

## 78M DP2 4950BHP ROV Support/Maintenance Vessel

### Machinery & Equipment List

DESCRIPTION	SPECIFICATION	QTY	MAKER
<b>A. MAIN MACHINERY:</b>			
MAIN ENGINES	Wartsila 9L20, 1800kW @ 1000rpm diesel engine, water cooled type, with ABS certificate	2	Wartsila
Propulsion Control Systems	Lipstronic @/C 7000 Basic	2	Wartsila
ENGINE TELEGRAPH	KED12	1 shipset	China
SHAFT ALTERNATOR	1300kW @ 1000rpm, 415V/3ph/50HZ, IP23	2	AVK(Supplied by Wartsila)
REDUCTION GEAR BOX	SCV56, 4.81:1	2	Wartsila
PROPELLER	Wartsila W20	2	Wartsila
MAIN GENERATOR SET	Caterpillar 3412, 500eKW @ 1500rpm, 24V DC electric start	3	Caterpillar
EMERGENCY GENERATOR SET	Air-cooled, 99kW @ 1500rpm, 24V DV electric start and spring start	1	Cummins
BOW THRUSTER & STERN THRUSTER	KT-88B3, CPP, max. thrust approx.: 98kN	3	Wuhan Kawasaki Marine, China
STEERING GEAR SET	Electro-hydraulic of 8tm@1280psi torque	2	RIQ
RUDDER STOCK BEARING	23044 CC/W33	1 shipset	China
DP-2	KONGSBERG	1 set	NORWAY
<b>B. DECK AND OTHER EQUIPMENT:</b>			
4-POINT HYDRAULIC MOORING WINCH	ME40THMW, single drum, 1200m x 40mm dia. (SWR) 13 layers, 90T @ 1 <sup>st</sup> layer brake holding	4	ME
ANCHOR WINDLASS	electro-hydraulic, double gypsy, double warping	1	ME
CAPSTAN	electro-hydraulic, 10t @ 15m/min	2	ME
TUGGER WINCH	electro-hydraulic, 10t @ 0 – 15m/min (1 <sup>st</sup> layer)	2	ME
DECK CRANE (PROVISION)	2t @ 12m	1	China
ANCHOR + CHAINS	AC-14 HIGH – HOLD – TYPE ANCHOR×2 + AM <sub>2</sub> -48 CHAINS×880m		China
UNIVERSAL FAIRLEADER	BC-360	3	China
MOOR WINCH WIRE W SPELTER SOCKET	φ 40 × 1200m	4	China
VERTICAL SHEAVES	SUITABLE FOR □40mm STEEL WIRE ROPE	1 shipset	Singapore
MANHOLES		1 shipset	China
HATCHES		1 shipset	China
WINDOWS		1 shipset	China
PORTHOLES		1 shipset	China
WEATHER TIGHT DOORS		1 shipset	China
WATER TIGHT DOORS		1	China
INSULATION		1 shipset	China
PANELING, FIRE DOOR, TILES		1 shipset	China
TOILET MODULES+FITTINGS		1 shipset	China
<b>C. NAVIGATION &amp; COMMUNICATION EQUIPMENT</b>			
GPS	GP-150	1pces	Japan

