PIPING SPECIFICATION

SHIP NO. : 2452/2453 | 15/28

2. BILGE SYSTEM

DWG NO. 2T-7400-003

SPEC NO.	SERVICE	FLUID COND. PRESS (KG/CM²G)	FLUID COND. TEMP (°C)	NOM DIA.	PIPE THICK-NESS	PIPE MAT'L	PIPE MAT'L MARK	PIPE TEST PRESS SHOP	PIPE TEST PRESS SHIP	PIPE TREAT-MENT	PIPE CONNECTION WELD EXPA COUP	PIPE CONNECTION FLANGE ST'D	PIPE CONNECTION FLANGE MAT'L	VALVE CONN-ECT TYPE	VALVE MATERIAL BODY	VALVE MATERIAL SEAT	RE-MARK
BA	BILGE LINE IN PIPE DUCT	3.0	NOR	250	12.7	CARBON STEEL	ERW S370	-	WORK COND.	ALUM-INIZED	SLIDING TYPE EXPAN. COUPL-ING	JIS 5K SLIP ON	SS400	-	-	-	
				150	11.0		STPG370E SCH.80							W	FC	NBR	
				65	7.0												
BA	BILGE LINE IN LOWER STOOL			100	8.6												
BK	BILGE EDUCTOR DISCH/DRIV.	9.0		200	16.0		STS370 SCH.160					JIS 10K SLIP ON		F	SC	SCS	SHIP SIDE PIECE
				65	9.5												
BA				200	12.7		STPG370E SCH.80								FC	BC	
				65	7.0												
				40	5.1									-	-	-	
	BILGE IN VOID & BOSUN STORE	-		150	11.0							JIS 5K SLIP ON		F	FC	BC	
				100	8.6												
				50	5.5												
BE	BILGE LINE IN A.P.T./F.P.T.			50	8.7		STS370 SCH.160				SLEEVE			-	-	-	
BA	BILGE / SEWAGE SHORE CONNECTION			50	5.5		STPG370E SCH.80							F	FC	BC	
DA	F.W. LINE IN F.W.T.			50	2.0	COPPER	C1220T-1/2H					COMPOSITE BRAZING	YBSC2	-	-	-	
				40	2.0							SOLID BRAZING					
				25	1.6												

NOTE

1. SLIDING TYPE EXPANSION JOINT TO BE PROVIDED FOR EXPANSION/CONTRACTION OF BILGE MAIN LINE AS PER YARD PRACTICE. THE NUMBER OF JOINT TO BE ADJUSTED ACCORDING TO THE ACTUAL PIPING ARRANGEMENT. A9
2. CLACULATION OF BILGE PIPE DIAMETER ACCORDING TO THE RULE.
   - BILGE MAIN
     $D=25+1.68\sqrt{(L(B+D))}$ MM = $25+1.68\sqrt{(283.5(45+24.7))}$ = 261.2 MM
     ACCORDINGLY, THE PIPE FOR BILGE MAIN IS 250A (I.D 248.8 MM)
   - BILGE BRANCH
     $D=25+2.15\sqrt{(l(B+D))}$ MM = $25+2.15\sqrt{(26(45+24.7))}$ = 116.5 MM
     BUT, THE PIPE INSIDE DIAMETER FOR BILGE BRANCH NEED NOT TO BE MORE THAN 100 MM.
     ACCORDINGLY, THE PIPE FOR BILGE BRANCH IS 100A (I.D 102.3 MM)
3. BILGE WELL IN FLOODABLE HOLD TO BE BLANKED OFF WHEN HOLD IS USED FOR BALLASTING.
4. BILGE IN THE BOSUN STORE TO BE DISCHARGED OVER BOARD BY BILGE EDUCTOR HAVING CAPACITY OF 100M3/H DRIVEN BY BILGE FIRE AND GENERAL SURVICE PUMPS TO BE INSTALLED IN BOSUN STORE.
5. WATER INGRESS DETECTION TO BE PROVIDED FOR FOLLOWING SPACES AND AUDIBLE/VISIBLE ALARM TO BE DISPLAYED AT NAVIGATION BRIDGE IN ACCORDANCE WITH REQUIREMENTS OF THE RULE.
   - TWO(2) SETS FOR EACH CARGO HOLD
   - ONE(1) SET FOR BOSUN STORE,FORWARD VOID SPACE AND FORE PEAK TNAK
6. BILGE IN UPPER STOOL AND VOID SPACE IN WAY OF CARGO HOLD TO BE DRAINED INTO ADJACENT CARGO HOLD THROUGH DRAIN HOLE.
7. DRAIN PLUG TO BE PROVIDED FOR UPPER STOOL IN FLOODABLE HOLD AND VOID SPACE IN WAY OF CARGO HOLD.
8. BILGE IN THE LOWER STOOL IN WAY OF CARGO HOLD TO BE DRAINED TO THE PIPE DUCT THROUGH PERMANENT OPENING.
9. BILGE IN VOID SPACES IN WAY OF L.S.H.F.O.B.T.(P) & NO.1 H.F.O.B.T.(S) TO BE DRAINED BY BILGE, FIRE & G/S PUMP IN ENGINE ROOM.

2. PIPING DIAGRAM OF BILGE SYSTEM

SHIP NO.	2452/2453	16/28
DWG NO.	2T-7400-003