


MATERIALS

SERVICE: MACHINERY COOLING					CLASS 150			MATERIAL: CARBON STEEL GALVANIZED AFTER FABRICATION IN CONTACT WITH SEAWATER						
RATED TEMPERATURE	300°F (149°C) MAX													
PRESSURE	CLASS 150 – MAXIMUM WORKING PRESSURE 230psi (16 bar) AT RATED TEMPERATURE													
SIZE	½”	¾”	1”	1 ¼”	1 ½”	2”	2 ½”	3”	4”	5”	6”	8”	10”	
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	
PIPE	SCH. 80				SCH. 40									
	ASTM A–53 GR. B SMLS OR ASTM A–106 GR. B SMLS													
FITTINGS	ASTM A105, ASME B16.11				ASTM A234 WPB SMLS, ASME B16.9									
	SW OR THD				BUTT WELDED, BORE TO MATCH PIPE									
FLANGE	ASTM A105, ASME B16.5				ASTM A105, ASME B16.5									
	CL 150 RF SW				CL 150 RF SO OR WN, BORE TO MATCH PIPE									

SERVICE: MACHINERY COOLING (REF: ASTM F 1155 – 98)					CLASS 200			MATERIAL: COPPER NICKEL, CuNi 90–10						
RATED TEMPERATURE	200°F (93°C) MAX													
	PRESSURE	CLASS 200 – MAXIMUM WORKING PRESSURE 216psi (18 bar) AT RATED TEMPERATURE												
SIZE		½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"	3"	4"	5"	6"	8"	10"
PIPE	ASME SB466, SEAMLESS CuNi 90–10													
	FITTINGS	FLANGED: ASME SB61, ANSI B16.24 BUTTWELD: ASME SB466, NAVSEA 810–1385880												
FLANGE		ASME SB62, ANSI B16.24												
	BOLTING	BOLTS: ASTM A 307 GR B, ANSI B18.2.1, NUTS: ASTM A 563 GR A, ANSI B18.2.2												
VALVES		BUTTERFLY: DUCTILE IRON – ASTM A 395, CARBON STEEL – ASTM A 216/A 216M GR WCB, MSS–SP–67												
	GATE:													
	GLOBE–SDNR: FLANGED: DUCTILE IRON – ASTM A 395, CARBON STEEL – ASTM A 216/A 216M GR WCB, ANSI B16.34													
	CHECK													

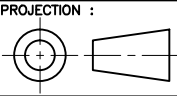
12	AS CONSTRUCTED	MM	JAN 2012
11	REPLACE SWING CHECK VALVE BY DISCK CHECK VALVE	AD	JAN 2011
10	TWO PRESSURE GAUGES ADDED	AD	JAN 2011
9	LOCATION OF STBD O.B. DISCH. MANIFOLD + CONFIG. OF EMERGENCY DECK MACH. & FISHING GEAR LINE.	AD	JAN 2011
8	INLETS & OUTLETS OF GENSET (SERVICES : 2.00”, HARBOUR : 1.50”) REMOVE VALVE NO. V–125	AD	NOV 2010
7	AUXILIARY PUMP MODEL/PORTS CHANGE	AD	NOV 2010
6	COMBINE OVERBOARD DISCHARGES INTO. PORT & STBD MANIFOLD. REMOVE HVAC CHILLER FROM THE COOLING CIRCUIT. ADD BY–PASS ON THE PROP. ENGINE AND SERVICE GENERATOR LINES. ADD OVERFLOW LINE ON BTW STERN TUBE AND STEERING GEAR COOLER.	AD	OCT 2010
5	FROM SERIAL CONFIG. OF THE STEER. GEAR & STERN TUBE T O PARALLEL CONFIG.	AD	SEPT. 2010
4	CONFIG. STEERING GEAR AND STERN TUBE SINCE NOT COMPATIBLE W/ ENGINE (PROP.) SELECTED. ADD. BRANCHES TO THE SWSCCA.	AD	AUGUST 2010
REV.	REVISIONS	BY	DATE





















	Garde côtière canadienne Canadian Coast Guard		
NAVIRE 25M VESSEL COQUE # / HULL # 008	PROJECT TITLE : Navire semi–hauturier de recherche halieutique Near Shore Fisheries Research Vessels		
PROJECT # : MRO9–1113	DRAWING FILE : ISV25–73500RMM12.DWG	DATE : JAN 2012	
DRAWN BY : MV	DRAWING # : 73500	REV : 12	SHEET : 1 OF 4



