



REFERENCE DRAWINGS

NO.	DRAWING TITLE	DRAWING NUMBER
1	GENERAL ARRANGEMENT PLAN	AF6097-89940-01
2	SANITARY FRESH WATER SYSTEM	AF6097-53000-02
3	BILGE DRAINAGE AND DEWATERING SYSTEM	AF6097-52000-01
4	COOLING WATER SYSTEM	AF6097-25600-01
5	BLACK, GREY AND SANITARY FLUSHING SYSTEM	AF6097-89940-02
6	WATER FIRE EXTINGUISHING SYSTEM	AF6097-55500-03

PIPE DIMENSIONS

PIPE CODE	PIPE SIZE	STANDARD	MATERIAL	REMARKS	JOINTS
8p	12 x 2.0	DN12391	STEEL	-	COMPRESSION FITTINGS
10p	15 x 2.0	DN12391	STEEL	-	
15p	18 x 2.0	DN12391	STEEL	-	
20p	22 x 2.0	DN12391	STEEL	-	
25p	28 x 2.0	DN12391	STEEL	-	
32p	35 x 2.0	DN12391	STEEL	-	FLANGED
40p	42 x 2.0	DN12391	STEEL	-	
15	18 x 2.0	DN12462	ST. STEEL	-	
20	22 x 2.0	DN12462	ST. STEEL	-	
20	26.9 x 6.3	DN12448	STEEL	-	
25	33.7 x 8.0	DN12448	STEEL	-	

NOTE: WALL THICKNESS ACC. TO LRS for Special Craft Part 15, Chapter 1, Section 5

VALVE MATERIALS

ND	NP	TEMP	VALVE TYPE	BODY	MATERIAL	TRIM	L.R. CERT.
8	10	50	PRESSURE GAUGE COCK	BRASS	BRASS	BRASS	NO
8	10	50	NEEDLE VALVE	ST. STEEL	ST. STEEL	ST. STEEL STEM AND NEEDLE TIP	NO
8	25	50	BALL VALVE	BRASS	BRASS	BRASS	NO
10	16	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO
15	25	50	BALL VALVE	BRASS	BRASS	BRASS	NO
15	16	50	BALL VALVE	ST. STEEL	BRASS	BRASS	NO
15	16	50	CHECK VALVE	ST. STEEL	ST. STEEL	ST. STEEL	NO
15	16	50	GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO
15	16	50	GLOBE VALVE	ST. STEEL	ST. STEEL	ST. STEEL DISC	NO
15	40	50	GLOBE VALVE-Y PATTERN	ST. STEEL	ST. STEEL	ST. STEEL DISC	NO
15	10	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO
15	10	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	YES
15	40	50	NEEDLE VALVE	ST. STEEL	ST. STEEL	ST. STEEL STEM AND NEEDLE TIP	NO
15	25	50	SAFETY VALVE	BRONZE	BRASS	BRASS	NO
20	16	50	GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO
20	25	50	SAFETY VALVE	BRONZE	BRASS	BRASS	NO
25	10	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	YES
25	40	50	CHECK VALVE	ST. STEEL	ST. STEEL	ST. STEEL	NO
25	40	50	GLOBE VALVE-Y PATTERN	ST. STEEL	ST. STEEL	ST. STEEL DISC	NO
25	40	50	NEEDLE VALVE	BRASS	BRASS	BRASS	NO
32	40	50	GLOBE VALVE-Y PATTERN	ST. STEEL	ST. STEEL	ST. STEEL DISC	NO
32	16	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO
32	40	50	SAFETY VALVE	BRASS	BRASS	BRASS	NO
40	40	50	CHECK VALVE	ST. STEEL	ST. STEEL	ST. STEEL	NO
40	16	50	SONR GLOBE VALVE	BRONZE	BRASS STEM, BRONZE DISC	BRASS	NO

