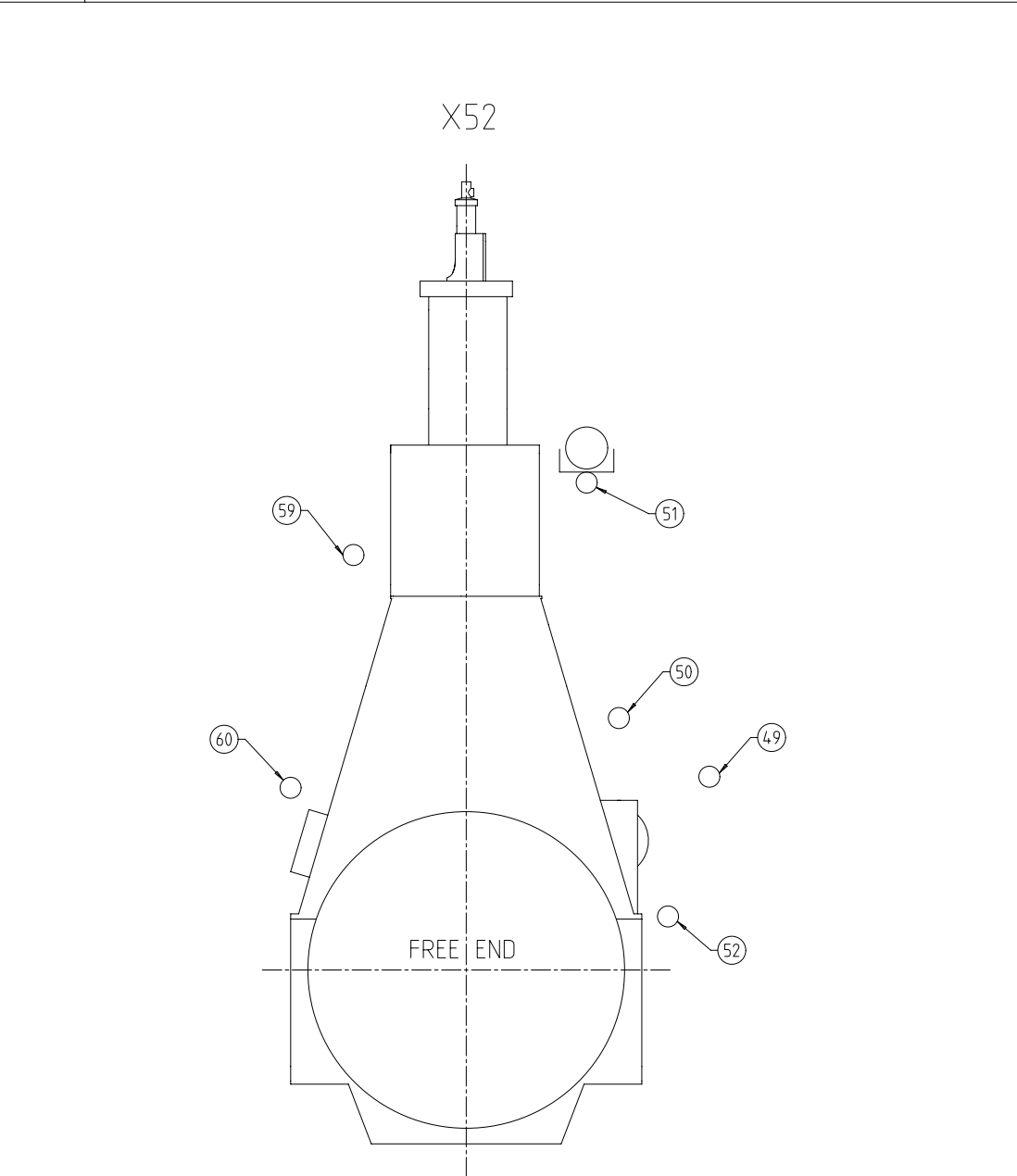




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SPECIFICATION which must be met