COMPANY : MÉRIDIEN MARITIME RÉPARATION	TITLE : COOLING WATER SYSTEM DIAGRAM
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SYMBOLS LEGEND/LÉGENDE DE SYMBOLES		
	GLOBE VALVE	ROBINET À SOUPAPE
	BUTTERFLY VALVE	VANNE À PAPILLON
	SDNR (GLOBE CHECK) VALVE	ROBINET À SOUPAPE ANTIRETOUR
	DISC CHECK VALVE	SOUPAPE À CLAPET BATTANT
	SIMPLEX BASKET STRAINER	CRÉPINE À PANIER SIMPLEX
	CONCENTRIC REDUCER	RACCORD–RÉDUCTION CONCENTRIQUE
	CENTRIFUGAL PUMP	POMPE CENTRIFUGE
	OVERBOARD DISCHARGE	CONDUITE D'ÉVACUATION VERS L'EXTÉRIEUR
	PRESSURE GAUGE, LOCAL	MANOMÈTRE LOCAL
	VACUUM/PRESSURE GAUGE, LOCAL	MANOMÈTRE À VIDE LOCAL
	BALL VALVE	ROBINET À TOURNANT SPHÉRIQUE
	FLANGE	BRIDE
	TEMPERATURE GAUGE IN THERMOWELL	INDICATEUR DE TEMPÉRATURE DANS UN PUIT THERMOMÉTRIQUE
	LOW LEVEL ALARM	AVERTISSEUR DE NIVEAU BAS
	SHELL & TUBE HEAT EXCHANGER	ÉCHANGEUR DE CHALEUR À CALANDRE
	SIGHTGLASS	VOYANT LIQUIDE
	FLEXIBLE CONNECTION	RACCORD FLEXIBLE
	PLATE HEAT EXCHANGER	ÉCHANGEUR À PLAQUE
	CARBON STEEL PIPE	TUYAU EN ACIER AU CARBONE
	COPPER NICKEL PIPE	TUYAU EN NICKÉLINE

NOTES

1. PROVIDE A MACHINERY COOLING SYSTEM IN ACCORDANCE WITH CLASSIFICATION SOCIETY REQUIREMENTS, INSTALL PIPING AND EQUIPMENT TO THE SATISFACTION OF THE ATTENDING SURVEYOR.
2. AFTER INSTALLATION, CLEAN AND FLUSH SYSTEM IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3. CARRY ONBOARD ONE SPARE OF EACH TYPE OF MAIN ENGINE COOLING PUMP (PROPULSION MACHINERY SEAWATER, JACKET WATER, AND AFTERCOOLER WATER PUMPS). ENSURE ALL NECESSARY MEANS ARE ONBOARD TO FACILITATE REPLACEMENT.
4. PROVIDE STRAINER MESH SIZES ACCORDING TO EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
5. USE VALVES AND FLEXIBLE HOSE CONNECTIONS COMPLYING TO CLASS REQUIREMENTS.
6. VERIFY PRESSURE DROP IN COOLING SYSTEM MEETS EQUIPMENT MANUFACTURER'S REQUIREMENTS PRIOR TO CONSTRUCTION.
7. KEEP SHUT-OFF VALVES ASSOCIATED WITH THE SEAWATER INLET TO THE SEAWATER MAIN PERMANENTLY OPEN AND PROVIDE NOTICE "VALVE ALWAYS TO BE KEPT OPEN!"
8. DOSE FRESH WATER SYSTEMS WITH CORROSION INHIBITOR AND/OR ANTIFREEZE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. USE GLOBE VALVES ON DISCHARGE SIDE OF HEAT EXCHANGERS TO ALLOW FOR SYSTEM BALANCING.
10. LOCATE EMERGENCY BILGE SUCTION AT LOW LEVEL AND INSTALL VALVE WITH HANDWHEEL NOT LESS THAN 18" (460 mm) ABOVE FLOORPLATES. FIT VALVE WITH NOTICE "FOR EMERGENCY USE ONLY".
11. PROVIDE REDUCED PRESSURE CONNECTION FOR SEA CHEST BLOWDOWN FROM COMPRESSED AIR SYSTEM. VENT SAFETY RELIEF VALVES TO MAIN DECK.
12. ARRANGE OVERBOARD DISCHARGE IN A LOCATION SUCH THAT THE DISCHARGE OF WATER AT ANY DRAUGHT WILL NOT BE OBSTRUCTED BY ICE. ALL DISCHARGES ARE TO BE LOCATED ON THE PORT SIDE.