EQUIPMENT TABLE

ITEM	DESCRIPTION	CHARACTERISTICS	REMARKS
E551101	STARTING AIR COMPRESSOR	Q=abt. 13 m³/h, H=30 bar, P=3.1 kW	FLEXIBLE FASTENING
E551102	STARTING AIR RECEIVER	V=0.3 m³, 30 bar	VERTICAL TYPE
E551104	STARTING AIR RECEIVER	V=0.3 m³, 30 bar	HORIZONTAL TYPE
E551105	STARTING AIR RECEIVER	V=0.125 m³, 30 bar	VERTICAL TYPE
E551106	COMPRESSED AIR HOSE	L=abt. 15 m	-
E551111	COMPRESSED AIR HOSE	L=abt. 15 m	-
E551112	COMPRESSED AIR HOSE	L=abt. 15 m	-
E551113	COMPRESSED AIR HOSE	L=abt. 15 m	-
17.025	ELECTROMAGNETIC STARTING VALVE	ND 40 (MS21.5)	MTU SUPPLY
E551114	SRV-100 - PILOT VALVE	-	ODACE SUPPLY
E551116	COMPRESSED AIR HOSE	L=abt. 3 m	-
E551117	HANDHELD INFLATOR GUN	SUPPLIED WITH GAUGE AND FLEXIBLE HOSE	-

TESTS TABLE

ITEM	DESIGN PRESSURE (bar)	IN WORKSHOP (bar)	ON BOARD (bar)
SUPPLY & STARTING PIPELINE	33.0	49.5	49.5
WORKING PIPELINE - 7 bar	7.7	11.55	11.55
WORKING PIPELINE - 2 bar	2.2	3.3	3.3
DRAIN PIPELINE	2.2	-	WORKING CONDITION
VENTING PIPELINE	2.2	-	WORKING CONDITION
ME SUPPLY - 10 bar	10	15	15
DG SUPPLY - 10.3 bar	11.33	17	17
EDG SUPPLY - 8.2 bar	9	13.5	13.5

MTU CONNECTIONS

ITEM	DESCRIPTION	SIZE	REMARKS
17.002	Connection compressed air starting engine	ND 40	-

NOTES:

- CLASS OF PIPING SYSTEM: II L/R (FOR 16-P-40BAR, T=300°C), III (FOR P-16BAR, T=200°C).
- PIPING SHALL BE ADEQUATELY SUPPORTED USING APPROVED SHIPYARD STANDARDS IN A MANNER AS NOT TO INTERFERE WITH ITS FLEXIBILITY.
- PIPS TO BE CLEANED AFTER WELDING, AND FOR PROTECTION OF PIPE DURING TRANSPORTATION ALL OPEN ENDS OF PIPES SHALL BE BLANKED OFF WITH EITHER BLANK FLANGES OR PLUGS.
- PIPE PENETRATIONS SHALL BE SLEEVED OR FLANGED I.A.W. APPROPRIATE SHIPYARD STANDARDS.
- PIPS SECTIONS IN ENGINE ROOMS TO BE EASILY REMOVABLE AND OF MANAGEABLE LENGTHS.
- PIPING SHALL NOT BE INSTALLED IN WAY OF HATCHES, WHERE SUCH A CONDITION IS UNAVOIDABLE, REMOVABLE SPOOLS SHALL BE PROVIDED.
- VALVES IN ENGINE ROOMS MUST BE GROUPED AND PLACED IN ACCESSIBLE POSITION.
- ALL VALVES SHALL HAVE BILINGUAL BRASS LABEL PLATES SECURELY ATTACHED TO THEM IN ACC. WITH ASTM F982-86(2006) STANDARD SPECIFICATION FOR VALVE LABEL PLATES.
- THE 15 METER QUICK CONNECT AIR HOSE WILL BE COMPLETE WITH 1 MALE AND 1 FEMALE QUICK CONNECT COUPLING.
- ALL ENGINES SHALL BE SUPPLIED WITH APPROVED TYPE FLEXIBLE HOSE TO CONNECT WITH ASSOCIATED PIPING ROTATING FLANGE JOINTS OR 301 S.S. BRAIDED HOSE WITH RIGID MALE AND SWIVEL FEMALE ENDS SHALL BE USED.
- ALL PIPE SECTIONS SHALL BE THOROUGHLY CLEANED AND BE FREE OF OIL, DIRT, RUST, WELD SPATTER AND OTHER FOREIGN MATTER PRIOR TO INSTALLATION.
- AFTER INSTALLATION ALL PIPING SHALL BE FLUSHED AND BLOWN CLEAR TO BE PROVEN FREE OF ALL FOREIGN MATTER AND CONTAMINANTS PRIOR TO PUTTING INTO SERVICE.
- THE AIR RECEIVERS ARE TO BE MANUFACTURED IN ACCORDANCE WITH PART 15, CHAPTER 4 OF THE RULES.
- COMPRESSED AIR PIPING EXPOSED TO WEATHER TO BE 316 STAINLESS STEEL, WHERE INDICATED.
- ENSURE VHT TYPE SUPPORT SLEEVES ARE INSTALLED PER PARKER TECHNICAL GUIDANCE.
- ALL PIPES EXPOSED TO WEATHER TO BE COATED PROTECTED.
- PRESSURE INDICATOR AND VENT LINE SHALL BE AS CLOSE AS POSSIBLE TO STERN TUBE BEARING PNEUMOSTOP INLET.
- FOR FENDERS INFLATING OPERATION THE PORTABLE ASSEMBLY SHALL BE COUPLED TO THE SERVICE AIR COUPLING IN AFT OR FORWARD END OF MAINDECK HOUSE, AS NEEDED.
- THE MTU VALVE 17.002 WILL BE PLACED AT MAX. 2m FROM THE MAIN ENGINE.

