR SUBPLATE FOR ID 09
31	MOD. SUBPL. - FLEX. TORQUE ARR. CTRL.
32	END MODULE
33	PRE-TENSION DISTRIBUTOR
34	-
35	MANIFOLD FOR ID 14
36	MANIFOLD FOR ID 10
37	EMERGENCY BRAKE RELEASE CONNECTOR
38	DUST PLUG FOR ID 37
39	LHS DRIVE SPEED AND POSITION
40	RHS DRIVE SPEED AND POSITION
41	MAIN TONG DRIVE POSITION RESET SWITCH
42	PLUG & CABLE FOR ID 40
43	LHS TORQUE MEASURING SENSOR
44	RHS TORQUE MEASURING SENSOR
45	LHS DISPLACEMENT SHIFT SPEED LIMIT
46	RHS DISPLACEMENT SHIFT SPEED LIMIT
47	UTILITY MODULE
48	-
49	END MODULE
50	TEST POINT SUPPLY PRESSURE
51	LHS TORQUE ARR. MANIFOLD
52	RHS TORQUE ARRESTOR MANIFOLD
53	MAIN TONG DISTRIBUTION MANIFOLD

29 - R8	29 - D3	29 - P6	29 - BL	29 - AL	29 - BR	29 - AR	29 - DL	29 - DR
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THIS IS A COMPUTER AIDED DRAWING AND MUST NOT BE ALTERED MANUALLY				
Tolerances except as noted		Welding except as noted		
Rev.	Description of revision	Chk.	Appr.	Date / Sign.
0	ISSUED FOR CONSTRUCTION	BKT	OH	07-FEB-07/KE

NOTE!

HYDRAULIC TUBE / PIPE / FITTING:
PROPERTIES ACC. TO MH STD. PIPING SPECIFICATION, SA17-0001, PIPING CLASS SHEET(S):
ISO1 MH/3501MH
TUBE / PIPE: DIMENSIONS ACC. TO FLOW DIAGRAM.
FITTING TYPE: ISO 8434-2 (SAE J514), WITHOUT SOFT SEAL IN FITTING NOSE (O-RING)
FLANGE TYPE: ISO 6162-1 & 2 (SAE J518C 61 & 62)

PRESSURE FLUID:
HYDRAULIC MINERAL OIL ISO HV TYPE (DIN HVL)
PERMISSIBLE UPPER OPERATIONAL CONTAMINATION LIMIT:
ISO 4406, CODE 16 / 13 (SAE AS4059, CLASS 7).

GRAPHICAL SYMBOLS:
HYDRAULIC & PNEUMATIC DIAGRAMS BASED ON ISO 1219.
ELECTRIC INSTRUMENTS BASED ON ISO 1219 AND IEC617

13	1818059	TORQUE MASTER, HOSE SCHEDULE FOR SHEET 07-10
12	1818058	TORQUE MASTER, HOSE SCHEDULE FOR SHEET 04-06
11	1818057	TORQUE MASTER, HOSE SCHEDULE FOR SHEET 01-03
10	1818056	TORQUE MASTER, TWL
09	1818055	TORQUE MASTER, CASING STABBING GUIDE
08	1818054	TORQUE MASTER, BACK-UP TONG
07	1818053	TORQUE MASTER, SPINNER
06	1818052	TORQUE MASTER, MAIN TONG CHUCK
05	1818051	TORQUE MASTER, MAIN TONG CHUCK CONTROL
04	1818050	TORQUE MASTER, MAIN TONG DRIVE
03	1818049	TORQUE MASTER, MAIN TONG DOLLY
02	1818048	TORQUE MASTER, MAIN FRAME
01	1818047	TORQUE MASTER, MANIFOLD IN DERRICK
SHEET NO MH DRWG NO		CONTENTS OF DRAWING

2	30	MANIFOLD	5050282	5050282
1	29	MANIFOLD	5050258	5050258
2	27	THROTTLE SCREW		57632
2	26	THROTTLE PIN 0,80/0,80		57633
2	25	THROTTLE SCREW		57634
2	24	LOAD CELL		55528
1	23	15M CABLE W/QUICK CONNECTOR		55126
1	22	PROXIMITY SWITCH		55125
2	21	PULSE ENCODER		55468
1	20	QUICK COUPLING, PLUG 1/4" BSP		24370
1	19	QUICK COUPLING		24360
2	18	TIE ROD KIT		58598
1	17	BLANKING PLATE, P to A and B,		57461
2	16	END PLATE FOR MODULAR SUBPL.		55623
4	15	PARALLEL MODULAR SUBPLATE		55622
2	14	INLET FOR MODULAR SUBPLATES		55620
11	13	TEST COUPLING W/BALL M16x2/G1		11993
1	12	BALL VALVE		11118
1	11	BALL VALVE		11114
1	10	MANIFOLD WITH CAVITY T-11A (2x)		57458
2	9	VENTED PILOT-TO-OPEN CHECK V.		57457
1	8	MODULAR DUAL THROTTLE/CHECK		46084
2	7	PRESS.RED./REL.VALVE SANDWICH		19713
1	6	MANIFOLD WITH CAVITY: T-10A		57462
2	5	PRESSURE RELIEF VALVE, CART.		29694
3	4	4/2 DIR. VALVE,EL.OPER.MARINE		48961
2	3	PLANETARY REDUCTION GEAR		55633
2	2	AXIAL PISTON MOTOR		55487
2	1	HYDRAULIC CYLINDER		55494
Qty.	Item	Description	Drwg./Material	Unit weight Part number
Date	Drawn	Traced	Scale	Maritime Hydraulics
10-DEC-05	JHB	KE	NA	
Checked	Approved	Projection		
BKT	OH			
HIGH EFFICIENCY JACK-UP B276 TORQUE MASTER, MAIN TONG DRIVE HYDRAULIC FLOW DIAGRAM, SHEET 04			Replaces	Replaced by
			Format	Drawing number
			A1	UM 1818050
			Rev.	0