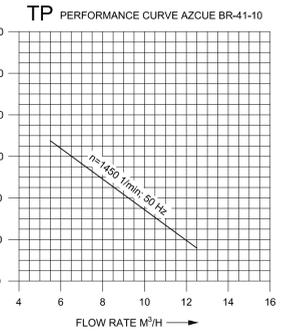


Bureau Veritas Marine & Offshore
Section 47158L.....
REVIEWED
 only for parts concerning Classification,
 and as per contract.
 Rotterdam, 13-May-2024
 [Electronic document]
 The plan approval office

PIPE CODE	SPECIFICATIONS	MATERIAL	DOCUMENT
8x	OD=8, PN 160, seamless precision, annealed, coiled	Stainless Steel	1724271
15aa	OD=15, metric, seamless precision	Steel	1011057
22aa	OD=22, metric, seamless precision	Steel	1011057
25a	OD=33.7, DN 25, Normal	Steel	1010971
28aa	OD=28, metric, seamless precision	Steel	1011057
32a	OD 42.4, DN 32, Normal	Steel	1010971
40a	OD=48.3, DN 40, Normal	Steel	1010971
50a	OD=60.3, DN 50, Normal	Steel	1010971
50b	OD=60.3, DN 50, Heavy	Steel	1591742
65a	OD=76.1, DN 65, Normal	Steel	1010971
100b	OD=114.3, DN 100, Heavy	Steel	1591742



SYMBOLS
 (LS) A^L (LS) A^H Level switch Alarm LOW / HIGH
 (LE) A Water detection sensor / alarm

NOMENCLATURE
 N.C. = Valve closed in normal operation condition
 N.O. = Valve open in normal operation condition
 — = F.O. transfer lines
 - - - = Hydraulic activation lines
 [Symbol] = Optional equipment or system

NOTE
 - 1/2" measure plugs must be installed at places where necessary;
 - Limit switch on valve 011-01 disables bunker alarm 025-02, when valve is closed;
 - Threaded pipes must be applied pipe class b.

REFERENCE DOCUMENTS

Function	Doc.nr	Class	Title
391	1209712	INS-EXT	Notes for piping drawings
310	001	DRAW-2D	Bilge and internal fire fighting system
322	001	DRAW-2D	Fuel oil service system Main engines and generator sets
322	010	DRAW-2D	Fuel oil service system central heater
345	001	DRAW-2D	Sewage treatment system - Ecomar 20 (Optional)
351	001	DRAW-2D	Filling, sounding and de-aeration system
382	012	DRAW-2D	Urea transfer system (2 tanks)
360	001	DRAW-2D	Lubrication oil system
670	050	DRAW-2D	Arrangement CO2 locker - Outfitting