DESCRIPTION	SPECIFICATION	QTY	MAKER
ANEMOMETER	DP supply	3 sets	Norway
GYRO-COMPASS	STD22 TYPE:110-233	1	Anschütz
GYRO-COMPASS	NAVIGAT X MK.1 (DP supply)	2	Sperry Marine
GMDSS RADIO CONSSOLE	Furuno RC-1800T	1 set	Japan
COMINATION RADIO STATION	FS2570	1 set	Japan
NAVTEX RECEIVER	NX-700B	1 set	Japan
EPIRB	MCMURDO E5 EPIRB	1 set	UK
SART	MCMURDO S4	2 sets	UK
HANDHELD VHF RADIO	MCMURDO R2	3 sets	UK
WEATHER FACSIMILE RECEIVER	Furuno FAX408	1 set	Japan
RADAR	Furuno FAR2117	1 set	Japan
RADAR	Furuno FR-1510 MK3	1 set	Japan
ECHO SOUNDR	Furuno FE700	1set	Japan
ECHO SOUNDR CONTROL	Furuno	1 set	Japan
DOPPEL SPEED LOG	Furuno DS-80	1set	Japan
DOPPEL SPEED LOG CONTROL	Furuno	1 set	Japan
AUTOMATIC IDENTIFICATION SYSTEM	Furuno FA-150	1 set	Japan
MAGNETIC COMPASS	CLASS A REFLECTA	1 set	Germany
AUTO-PILOT	Anschütz Pilotstar D	1 set	Germany
BATTERYLESS TELEPHONE	KS-1 MULTI-WAY SOUND POWER TELEPHONE	1 set	China
2 WAY INTERCOM SYSTEM	KEXUN	1 set	China
S.S.A.S	FURUNO IC-307	1 set	Japan
PA/TANLKBACK SYSTEM	KEXUN	1 set	China
TV-FM ANTENNA SYSTEM		1 set	China
CLEAR VIPER SCREN	φ300	1 set	China
<b>D. ANCILLARY EQUIPMENT</b>			
FUEL OIL CARGO PUMP	63kW @ 1480rpm, 150M <sup>3</sup> /h, 0.75MPa	1	IMO Pump
FUEL OIL TRANSFER PUMP	4kW @ 720rpm, 18.5m <sup>3</sup> /h, 0.2MPa	2	Desmi
SLUDGE OIL PUMP	1.5kW @ 250rpm, 5m <sup>3</sup> /h, 0.29MPa	1	Desmi
FRESH WATER CARGO PUMP	74kW @ 2963rpm, 150m <sup>3</sup> /h, 0.75MPa	1	Desmi
DRILL WATER PUMP	74kW @ 2963rpm, 150m <sup>3</sup> /h, 0.75MPa	1	Desmi
MUD PUMP	55kW @ 2900rpm, 70m <sup>3</sup> /h, 0.85MPa	2	Desmi
HEELING / BALLAST PUMP	37kW @ 2946rpm, 200m <sup>3</sup> /h, 0.41MPa	1	Desmi
BILGE / BALLAST PUMP	18.5kW @ 2930rpm, 100m <sup>3</sup> /h, 0.4MPa	1	Desmi
G.S/FIRE PUMP	18.5kW @ 2930rpm, 100m <sup>3</sup> /h, 0.4MPa	1	Desmi
BILGE PIMP FOR BT COMPT.	18.5kW @ 2930rpm, 80m <sup>3</sup> /h, 0.4MPa	1	Desmi
EMERGENCY FIRE PUMP	15kW @ 2930rpm, 35m <sup>3</sup> /h, 0.46MPa	1	Desmi
LUBRICATING OIL PURIFIER	PA605	1	Alfa Laval
FUEL OIL PURIFIER	PA605	1	Alfa Laval
FW PRESSURE SET	Pump: 10m <sup>3</sup> /h, 0.7MPa; Tank: 1000 Litres, 1.0MPa	1	Desmi
SW PRESSURE SET	Pump: 10m <sup>3</sup> /h, 0.7MPa; Tank: 1000 Litres, 1.0MPa	1	Desmi
HOT WATER CALORIFIER	1.0m <sup>3</sup> , 1500kg/hr	2	China

