	Qualific	Qualification Test F NORSOK N			QTR. No.: EM2205 Rev. No.01:	
ENGEMAS	A			Rev		
Manufacturer name/address/ Web page:	Ernesto Cardina 13571-390 BRA	Engemasa – Engenharia e Materiais Ltda. Ernesto Cardinalli 333 São Carlos SP 13571-390 BRAZIL www.engemasa.com.br				
Reference standa		NORSOK M-650, Edition 4				
Material designati	on ASTM A995 Gr.4/	A (UNS J92205);	MDS D46, Revisio	n 6.		
Manufacturing Summary doc. No	The state of the s	Engemasa Manufacturing Procedure Specification - Norsok 4A			Rev. No.:01	
Products and manufacturing process(es):	Melting: Induction	Sand Castings Centrifugal Castings Melting: Induction Furnace Heat treatment by: electrical furnace number 06 at Engemasa premisses				
Mandatory conditions and su contractors:	 Melting charge using ingots refined by VOD, AOD or equivalent Melting charge using pure metals and Ferro alloys Welding process specification to be used WPS 311/23. 				ent	
Other information	All qualification Qualification Co	Inspection and Test plan 074/2023 rev04 All qualification tests witnessed by TPI (TÜV NORD Brasil - BRTÜV) and Qualification Company (Gardner Denver Nash Brasil Indústria e Comércio de Bombas Ltda)				
Qualification expi						
	Tested and q	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.				
Products and manufacturing process(es):	Test record No.	Tested thickness mm	Qualified thickness mm	Test piece weight kg	Qualified weight kg	
Sand Castings	Proaqt 00981/24 Proaqt 01489/24 Proaqt 03292/24 Proaqt 03293/24	160	160	280	All	
Centrifugal Casting	Propert 018/12/2/	180	180	275	All	
		ion/accepta	nce signatur	es		
	William William Control	pared by/Date:		Checked by/Date: Daniel Moreira Guarnieri 2024.05.30 12:02:26 -03		
Manufacturer:	Prepared by/Date: Danielli de Brito Balbii	Brito Balbino 2024.05.31			Guarnieri 2024.05.30	
Third Part Inspec TÜV NORD Brasil	tion (company name /ad - BRTÜV 222 – 3rd Floor - Alphav	Brito Balbino 2024.05.31 2024.05.31 2024.05.31 2024.05.31 20251:36 -03'00'	Daniel Moreira Signature/Date	Guarnieri	Guarnieri 2024.05.30 12:02:26 -0	
Third Part Inspect TÜV NORD Brasil Alameda Madeira, BARUERI - SP 06- The manufact	tion (company name /ad - BRTÜV 222 – 3rd Floor - Alphav	Prito Balbino 2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05:136 (2020-05)))))))	Signature/Date TUV d to be in compliant elisted products an esponsibility to ensi	CONTROL Eduardo FAT N SNQC 25 The ce with the requirement of materials. For each of the control of the cont	Guarnieri 2024.05.30 12:02:26 -0: Constancio 31/05/2024 uirements of	