

## CERTIFICATE

**TUV SUD BABT Unlimited** 

certifies that

## FDB – FORGIA DI BOLLATE S.p.A. Strada Provinciale 4, n. 9 IT – 46013 Canneto sull´Oglio (MN)

has implemented, operates and maintains a

Quality Assurance System in accordance with the Pressure Equipment (Safety) Regulation 2016/1105, Schedule 2, Part. 4, Para. 31 (8) as well as EN 764-5, Para. 4.2

as a material manufacturer for the scope of

forgings in austenitic and ferritic steels.

The scope of the approval is described in the annex to this certificate. Further details are mentioned in report no. C-722297696-22.

The manufacturer is therefore authorized to issue certificates of specific product control within the scope of the assessed quality system and in accordance with the Pressure Equipment (Safety) Regulation 2016/1105. Possible additional requirements - specific to applied technical specifications to meet PER 2016/1105, Schedule 2 - are not affected.

This certificate is valid through 2025-12-31.

In order to adhere the validity an annual surveillance audit is required.

Certificate No.: PER-0168-QS-M 3257599 /2023/MUC-01 Fareham, 2023-01-23

**TUV SUD BABT Unlimited** 

Strobel)

Certification Body Materials and Permanent Joining

TUV SUD BABT Unlimited Octagon House, Concorde Way Segensworth North, Fareham, Hampshire, PO 15 5RL, United Kingdom

ZERTIFIKAT

CERTIFICAT

**CERTIFICADO** 

СЕРТИФИКАТ

認證證書

CERTIFICATE

ℼℋ

EQ3257599



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 3257599/2023/MUC-01 von / dated 2023-01-23					
Manufacturer: Street: Strada Provinciale 4, n. 9											Date rev. 202		Page 1 of 4	Competent Body of TUV SUD BABT Unlimite			
No.	Material Designation Material Grade		erial fication	Delivery Condition	Descriptior Product	ı	Thick		nsions Diameter [mm]		Weight 1=t 2=kg			rements cal Rules	Report no. C-722297696-22 dated 2022-10-11		
		Spec.	No.	Code			from	to	from	to	⊥g	value	Spec.	No.	Remarks		
1	2	3a	3b	4	5		6a	6b	7a	7b	8a	8b	9a	9b	10		
01*)	Allgemeine Baustähle / constructional steels	EN	10250-2	N	Schmiedestück / forgir Stabstahl / bar Flansch / flange	ng	-	250	-	-	1	18,5			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is		
02	X5CrNi18-10 (1.4301), X5CrNi18-12 (1.4303), X2CrNi19-11 (1.4306), X2CrNiN18-10 (1.4311), X5CrNiMo17-12-2 (1.4401), X2CrNiMo17-12-2 (1.4404), X2CrNiMoN 17-11-2 (1.4404), X6CrNiTHs 10 (1.4541), X6CrNiTHs 10 (1.4541),	EN	10222-5	AT	Schmiedestück / forgir Stabstahl / bar Flansch / flange	ng	-	250	-	-	1	5			mandatory.		
03	16Mo3 (1.5415), 11CrMo9-10 (1.7383), 13CrMo4-5 (1.7335), P250GH / C22.8 (1.0460), P245GH (1.0352), P265GH (1.0425), P285GH (1.0426), P295GH (1.0481), P305GH (1.0486)* <sup>2</sup>	EN	10222-2	N/QT	Schmiedstück / forging Stabstahl / bar Flansch / flange Schüsse / steel section	- -	-	250 *2 300	-	-	1	18,5 *² 8,2					
04	P250GH / C22.8 (1.0460)	EN VdTÜV	10222-2 350/3*)	N	Flansch / flange		-	250	-	-	1	2					
05	18MnMoNi5-5 (1.6308)	EN	10222-2	QT	Schmiedestück / forgir Stabstahl / bar	ng	-	220	-	-	1	2,1			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.		
06	12Ni14 (1.5637)	EN	10222-3	QT	Schmiedestück / forgir Stabstahl / bar Flansch / flange Schüsse / steel section	0	-	105	-	-	1	2					
Explanat	QT = quenched and tempered Cl a = material designation in column d = dimensions acc. to technical ru	R = temperatur 10 b = condi	re controlled h ition in column	ot formed (contro 10 c = object in	elled rolled) A = annealed Al n column 10 schnical rules reference column	R = as rolled 10			·	-					•		
	/ revised: 2022-02-21					Approved: 2022-02-21 W. Schock						Page 1 of 4 Printed copies are not subject to change service! Copyright TUV SUD BABT Unlimited					
File: I'S	e: TS-BABT-M-10 Scope of approval Revision: V 2											Printed	copies are no	t subject to cl	nange service! Copyright TUV SUD BABT Unlimited		



