

**Scope of the approval – Manufacturer of material in accordance with  
PER 2016/1105, Schedule 2, Part 4, Para. 31 (8)**

**Annex to certificate no.  
PER-0168-QS-M 3183398/2022/MUC-01 von / dated 2022-02-21**

Name: Stainless Foundry & Engineering, Inc. Street: 5110 North 35th Street City: Milwaukee, WI 53209										Country: USA		Date: rev. 0 2022-02-21		Page 1 of 3		Competent Body of TUV SUD BABT Unlimited	
No.	Material Designation Material Grade	Material Specification		Delivery Condition	Description Product	Dimensions				Weight		Requirements Technical Rules		Report no. C-72175567UK-22 dated 2022-02-01  Remarks  10  *) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory.  b) Heat treatment condition according to mentioned standards			
		Spec.	No.			Thickness [mm] from to	Diameter [mm] from to	1=t 2=kg ↓ value	Spec.	No.							
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b				
01	GP240GH (1.0619) GP280GH (1.0625) G20Mo5 (1.5419) G17CrMo5-5 (1.7357) GX15CrMo5 (1.7365) GX8CrNi12 (1.4107) GX4CrNi13-4 (1.4317) GX12CrMoVNBn9-1 (1.4955) GX2CrNi19-11 (1.4309) GX5CrNi19-10 (1.4308) GX5CrNiNb19-11 (1.4552) GX2CrNiMo19-11-2 (1.4409) GX5CrNiMo19-11-2 (1.4408) GX2NiCrMo28-20-2 (1.4458) GX2CrNiMoN22-5-3 (1.4470) GX2CrNiMoCuN25-6-3-3 (1.4517) GX2CrNiMoN25-7-3 (1.4417) GX2CrNiMoN26-7-4 (1.4469)	EN	10213	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	200						
02*)	GS340 (1.0467) G26CrMo4 (1.7221) G34CrMo4 (1.7230) G42CrMo4 (1.7231) G20NiCrMo2-2 (1.6741) G30NiCrMo2-2 (1.6778)	ISO	14737	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	200						
03*)	NiCr21Mo14W (2.4602) NiMo16Cr16Ti (2.4610) NiMo16Cr15W (2.4819) NiCr22Mo9Nb (2.4856) NiCr21Mo (2.4858)	DIN	17744	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	200						
<b>Explanation:</b> AT = solution annealed NT = normalized and tempered N = normalized S = stress relieved TM = thermo-mech. treated U = not annealed QT = quenched and tempered CR = temperature controlled hot formed (controlled rolled) A = annealed AR = as rolled a = material designation in column 10 b = condition in column 10 c = object in column 10 d = dimensions acc. to technical rules e = weight acc. to technical rules f = technical rules reference column 10																	
Created / revised: 2022-01-10																	
File: TS-BABT-M-10 Scope of approval																	
Revision: V 1																	
Approved: 2022-01-10 W. Schock																	
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**Explanation:**

AT = solution annealed    NT = normalized and tempered    N = normalized    S = stress relieved    TM = thermo-mech. treated    U = not annealed  
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Created / revised: 2022-01-10

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					Spec.	No.	Code	Thickness [mm] from to	Diameter [mm] from to	1=1 2=kg ↓ value	Spec.	No.					
1	2 NiCr15Fe (2.4816) LC-NiCr15Fe (2.4817)	3a DIN	3b 17742	b) 4	5 Castings for valves, flanges, fittings and other pressure containing parts	6a	6b	7a	7b	8a	8b	9a	9b	10 *) To fulfill essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory.			
04*)	WCA, WCB, WCC	ASME ASTM	SA-216 A216	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	1130			b) Heat treatment condition according to mentioned standards			
05*)	WC6, WC9, WC1, C5, C12, CA15	ASME ASTM	SA-217 A217	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	1130						
06*)	CF3, CF3A, CF8M, CF8, CF8A, CF8C, CF3M, CF10M, CG8M, CK3MNCuN, CD4MCu, 6A, CG6MMN, CN7M, CN3MN, CF10, HK40, CF10SMnN, CG3M	ASME ASTM	SA-351 A351	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	1130						
07*)	LCA, LCB, LCC, LC1, CA6NM	ASME ASTM	SA-352 A352	b)	Castings for valves, flanges, fittings and other pressure containing parts					2	1130						
08*)	UNS C96200, C96400	ASME ASTM	SB-369 B369	b)	Cu/Ni Castings					2	1130						
09*)	D2, D2B, D2C, D3, D5, D5B	ASTM	A439	b)	Castings					2	1130						
10*)	CA15M – Class A CA15 – Classes A, B, C, D CA6NM – Classes A, B	ASME ASTM	SA-487 A487	b)	Castings					2	1130						
11*)	CX2MW, CW6M, CW2M, CW12MW, CW6MC, N7M, N12MW, M35-1, M35-2, M30C, M30H, CZ100, CY40 – Classes 1, 2, CU5MNCUC, M25S	ASME ASTM	SA-494 A494	b)	Castings					2	1130						
12*)	For the use of materials acc. to column 2 till 4 the regulations and limits of the respective standards have to be observed. The specific material operating conditions have to be approved by the pressure equipment manufacturer or respectively by the Approved Body in charge.																
Explanation: AT = solution annealed NT = normalized and tempered N = normalized S = stress relieved TM = thermo-mech. treated U = not annealed QT = quenched and tempered CR = temperature controlled hot formed (controlled rolled) A = annealed AR = as rolled a = material designation in column 10 b = condition in column 10 c = object in column 10 d = dimensions acc. to technical rules e = weight acc. to technical rules f = technical rules reference column 10																	
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13*)	1A, 2A, 2Q, 3A, 3Q, 7Q, 8Q, 13Q, 14Q	ASTM	A732	b)	Castings					2	1130			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatory.			
14*)	CF3, CF3A, CF8M, CF8, CF8A, CF8C, CF3M, CF10M, CG8M, CK3MCuN, CD4MCu, 6A, CG6MMN, CN7M, CN3MN, CA15, CF10, HK40, CF10SMnN, CG3M	ASTM	A733	b)	Castings					2	1130						
15*)	CF3, CF3A, CF8M, CF8, CF8A, CF8C, CF3M, CF10M, CG8M, CN7M, CN3MN, CA15, CF10, HK40, CF10SMnN, CG3M	ASTM	A744	b)	Castings					2	1130			b) Heat treatment condition according to mentioned standards			
16*)	CB7Cu-1, CB7Cu-2 NiCr15Fe (2.4816) LC-NiCr15Fe (2.4817	ASTM	A747	b)	Castings					2	1130						
17*)	A1Q (LCB), A2Q (LCC), E3N (CA6NM)	ASTM	A757	b)	Castings					2	1130						
18*)	CD3MMWCuN	ASME ASTM	SA-890 A890	b)	Castings					2	200						
19*)	1A, 1B, 2A, 3A, 4A, 5A, 6A	ASTM	A890	b)	Duplex Castings					2	1130						
20*)	CW2M, CN3MCu	ASTM	A990	b)	Nickel Base Castings					2	1130						
21*)	1B, 2A, 3A, 4A, 5A, 6A	ASTM	A995	b)	Duplex Castings					2	1130						
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