NOTES

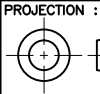
1. FOURNIR UN SYSTÈME DE REFROIDISSEMENT DE LA MACHINERIE CONFORMÉMENT AUX NORMES DE CLASSIFICATION. INSTALLER L'ÉQUIPEMENT ET LA TUYAUTERIE À LA SATISFACTION DE L'INSPECTEUR PRÉSENT.
2. APRÈS L'INSTALLATION, NETTOYER ET RINCER LE SYSTÈME CONFORMÉMENT AUX EXIGENCES DU FABRICANT.
3. SAUVEGARDER À BORD DU NAVIRE UNE POMPE DE RÉSERVE POUR CHAQUE TYPE DE POMPE COMPRISE DANS LE SYSTÈME DE REFROIDISSEMENT DES MOTEURS PRINCIPAUX (POMPE À EAU BRUTE DE LA MACHINERIE DE PROPULSION, POMPE À EAU DE REFROIDISSEMENT, ET POMPE À EAU DU POSTREFROIDISSEUR). ASSURER QUE LE REMPLACEMENT DES PIÈCES PUISSE S'EFFECTUER À BORD DU NAVIRE.
4. LES MAILLES DE CRÉPINES DOIVENT SE CONFORMER AUX RECOMMANDATIONS DU FABRICANT.
5. FOURNIR LES SOUPAPES ET LES RACCORDS FLEXIBLES CONFORMÉMENT AUX NORMES DE CLASSIFICATION.
6. AVANT LA CONSTRUCTION, VÉRIFIER QUE LA PERTE DE CHARGE DU SYSTÈME DE REFROIDISSEMENT SE CONFORME AUX EXIGENCES DU FABRICANT.
7. MAINTENIR OUVERTE LES SOUPAPES ASSOCIÉES À L'ENTRÉE D'EAU AU COLLECTEUR D'EAU DE MER ET Y AFFIXER L'AVIS: "VALVE ALWAYS TO BE KEPT OPEN!"
8. INTRODUIRE AU SYSTÈME D'EAU DOUCE UN INHIBITEUR DE CORROSION ET/OU UN ANTIGEL CONFORMÉMENT AUX RECOMMANDATIONS DU FABRICANT.
9. PLACER DES SOUPAPES GLOBULAIRES DU CÔTÉ DE REFOULEMENT DES ÉCHANGEURS DE CHALEUR AFIN DE PERMETTRE AU SYSTÈME DE S'ÉQUILIBRER.
10. SITUER L'ASPIRATION D'URGENCE DE CALE À BAS NIVEAU ET Y INSTALLER UNE SOUPAPE AVEC VOLANT DE COMMANDE PLACÉ AU MOINS 18" (460mm) AU-DESSUS DES TÔLES VARANGUES. AFFIXER L'AVIS: "FOR EMERGENCY USE ONLY".
11. FOURNIR UN RACCORD DE PRESSION DÉTENDUE AU COFFRE DE BORD, AFIN DE PERMETTRE LA PURGE SOUS PRESSION À PARTIR DU SYSTÈME D'AIR COMPRIMÉ. METTRE À L'AIR AU PONT PRINCIPAL LE ROBINET DE SURETÉ ET DE DÉCHARGE.
12. PLACER L'ÉVACUATION VERS L'EXTÉRIEUR DE FAÇON À CE QU'ELLE NE SOIT JAMAIS OBSTRUÉE PAR LA GLACE, PEU IMPORTE LE TIRANT D'EAU. LES ÉVACUATIONS DOIVENT TOUS ÊTRE SITUÉES DU CÔTÉ BÂBORD.