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 3257599/2023/MUC-01 von / dated 2023-01-23				
Manufa	Name: FDB – FORGIA DI BOLLATE S.p.A. Country: D   Manufacturer: Street: Strada Provinciale 4, n. 9 rr   City: 46013 Canneto sull'Oglio (MN) IT 2											Page 2 of 4	Competent Body of TUV SUD BABT Unlimited		
No.	Material Designation Material Grade		erial fication	Delivery Condition	Description Product		Dime ckness mm]		ameter mm]	W 1=t 2=kg	/eight		ements al Rules	Report no. C-722297696-22 dated 2022-10-11	
		Spec.	No.	Code		from	to	from	to	Ļ	value	Spec.	No.	Remarks	
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b	10	
07*)	C 22.3 (1.0427)	VdTÜV	364	N	Schmiedestück / forging Stabstahl / bar Flansch / flange Schüsse / steel sections	-	150	-	-	1	18,5			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a Particular Material Appraisal (PMA) is mandatorv.	
08*)	C 21 (1.0432)	VdTÜV	399/3	Ν	Schmiedestück / forging Stabstahl / bar Flansch / flange Schüsse / steel sections	-	150	-	-	1	18,5			manado y.	
09	P355NH (1.0565), P355QH1 (1.0571), P355NL1 (1.0566), P355NL2 (1.1106), W-, T-, StE 355	EN VdTÜV	10222-4 354/3*)	N/QT	Schmiedestück / forging Stabstahl / bar Flansch / flange Schüsse / steel sections	-	400	-	-	1	18,5				
10*)	15NiCuMoNb5 (1.6368)	VdTÜV	377/3	QT	Schmiedstück / forging Stabstahl / bar Flansch / flange	-	300	-	-	1	5				
11	S420N (1.8902), P420NH (1.8932), P420QH (1.8936), S420NL (1.8912)	EN VdTÜV	10222-4 356/3*)	N/QT	Stabstahl / bar Flansch / flange	-	400	-	-	1	18,5				
12	P285NH (1.0477), P460QH (1.8871)	EN	10222-4	N/QT	Schmiedestück / forging	-	340	-	-	1	24,0				
13*)	20Mn5 (1.1133), S235JRG2 (1.0038), S235J2G3 (1.0116), S355J2G3 (1.0570)	EN	10250-2	NT/QT	Schmiedestück / forging	-	400	-	-	1	18,5			For the use of materials acc. to column 2 till 4 the regulations and limits of the respective	
14*)	20MnMoNi4-5 (1.6311)	EN	10250-3	QT	Schmiedestück / forging Stabstahl / bar	-	635	-	-	1	31,0			standards have to be observed. The specific material operating conditions have to be approved by the pressure equipment manufacturer or respectively by	
15*)	X12Cr13 (1.4006)	EN	10250-4	QT	Schmiedestück / forging	-	160	-	-	1	17,2			the Approved Body in charge.	
<u>Explanati</u>	QT = quenched and tempered CF a = material designation in column d = dimensions acc. to technical ru	temperatur 10 b = condi	re controlled h ition in column	ot formed (contro 10 c = object i	chnical rules reference column 10										
	/ revised: 2022-02-21				Approved: 202		1 W. Sch	lock						Page 2 of 4	
File: TS-	-BABT-M-10_Scope of approval				Revision:	V 2					Printed	copies are no	t subject to ch	nange service! Copyright TUV SUD BABT Unlimited	