DESCRIPTION	SPECIFICATION	QTY	MAKER
FRESHWATER MAKER	30t/day, reverse osmosis type	2	ENWA
SEWAGE TREATMENT PLANT	150 men/day	1	China
OILY WATER SEPARATOR	1.0m³/hr	1	China
QUICK CLOSING DEVICE FOR F.O. VALVE	CSKX-60/7III	1 shipset	China
VALVES	DongTai YuanYang Ships Parts Factory	1 shipset	China
<b>E. ELECTRICAL FITTINGS</b>			
NAVIGATION LIGHT	AQUA series70m/2x65W	1shipset	Singapore
SEARCH LIGHTS	SH470(manual)	3 pce	Singapore
FLOOD LIGHTS	FL1000 1000W	5 pces	China
DAY SIGNAL LIGHT	CXD8	1 pce	China
ELECTRICAL, CABLE, SB		1 shipset	China
LIGHTINGS, SWITCHES AND SOCKETS		1 shipset	China
TRANSFORMER	75KVA	2	China
TRANSFORMER	50KVA	2	China
BATTERY CHARGER		1 shipset	China
<b>F. FIRE FIGHTING &amp; LIFE SAVING</b>			
FIRE DETECTOR SYSTEM	W.H.BRENNAN&CO PTE LTD	1 set	Singapore
FIXED SPRINKLER SYSTEM	NANJING FIRE PROTECTION TECHNOLOGY CO.,LTD.	1 set	China
LOCAL APPL. FIRE FIGHTING SYSTEM	NANJING FIRE PROTECTION TECHNOLOGY CO.,LTD.	1 set	China
MOB C/W SMOKE SIGNAL		12	China
FIXED CO <sub>2</sub> FIRE SYSTEM	THE CHENGANWEI SHIPYARD OF CHINA SHIPPING INDUSTRY CO.,LTD	1 shipset	China
FIREMAN'S OUTFITS		1 shipset	China
PORTABLE FIRE EXTINGUISHER		1 shipset	China
LIFE/ RESCUE BOAT WITH DAVIT	75 PERSONS	2	China
WHISTLE		1	China
INFLATABLE RAFTS	25 PERSONS	1 shipset	China
LIFE BUOYS		1 shipset	China
LIFE JACKETS		1 shipset	China
IMMERSION SUIT		1 shipset	China
BREATHEING APPARATUS		1 shipset	China
LINE THROWING APPARATUS		1	China
<b>G. OTHERS</b>			
AIR CONDITION UNIT	MCU-55/2051-RM (Condensing Units), HP-17-55 (Air Handling Unit)	2	Paramount Airtech, Singapore
REFRIGERATION PLANTS	MCU-1.3/IV-RM2	1	Paramount Airtech, Singapore
A.C. SET FOR ECR	RP-4W5/PAPU-3	1	Paramount Airtech, Singapore
VENTILATOR	Suitable capacity and units	1 shipset	China
HEELING SYSTEM CONTROLLER	MCA ELECTRIC CO.,LTD	1 set	China

DESCRIPTION	SPECIFICATION	QTY	MAKER
F.O FLOW METER	YWGY-100C0B3B3/D	1	China
F.W FLOW METER	SE210MM-DEK1S-LS0-A2H2/QIC	2	China
PUMP STARTER PANELS	MCA ELECTRIC CO.,LTD	1 shipset	China
TENSIONER	Centralise readout unit for rope length and wire tension	4 sets	ME
HEAVY DUTY WASHING MACHINE WITH DRYER	10kg	5 sets	China
ELECTIRC COOKING RANGE		2 sets	China
HELSMAN CHAIR [FIXED]+[SLIDING]		2	China
CCTV		1 set	China
UV	RZ-UVZ-LM22	1 set	China
ANODES/SEA GRATING	5kg/14kg/8.5kg	1 shipset	China
PAINT	IP	1 shipset	China
WOODEN SHEATING	75mm	1 shipset	China
ALL FOUNDATION BOLTS		1 shipset	China
QUICK COUPLING	DC-4 DN100	shipset	China
ALL STRAINERS,MUD BOX,ETC	DongTai YuanYang Ships Parts Factory	shipset	China
CHOCK FAST	SHANG HAI UNIWELL CHEMICAL CO.,LTD	shipset	EPOCAST
FURNITURE		1 shipset	China
FLOOR COMPOSITE		1 shipset	China
REFRIGERATOR		1 shipset	China prefabricated panel
WH AND ECR CONSOLE	MCA ELECTRIC CO.,LTD	1 shipset	China