



REFERENCE DRAWINGS		
NO.	DRAWING TITLE	DRAWING NUMBER
1	GENERAL ARRANGEMENT PLAN	6094-89940-01
2	TANK ARRANGEMENT PLAN AND CAPACITY PLAN	6094-89940-02
3	COOLING WATER SYSTEM	6094-25600-01
4	BLACK, GREY AND SANITARY FLUSHING SYSTEM	6094-58300-02
5	COMPRESSED AIR SYSTEM	6094-55100-01
6	BILGE DRAINAGE AND DEWATERING SYSTEM	6094-52000-01
7	GENERAL ARRANGEMENT OF THE FIRE FIGHTING INVENTORY	6094-55500-02
8	FIRE CONTROL PLAN	6094-55500-04

PIPE DIMENSIONS					
ND	Pipes sizes	Standard	Material	Remarks	Demountable joints
25	33.7x3.2	DIN2448	Carbon steel	Galvanized	-Flanges and screwed joint
32	42.4x3.2	DIN2448	Carbon steel	Galvanized	
40	48.3x3.68	DIN2448	Carbon steel	Galvanized	
50	60.3x3.2	DIN2448	Carbon steel	Galvanized	
65	76.1x3.2	DIN2448	Carbon steel	Galvanized	-Flanges
25	33.7x6.3	DIN2448	Carbon steel	Galvanized CLASS II LR	
32	42.4x6.3	DIN2448	Carbon steel	Galvanized CLASS II LR	
20	25x2	DIN2391	Stainless Steel		
					welded / screwed sleeves

VALVE MATERIALS					
ND	NP	TEMP	VALVE TYPE	BODY	MATERIAL
20	10/16	40	BALL VALVE	SS	SS BALL STEM; PTFE BALL SEAT & STEM SEAL
25	10/16	40	GLOBE VALVE - FLANGE ENDS	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS STEM
25	10/16	40	GLOBE VALVE - FLANGE ENDS	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS STEM
32	10/16	40	GLOBE VALVE - FLANGE ENDS	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS STEM
40	10/16	40	GLOBE VALVE - FLANGE ENDS	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS STEM
50	10/16	40	FI FI VALVE	BRONZE	NBR DISC AND SEALING RING, BRASS STEM
50	10/16	40	FI FI HAND NOZZLE		BRASS
65	10/16	40	FILTER	DUCTILE IRON	SST SINGLE STRAINER BASKET
65	10/16	40	GLOBE VALVE - STR FLANGE	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS STEM
65	10/16	40	CHECK VALVE	DUCTILE IRON	BRONZE DISC AND SEAT, BRASS HINGE PIN

EQUIPMENT TABLE			
ITEM	DESCRIPTION	CHARACTERISTICS	REMARKS
E555001	EMERGENCY FI FI SELF PRIMING PUMP	Q=25 m³/h, H=3 bar, P=4.6 KW	
E555002	FIRE HOSE BOX	FIRE HOSE 2", L=10m, 18mm SPRAY/JET NOZZLE SIZE	
E555004	FIRE HOSE BOX	FIRE HOSE 2", L=10m, 18mm SPRAY/JET NOZZLE SIZE	
E555010	FIRE HOSE BOX	FIRE HOSE 2", L=10m, 18mm SPRAY/JET NOZZLE SIZE	
E555003	FIRE HOSE BOX	FIRE HOSE 2", L=18m, 18mm SPRAY/JET NOZZLE SIZE PORTABLE ISC	
E555005	FIRE HOSE BOX	FIRE HOSE 2", L=18m, 18mm SPRAY/JET NOZZLE SIZE	
E555008	FIRE HOSE BOX	FIRE HOSE 2", L=18m, 18mm SPRAY/JET NOZZLE SIZE	
E555006	FIRE HOSE BOX	FIRE HOSE 2", L=12m, 18mm SPRAY/JET NOZZLE SIZE	
E555007	FIRE HOSE BOX	FIRE HOSE 2", L=18m, 18mm SPRAY/JET NOZZLE SIZE	
E555009	FIRE HOSE BOX	FIRE HOSE 2", L=18m, 18mm SPRAY/JET NOZZLE SIZE	
E520001	FIRE/BILGE/GEN. SERVICE SELF PRIMING PUMP	Q=25 m³/h, H=2.7 bar, P=6.4 KW	
E520002	BILGE/FIRE SELF PRIMING PUMP	Q=25 m³/h, H=2.7 bar, P=6.4 KW	
E555011	STAINLESS STEEL NOZZLE	Q=30 l/min	
E555012			

TESTS TABLE			
ITEM	DESIGN PRESSURE (bar)	ON WORKSHOP (bar)	ON BOARD (bar)
PIPES	3	-	TIGHTNESS TEST FOR LEAKAGE UNDER OPERATIONAL CONDITIONS TO BE CONDUCTED IN THE PRESENCE OF L.R. SURVEYOR
VALVES ⁽¹⁾	X ⁽²⁾	6	

(1) = TEST MADE BY THE VALVE SUPPLIER
(2) = TO BE TESTED BY HYDRAULIC PRESSURE TO 1.5 TIMES THE NOMINAL PRESSURE RATING OF THE VALVE AT AMBIENT TEMPERATURE

CCGS PRIVATE ROBERTSON V.C

CALCULATION REPORT

PUMP CAPACITY (2.14.2, PART 17, CH.2 OF THE L.R. Rules and Regulations for the Classification of Special Service Craft):

$$Q = (0.15 \sqrt{L \times (B + D)} + 2.25) \times (0.15 \sqrt{39.7 \times (7.31 + 3.77)} + 2.25) = 29.11 \text{ [m}^3/\text{h]} \\ Q \leq 25 \text{ [m}^3/\text{h]} \Rightarrow Q = 25 \text{ [m}^3/\text{h]}$$

Flow at any FI hand nozzle (size 12) supplied by any hydrant is abt. 8.5 m³/h.
Nozzle flow from any ammo. locker will be capable of delivering 30 l/m²/min (1.8 m³/m²/h).
The necessary flow for concurrent spraying of the ammo. lockers and for supplying any hydrant provided with FI hand nozzle:

$$Q = (2 \times \text{ammo. locker surface} \times 1.8 \text{ m}^3/\text{h}) + 9.5 \text{ m}^3/\text{h} = 13.1 \text{ m}^3/\text{h} < 25 \text{ m}^3/\text{h} \text{ (fire pump flow rate)}$$

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AF	04/24/2012	AS FITTED	TK	FP	BF
Rev	Date	Description	Perform	Check	Appr.
Client: CANADIAN COAST GUARD			Title: WATER FIRE EXTINGUISHING SYSTEM		
international ontract engineering			MID-SHORE PATROL VESSEL		
IRVING IRVING SHIPBUILDING INC.			Scale: NTS	Size: A0	Project No: 6094
P.O. Box 9110, 3099 Barrington Street, Halifax NS, Canada B3K 5M7, Tel: 902.423.9271, Fax: 902.429.4510			Drawn by: S.Hanganu	Checked by: M.Samolia	Dwg. date: 18/05/2011
Contract No. F7045-06001/002/NO			AF6094-55500-03		
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