Chy     40013 Canneto autl Oglo (MN)     IT     2023-01-23     3 of 4     Important autor oglo Constrained autor oglo	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 3257599/2023/MUC-01 von / dated 2023-01-23				
Material Grade     Specification     Condition     Product     Trickness (mm)     Diameter     L t     Technical Rules     Report no. 6.7222769-22 (dated 2022.16.11)       1     2     38     30     4     5     6a     6b     7a     7b     8a     8b     9b     100       16     2     38     30.1     4     5     6a     6b     7a     7b     8a     8b     9b     100       170     P9     SA-105     ANE     SA-105     N1/GT     Schmiedestuck / forging     -     1     18.5     -     1     18.5     -     1     18.5     -     1     18.5     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     -     1     18.5     -     <	Manufacturer: Street: Strada Provinciale 4, n. 9											rev. 0		0	Competent Body of TUV SUD BABT Unlimit		
Image: No.     Spec.     No.     Code     Image: No.     Image: No.     Image: No.     Image: No.     Image: No.     No.     Remarks       1     2     3a     3b     4     5     6a     Rb     7a     7b     8a     8b     9a     9b     10       16')     SA-105     ASME     SA-105     NT/OT     Schmiedestlick / forging     -     805     -     -     1     18.0     Ja     3b     Ja     ASME     SA-192     NOT     Schmiedestlick / forging     -     800     -     -     1     18.0     Ja     ASME     Schulp / Sc	No.	•			,		1		kness	Dia	ameter	1=t	/eight				
16')   SA-105   ASME ASTM   SA-105 ASTM   NT/QT ASTM   Schmiedestlick / forging F1 02 F2 CU / CS F2 CU / CS F3 CU			Spec.		Code			from	to	from	to	Ļ		Spec.		Remarks	
ASTM   A105   A1105	1	2	3a	3b	4	5		6a	6b	7a	7b	8a	8b	9a	9b	10	
17)   F9   Set Meterial Appraisal (PMA) is     17)   F9   Set Meterial Appraisal (PMA) is     17)   F12 C12   Set Meterial Appraisal (PMA) is     18'0   F34/F34/TH   ASTM   Schmiedestück / forging   -   1   1   8.5   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   8.0   -   -   1   1 <t< td=""><td>16*)</td><td>SA-105</td><td></td><td></td><td>NT/QT</td><td>Schmiedestück / forgin</td><td>ng</td><td>-</td><td>805</td><td>-</td><td>-</td><td>1</td><td>18,0</td><td></td><td></td><td></td></t<>	16*)	SA-105			NT/QT	Schmiedestück / forgin	ng	-	805	-	-	1	18,0				
F51, F53, F55   ASTM   A182   -   -   450   -   -   1   7,5     19''   F304, F304L, F316L, F316LN, ASME   ASTM   ASTM   A182   AT   Schmiedestück / forging   -   350   -   -   1   8,0     20''   F1, F5, F91 Type 1, F92   ASME   SA-182   AT   Schmiedestück / forging   -   315   -   1   5,9     21''   F6a Cl.1/Cl.2   ASME   SA-182   NT   Schmiedestück / forging   -   375   -   -   1   17,2     22''   Grade 1, 2, 3, 4   ASTM   ASME   SA-266   NT   Schmiedestück / forging   -   376   -   -   1   17,2     23''   F11 Cl3, F12, Cl   ASTM   ASG   N/NT/QT   Schmiedestück / forging   -   500   -   -   1   24,0     24''   LF2   ASME   SA-350   N/NT/QT   Schmiedestück / forging   -   500   -   -   1   12,0   -   The egulations and limits of the respective standards have to be observed.   The specifer material	17*)	F11 Cl3 F12 Cl2 F22 Cl1, Cl3			N/QT	Schmiedestück / forgin	ng	-	500 490 500		- - - -	1 1	18,5 10,6 22,0			Particular Material Appraisal (PMA) is	
F316Ti, F317L, F321   ASTM   A182   Stabstahl / bar   ASTM   A182   Stabstahl / bar   ASTM   ASTM   A182   Stabstahl / bar   ASTM   ASTM   ASTM   ASME   SA-386   ASTM   ASME   SA-386   ASTM   A182   ASSME   SA-386   ASTM   A182   ASSME   SA-386   ASTM   A182   ASSME   SA-386   ASTM   A182   ASSME   SA-386   NT   Schmiedestück / forging   -   315   -   1   17,2     22*)   Grade 1, 2, 3, 4   ASME   SA-266   NT   Schmiedestück / forging   -   340   -   -   1   24,0     23*)   F11 Cl3, F12, F22 Cl1, Cl3   ASME   SA-386   N/NT/QT   Schmiedestück / forging   -   -   1   22,0   Endmatch have to be observed.     F22 V   ASME   ASSM   SA-306   N/NT/QT   Schmiedestück / forging   -   -   1   12,0   Endmatch have to be observed.     F12, F22 V   ASME   ASSM   A350   N   Schmiedestück / forging   -   500   -   1   13,7	18*)				AT	Schmiedestück / forgin	ng	-		- -	-	1 1					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	19*)				AT		ng	-	350	-	-	1	8,0				