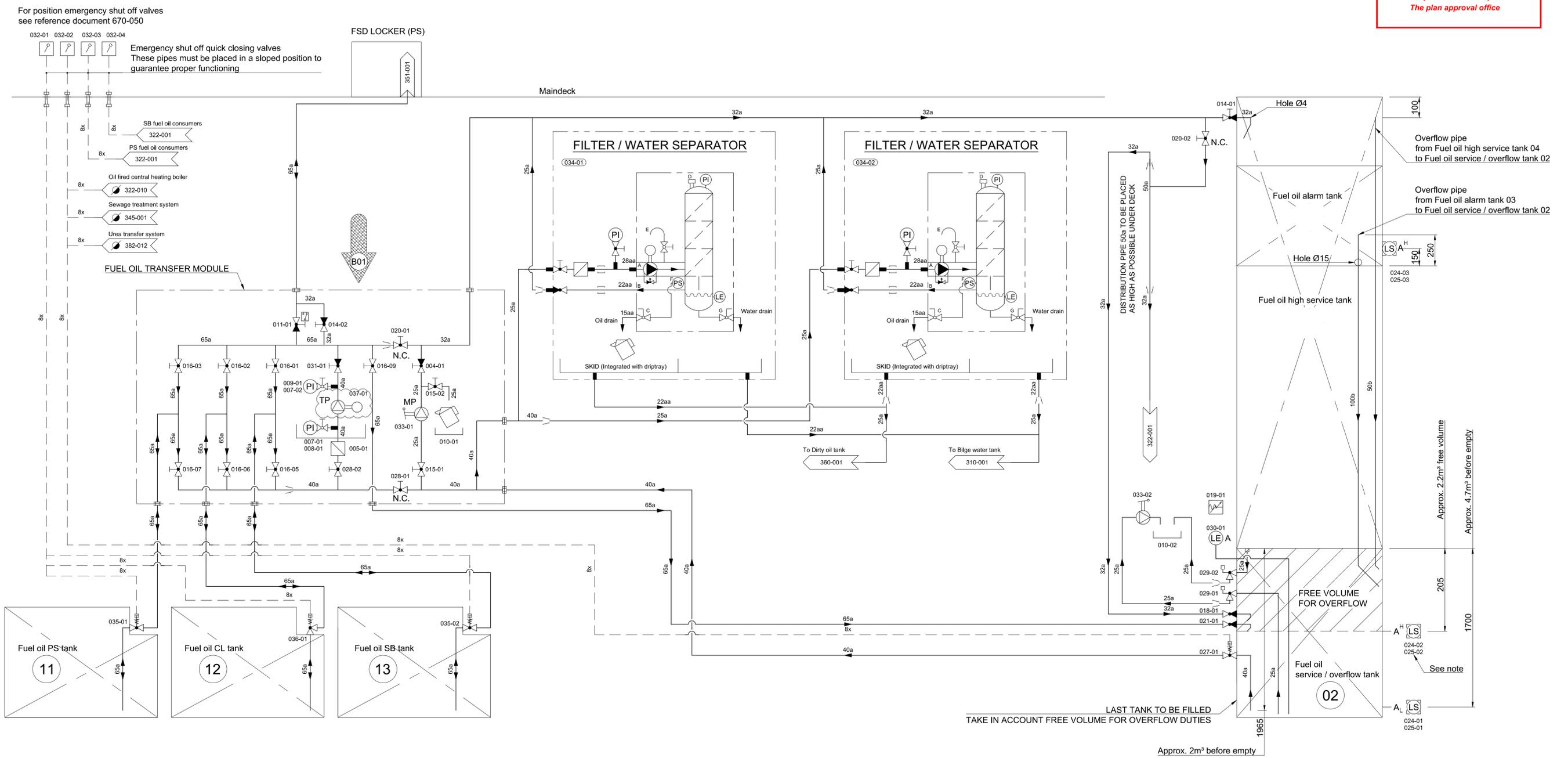
Rev	Date	Drawn	Checked	Revision text
B01	05-01-2024	CPAD01	CPAD01	Replaced FO transfer pump type
A01	02-11-2023	QKON01	CPAD01	Initially created

Projection: **DAMEN** DAMEN SHIPYARDS GORINCHEM
 Format: A1-1
 Scale: 1:1
 Units: mm

Doc class	Drawn	Sequence	Checked	Derived from
DRAW-2D	QKON01	001	CPAD01	2833273-1-G01

Project No.	Function	Sequence	Document number	Date
513233	321	001	5502648	11-01-2024

Yard No.	Section/Compartment	Sheet	Revision
HB	COPYRIGHT DAMEN SHIPYARDS GROUP	1	B01



For position emergency shut off valves see reference document 670-050
 Emergency shut off quick closing valves
 These pipes must be placed in a sloped position to guarantee proper functioning

FSD LOCKER (PS)

Maindeck

FILTER / WATER SEPARATOR (034-01)

FILTER / WATER SEPARATOR (034-02)

Hole Ø4

Fuel oil alarm tank

Fuel oil high service tank

FREE VOLUME FOR OVERFLOW

Fuel oil service / overflow tank (02)

LAST TANK TO BE FILLED
 TAKE IN ACCOUNT FREE VOLUME FOR OVERFLOW DUTIES

Approx. 2m³ before empty

Approx. 2.2m³ free volume
 Approx. 4.7m³ before empty

ISO 5457 - ISO 1200 A1-1 TransNo: TE-513233-001-2-01 / Issue: For Approval / Date: 22-01-2024



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BILL OF MATERIAL

Fuel oil transfer system				Top Part	M321
Project No.	513233	Function	321	Drawn	QKON01
Yard No.	Section/Compartment			Check	CPAD01
COPYRIGHT DAMEN SHIPYARDS GROUP				Document number	5502648
				Sheet	1
				Date	11-01-2024
				Revision	B01