TYPICAL O/B DISCHARGE BLOWDOWN ARRANGEMENT

BLOWDOWN ISOLATION VALVE	SIZE	UNIT	LOCATION	ASSOCIATED SYSTEM	O/B DISCH. NOM. SIZE	O/B DISCH. TAG	FUNCTION
V551136	DN 15	U1102	FR15 - FR16 (PS)	COOLING WATER	DN 150	U1102-256A109-01	MAIN ENGINE (PS) O/B DISCHARGE BLOWDOWN
V551127	DN 15	U1102	FR15 - FR12 (PS)	COOLING WATER	DN 40	U1102-256A125-01	MAIN ENGINE GEARBOX (PS) O/B DISCHARGE BLOWDOWN
V551064	DN 15	U1102	FR 15 - FR 16 (SB)	COOLING WATER	DN 150	U1102-256A108-03	MAIN ENGINE (SB) O/B DISCHARGE BLOWDOWN
V551128	DN 15	U1102	FR 10 - FR 11 (SB)	COOLING WATER	DN 25	U1102-256A165-01	MAIN ENGINE GEARBOX (SB) O/B DISCHARGE BLOWDOWN
V551076	DN 15	U1104	FR31 - FR32 (PS)	COOLING WATER	DN 65	U1104-256A130-01	AIR CONDITIONING O/B DISCHARGE BLOWDOWN
V551073	DN 15	U1102	FR 7 - FR 8 (PS)	BILGE / DEWATERING	DN 65	U1102-520A110-02	BILGE PUMP (AIR) O/B DISCHARGE BLOWDOWN
V551071	DN 15	U1102	FR 10 - FR 11 (PS)	BILGE / DEWATERING	DN 65	U1102-520A111-03	BILGE PUMP (AIR) O/B DISCHARGE BLOWDOWN
V551075	DN 15	U1104	FR 33.5 - FR34 (SB)	BILGE / DEWATERING	DN 80	U1104-520A131-04	BILGE PUMP (SB) O/B DISCHARGE BLOWDOWN
V551070	DN 15	U1104	FR 32 - FR 33 (SB)	SANITARY FRESH WATER	DN 25	U1104-530A101-01	FRESHMAN DRAIN O/B DISCHARGE BLOWDOWN
V551089	DN 15	U1104	FR 32 - FR 33 (SB)	FIRE WATER	DN 32	U1104-555A102-01	DISCHARGE BLOWDOWN
V551088	DN 15	U1102	FR 7 - FR 8 (PS)	BAG WATER	DN 50	U1102-530A162-01	DISCHARGE BLOWDOWN

CCGS CONSTABLE CARRIÈRE

AF 07.12.12	AS FITTED	IB	FP	BF
Rev	Date	Description	Perform	Check
Client: CANADIAN COAST GUARD		Title: COMPRESSED AIR SYSTEM		
Contract No: F7045-06001/002/NO		Rev: AF-1		
P.O. Box 9110, 3099 Barrington Street, Halifax NS, Canada B3K 5M7 Tel: 902.423.9271 Fax: 902.429.4510		Scale: 1:100		
Contract No: F7045-06001/002/NO		Rev: AF-1		