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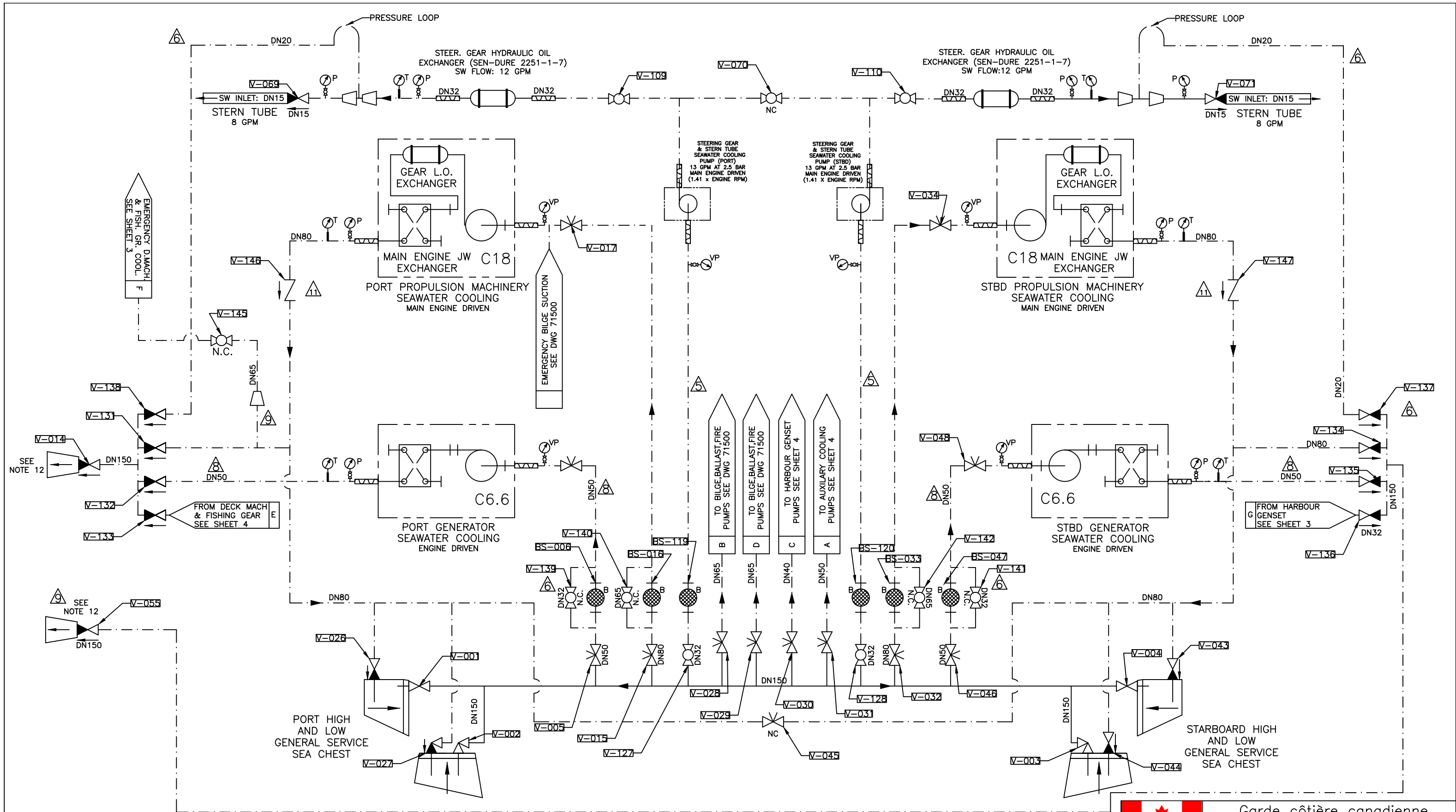
TITLE :
COOLING WATER SYSTEM DIAGRAM

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PROJECTION :
FIRST ANGLE

		Garde côtière canadienne Canadian Coast Guard	
NAVIRE 25M VESSEL COQUE # / HULL # 008		PROJECT TITLE : Navire semi-hauturier de recherche halieutique Near Shore Fisheries Research Vessels	
PROJECT # : MR09-1113	DRAWING FILE : ISV25-73500RMM12.DWG	DATE : JAN 2012	
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Garde côtière canadienne
Canadian Coast Guard