POS	PART		DESCRIPTION	DOC NO
	QT.	UNITS		
004	1000645		Globe valve, 241, Straight, SDNR disc, DN25, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1063480
	1	pcs		1
005	1011347		Y-filter, 1019, DN40, PN16, Flange, FL:PN16, Mesh=1mm, With drainage conn., Cast iron GG 25 (EN-JL 1040)	1324894
	1	pcs		1
007	1000358		Pressure gauge valve, 861, 1/4" (8), BSPP male, BSPP female, Hand wheel, PN125, Brass	1062556
	2	pcs		1
008	1204252		Pressure gauge, Bourdon tube, 3660, -1/0.6bar, D=63mm, 1/4", BSPP male, Mount:Direct, Conn:Below, Liquid-damped, Case:Stainles	2188438
	1	pcs		1
009	1155843		Pressure gauge, Bourdon tube, 3660, 0/6bar, D=63mm, 1/4", BSPP male, Mount:Direct, Conn:Below, Liquid-damped, Case:Stainless steel, Co	2188438
	1	pcs		1
010	1011316		Drip tray, 250x250x150 with drain, For drain points in lub. oil system, Steel S235JR (1.0038)	1233684
	2	pcs		1
011	1000793		Globe valve, 241, Straight, SDNR disc, DN65, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1, With limit	1063480
	1	pcs		1
014	1000646		Globe valve, 241, Straight, SDNR disc, DN32, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1063480
	2	pcs		1
015	1000449		Globe valve, 241, Straight, Fixed disc, DN25, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1063480
	2	pcs		1
016	1000522		Globe valve, 242, Right-angled, Fixed disc, DN65, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1154112
	7	pcs		1
018	1412547		Check valve, 70NGY, Swing type, Straight, DN32, Flange, Sealing: Metal, PN16, FL:PN16, Cast iron GGG 40.3 (EN-JS 1020)	1063434
	1	pcs		1
019	1005136		Waterseparator, Amplifier, For water separator SEPAR	1099449
	1	pcs		1
020	1000450		Globe valve, 241, Straight, Fixed disc, DN32, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1063480
	2	pcs		1
021	1000335		Check valve, 70NGY, Swing type, Straight, DN65, Flange, Sealing: Metal, PN16, FL:PN16, Cast iron GGG 40.3 (EN-JS 1020)	1063434
	1	pcs		1
024	1002618		Single bulkhead flange, PN10, OD=115mm, t=30mm, PCD=92mm, n=4x, M12, Steel S235JR (1.0038)	1055924
	3	pcs		1
025	1011093		[TA], Level Switch, A01041 FL-SQR Besta, FLANGE 92x92, max 300 deg.C, IP65, cable connection M20 x 1.5, Stainless steel	1102581
	3	pcs		1
027	1000373		[TA], Globe valve, Quick closing, 100-247, Straight, Fixed disc, DN40, Flange, Pneumatic/hydraulic, PN4, FL:PN16, Cast iron GGG 40	1063537
	1	pcs		1
028	1000451		Globe valve, 241, Straight, Fixed disc, DN40, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1063480
	2	pcs		1
029	1000801		Plug valve, Self-closing, 574, DN20, Flange, BSPP female, Lever with weight, PN4, FL:PN10, Right closing, Steel, drilled acc. to DN25	2211517
	2	pcs		1
030	1403423		ASSY, Level Indicator, Water sensor KWA 90-100, for FO tank, including cable gland and pipe cap	2765037
	1	pcs		1
031	1000707		Globe valve, 242, Right-angled, SDNR disc, DN40, Flange, Hand wheel, PN16, FL:PN16, Cast iron GG 25 (EN-JL 1040), EN 558-1	1154112
	1	pcs		1
032	1000238		Impuls unit valve, 106, straight, Alu EN AW-6082 (AlSi1MgMn), single execution	1066597
	4	pcs		1
033	1554712		Pump Manual Driven, Semi Rotary, fig 950, size K-2, connection 1 inch, D=170, Cast iron	
	2	pcs		
034	1497617		ASSY, MODULE, Fuel Oil Filtration, CJC Static separators, PTU3 27/81 filter, aluminium skid	3671609
	2	pcs		1
035	1600941		[C], Globe valve, Quick closing, 100-247, Straight, Fixed disc, DN65, Flange, Pneumatic/hydraulic, PN4, FL:PN16, Cast iron GGG 40.3 (EN	
	2	pcs		

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BILL OF MATERIAL

Fuel oil transfer system					Top Part	M321			
Project No.	513233	Function	321	Drawn	QKON01	Check	CPAD01	Date	11-01-2024
Yard No.	Section/Compartment				Document number	Sheet	Revision		
COPYRIGHT DAMEN SHIPYARDS GROUP					5502648	1	B01		

POS	PART		DESCRIPTION	DOC NO
	QT.	UNITS		SHT
036	1600811		[C], Globe valve, Quick closing, 100-248, Right-angled, Fixed disc,	
	1	pcs	DN65, Flange, Pneumatic/hydraulic, PN4, FL:PN16, Cast iron GGG 40	
037	1564410		Pump, Electrical, MR-41/10, 50Hz/3.0kW/400V/1450rpm, 60Hz/3.5kW/440V/1	
	1	pcs	750rpm, DN40, DN40, Cast iron, Impeller:Bronze, Sealing:Viton Gra	

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