ASTM   A182   ASTM   A182   ASTM   A182   For the use of materials acc. to column 2 till     22*)   Grade 1, 2, 3, 4   ASME   ASA266   NT   Schmiedestück / forging   -   340   -   -   1   24,0     23*)   F11 Cl3, F22, Cl1, Cl3   ASME   ASA36   N/NT/QT   Schmiedestück / forging   -   500   -   -   1   10,6     F22, Cl1, Cl3   F22, V   ASTM   ASS6   N/NT/QT   Schmiedestück / forging   -   500   -   -   1   10,6     F22, V   ASTM   ASS6   N/NT/QT   Schmiedestück / forging   -   500   -   -   1   10,6     F22, V   ASTM   ASS6   N   Schmiedestück / forging   -   500   -   1   14,0   The specific material operating conditions have to be observed.     LF2   LF2   ASTM   ASS0   Q   Q   Schmiedestück / forging   -   520   -   1   13,7   equipment manufacture or respectively by the Pressure equipment manufacture or respectively by the Approved Body in charge.   a materid esignation in column 10 </td <td>20*)</td> <td>F1, F5, F91 Type 1, F92</td> <td></td> <td>SA-336 A182</td> <td>NT</td> <td>Schmiedestück / forgin</td> <td>ıg</td> <td>-</td> <td>315</td> <td>-</td> <td>-</td> <td>1</td> <td>5,9</td> <td></td> <td></td> <td></td>	20*)	F1, F5, F91 Type 1, F92		SA-336 A182	NT	Schmiedestück / forgin	ıg	-	315	-	-	1	5,9				
ASTM   A266   N/NT/QT   Schwiedestück / forging   -   500   -   -   1   22,0     23*)   F12,   F12,   ASTM   A366   N/NT/QT   Schwiedestück / forging   -   500   -   -   1   10,6     F22 V   ASTM   A36   N/NT/QT   Schwiedestück / forging   -   500   -   -   1   10,6     F22 V   ASTM   A36   N   Schwiedestück / forging   -   500   -   1   14,0   standards have to be observed.     F22 V   ASTM   ASTM   A350   N   Schwiedestück / forging   -   520   -   -   1   13,7     LF6   ASTM   A350   N   QT   Schwiedestück / forging   -   550   -   -   1   13,7   upinpent manufacture or respectively by the pressure equipment manufacture or respectively by the Approved Body in charge.     Explanation:   AT = solution annealed MT = normalized at temperature controlided rolled). A = annealed AR = a rolled a = material designation in column 10   e - object in column	21*)	F6a Cl.1/Cl.2			NT	Schmiedestück / forgin	ıg	-	375	-	-	1	17,2				
F12, F12, F12, F12, F12, F12, F12, F12,	22*)	Grade 1, 2, 3, 4			NT	Schmiedestück / forgin	ng	-	340	-	-	1	24,0				
24*)   LF2 LF6   ASME ASTM   ASA-350 ASTM   N ASTM   Schmiedestück / forging Stabstahl / bar   - - Stabstahl / bar   - - - - - - - - - - - - - - - - - - -	23*)	F12, F22 Cl1, Cl3			N/NT/QT		ng	- - -	490 500	- - -	- - -	1	10,6 22,0			The specific material operating conditions have to be approved by the pressure equipment manufacturer or respectively by	
QT = quenched and tempered   CR = temperature controlled not formed (controlled rolled)   A = annealed   AR = as rolled     a = material designation in column 10   b = condition in column 10   c = object in column 10   c     d = dimensions acc. to technical rules   e = weight acc. to technical rules   f = technical rules reference column 10     Created / revised:   2022-02-21   Approved:   2022-02-21 W. Schock   Page 3 o	24*)						ng	-		- -	-	1 1					
		QT = quenched and tempered CI a = material designation in column d = dimensions acc. to technical ru	R = temperatur 10 b = condi	re controlled h ition in column	ot formed (contro 10 c = object ir	Iled rolled) A = annealed AR a column 10 chnical rules reference column	R = as rolled				I	I	1	1	1	1	
		/ revised: 2022-02-21 -BABT-M-10 Scope of approval						2-02-2 V 2	1 W. Sch	lock			Drinted	anning arg	t oubioat to -h	Page 3 of 4 nange service! Copyright TUV SUD BABT Unlimited	