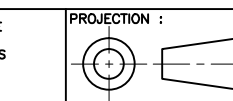
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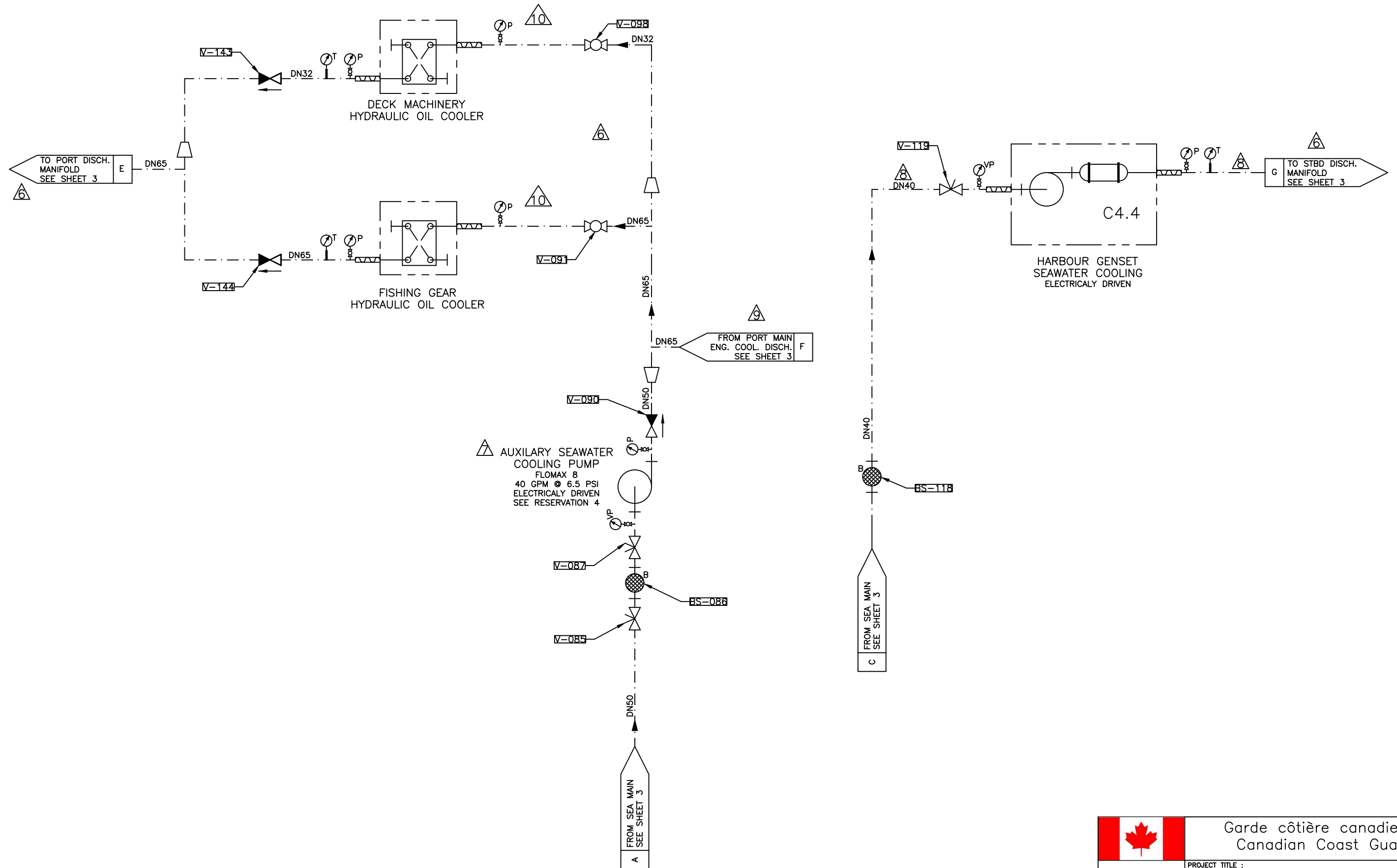
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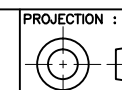
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RÉPARATION

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PROJECTION :

NAVIRE 25M VESSEL
COQUE # / HULL #
008

PROJECT TITLE :
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Near Shore Fisheries Research Vessels

PROJECT # :
MR09-1113

DRAWING FILE :
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DRAWN BY :
MV

DRAWING # :
73500

REV :
12

SHEET :
4 OF 4