60	OUTLET - Heating medium for fuel oil trace heating - Connected to condensate manifold or thermal oil return
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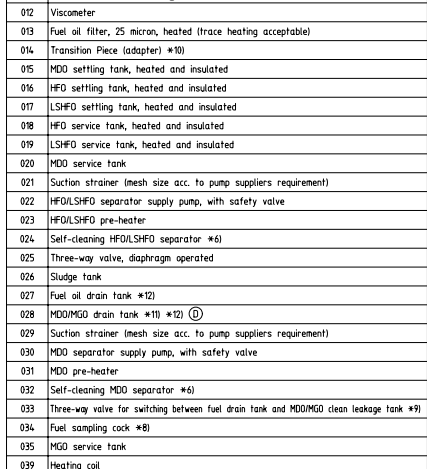












49	INLET - Fuel oil
D	Fuel oil quality at engine inlet: according to specification in Marine Installation Manual (MIM) Pressure at engine inlet: stopped engine: 10 bar running engine: 7-10 bar Volume flow: according to GTD Viscosity: - Viscosity for HFO: 10-20 cSt (recommendation: 13-17 cSt) - Viscosity MDO/MGO: 2-20 cSt Filtration: - At least one filter unit close to the engine inlet. - One filter unit with max. 10 micron (absolute, sphere passing mesh) in the fuel system (either in feed- or booster circuit) - Bypass filter in parallel to the main fuel oil filter with max. 25 micron (absolute, sphere passing mesh) Fuel change-over: - Max. temperature gradient during fuel change-over: 2 °C/min - Fuel amount on engine side: mentioned in table 1 on page 2. - Fuel amount on system side: according to project specific system layout.
50	OUTLET - Fuel return
D	- Normal operation condition: Returning to mixing unit. - During fuel change-over while engine is not in service: returning to service tank.
51	OUTLET - Drain rail-unit (dirty)
D	- Dirty fuel: Mixed drain (LO,FO) from rail-unit, not for re-use - Free flow by gravity to sludge oil tank or appropriate tank. - Pipe insulated and heated up (50-95 °C)
52	OUTLET - Fuel return, pressureless (clean)
D	- This pressureless fuel return consists of the following 2 types of clean fuel, namely: 'Normal drainage' Expected (design) fuel return from the fuel pump and injection control side during normal operation. 'Leakage' Unexpected fuel return from an emergency situation only (e.g. high pressure pipe damage). - Clean fuel must be collected in a drain tank (or appropriate tank) by gravity free flow - Piping must be insulated and heated (50-95°C)
59	INLET - Heating medium for fuel oil trace heating - Connected to steam or thermal oil supply

