



2. PARTICULAR OF MACHINERY

SHIP NO. S371/S372

7/28

DWG. NO. 2T-7400-003

NAME	TYPE	CAPACITY(M ³ /H X mTH) BASED ON SEA WATER	Q'TY	LOCATION
BALLAST PUMP	ELECTRIC MOTOR DRIVEN VERTICAL,CENTRIFUGAL (SELF-PRIMING)	600 m ³ /h X 25 mTH	2 SETS	ENGINE ROOM
BILGE, FIRE & GENERAL SERVICE PUMP	ELECTRIC MOTOR DRIVEN VERTICAL,CENTRIFUGAL (SELF-PRIMING)	280/90 m ³ /h X 30/90 mTH	2 SETS	
EMERGENCY FIRE PUMP	ELECTRIC MOTOR DRIVEN VERTICAL,CENTRIFUGAL (SELF-PRIMING)	72 m ³ /h X 90 mTH	1 SET	BOW THRU.ROOM & EM'CY FIRE PUMP SPACE
WATER BALLAST STRIPPING EDUCTOR	DRIVING WATER FROM BILGE, FIRE & G/S PUMP	80 m ³ /h	1 SET	ENGINE ROOM
ANTI-HEELING PUMP	ELECTRIC MOTOR DRIVEN REVERSIBLE, PROPELLER	600 m ³ /h X 11.4 mWC	1 SET	NO.3 HOLD
HOLD BILGE EDUCTOR	DRIVING WATER FROM FIRE MAIN LINE	40 m ³ /h X 25 mTH	1 SET	NO.3 HOLD

PIPING SPECIFICATION

SHIP NO.

S371/S372

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1. WATER BALLAST SYSTEM

DWG NO.

2T-7400-003

SPEC NO.	SERVICE	FLUID COND.		NOM DIA.	PIPE						PIPE CONNECTION			VALVE			RE-MARK
		PRESS (KG/CM ² G)	TEMP (°C)		THICK-NESS	MAT'L	MAT'L MARK	TEST PRESS		TREAT-MENT	WELD EXPA COUP	FLANGE		CONN-ECT TYPE	MATERIAL		
								SHOP	SHIP			ST'D	MAT'L		BODY	SEAT	
BA1	BALLAST LINE IN TANK	2.5	NOR	300	12.7	STEEL	ERWS370	-	3.75	GAL V.	SLIDING TYPE COUPL-ING, SLEEVE	JIS 5K SLIP ON	SS400	-	-	-	
	200			12.7	STPG370E SCH.80												
	SUC. LINE IN C.W.T.			65	7.0												
BA2	BALLAST LINE OTHER THAN IN TANK			300	9.5		ERWS370							W	FC	NBR	
	200			8.2	STPG370E SCH.40												

NOTE

- SLIDING TYPE EXPANSION COUPLING TO BE PROVIDED FOR EXPANSION/CONTRACTION OF WATER BALLAST MAIN LINE AS PER YARD PRACTICE AND THE NUMBER OF COUPLING TO BE ADJUSTED ACCORDING TO THE ACTUAL PIPING ARRANGEMENT.
- ESTIMATION OF WATER VELOCITY FOR SIMULTANEOUS OPERATION OF TWO(2) TANKS BY ONE(1) PUMP.
 - BALLAST MAIN : $V=Q/A=600/(1/4 \times 13.14 \times 0.2931^2 \times 3600) = 2.47 \text{M/SEC}$
 - BALLAST BRANCH: $V=Q/A=600/(1/4 \times 13.14 \times 0.1909^2 \times 3600 \times 2) = 2.91 \text{M/SEC}$
- HIGH AND LOW LEVEL ALARM TO BE PROVIDED FOR HEELING TANK.
- DOUBLE PAD (10 MM IN THICKNESS) TO BE PROVIDED BELOW THE SUCTION BELLMOUTH OF WATER BALLAST TANKS.