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 3257599/2023/MUC-01 von / dated 2023-01-23						
										Date: rev. 0 2023		Page 4 of 4	Competent Body of TUV SUD BABT Unlimite				
No.	Material Designation Material Grade	Material Specification		Delivery Condition	Description Product	Dimen Thickness [mm]		Diameter		W 1=t 2=kg	eight		ements al Rules	Report no. C-722297696-22 dated 2022-10-11			
		Spec.	No.	Code		from	to	from	to	↓	value	Spec.	No.	Remarks			
1	2	3a	3b	4	5	6a	6b	7a	7b	8a	8b	9a	9b	10			
25*)	Grade 3 Cl.1/Cl.2	ASME ASTM	SA-508 A508	QT	Schmiedestück / forging	-	295	-	-	1	4,6			*) To fulfil essential safety requirements of PER Schedule 2, for each material acc. to non designated standards a			
26*)	630	ASME ASTM	SA-564 SA-705 A564 A705	A	Schmiedestück / forging	-	350	-	-	1	2,5			Particular Material Appraisal (PMA) is mandatory.			
27*)	F52, F60, F65, F70	ASTM	A694	QT	Schmiedestück / forging	-	580	-	-	1	10,0						
28*)	Grade II Grade IV	ASME ASTM	SA-765 A765	NT NT/QT	Schmiedestück / forging Stabstahl / bar	-	220 500	-	-	1 1	8,0 10,6						
														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.			
Explanati	QT = quenched and tempered C a = material designation in column	R = temperatur n 10 b = condi	e controlled h tion in column	ot formed (contro 10 c = object in	stress relieved TM = thermo-mech. treated lied rolled) A = annealed AR = as rolled column 10 chnical rules reference column 10	U = not	annealed	1	1	L	1	1	I	1			
Created	/ revised: 2022-02-21				Approved: 202	22-02-2	1 W. Sch	ock						Page 4 of 4			
File: TS-	BABT-M-10_Scope of approval				Revision:	V 2					Printed	copies are no	t subject to ch	nange service! Copyright TUV SUD BABT Unlimited			