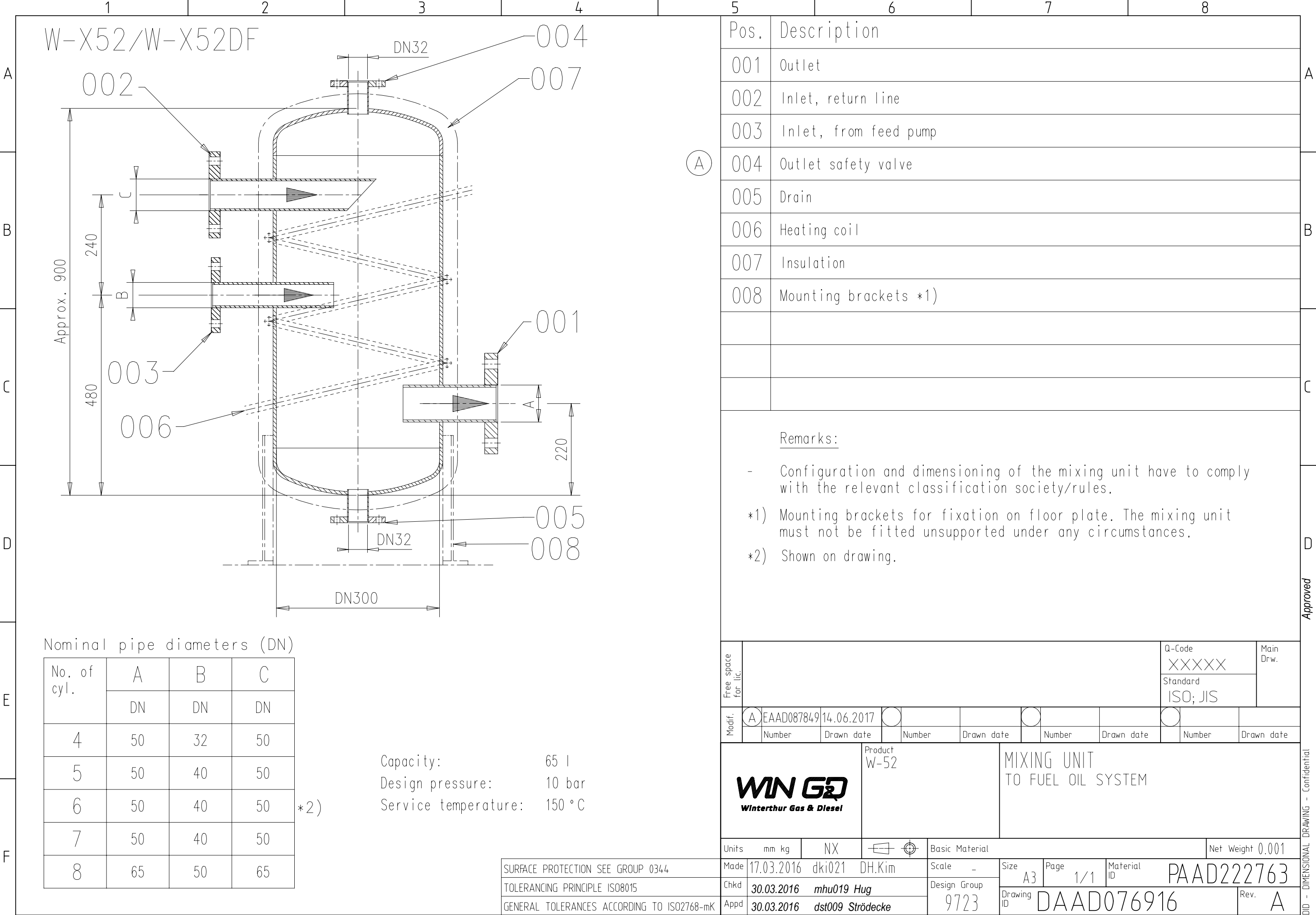
1	008	PAAD222763	MIXING UNIT			DAAD076916				0,001		
QTY	SEQ NO	Material ID	Material Name			Dimension, Occ		Standard or Drawing	Basic Material Material Standard	Weight GR./NET		
Free space for lic.									Q-Code	Main Drw.		
									XXXXXX			
									Standard ISO; JIS			
Modif.	A	EAAD086014	04.12.2015	B	EAAD086524	19.04.2016	C	EAAD089659	03.10.2018	D	EAAD091789	03.12.2019
	Number		Drawn date		Number		Drawn date		Number		Drawn date	
			Product 5-8X52			FUEL OIL SYSTEM HFO&MDO&MGO Brennstoffsystem						
Units	mm kg	NX				Basic Material					Net Weight 0,001	
Made	03.12.2014	www.008	W.WANG			Scale	-	Size	A2	Page	1/2	PAAD177846
Chkd	16.01.2015	mhu019	Hug			Design Group			Material ID			
Appd	16.01.2015	bha009	Haag			9723			Drawing ID			
									DAAD056601	Rev. D		

Pos.	SYSTEM COMPONENTS *1)
001	Three-way valve, manually or remotely operated
002	Automatic fuel change-over unit

008	Mixing unit, heated and insulated (according to separate drawing as linked on page 1)
009	High pressure booster pump
010	Fuel oil end-heater (1)
011	MDQMCO tank subcooler (2)



	HFO pipes, insulated and heated with steam, thermal oil or electrically		Heating pipes
	Drain/overflow pipes, insulated and heated with HT cooling water or electrically		Drain/overflow pipes
			Air vent pipes
	MDO pipes		Pipe connections
	Pilot fuel		
	Pipes on engine		



MIDS WinGD X52 FUEL-OIL-SYSTEM

TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2017-02-15	DRAWING SET	First web upload
2017-08-07	DAAD076916	Mixing unit - drawing replaced with new revision
2018-10-01	DAAD056601 DAAD061728	System drg - new revision Main drg- new revision
2020-09-30	DAAD056601	System drg – new revision

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