

Certificate

Quality-Assurance System for Manufacturer of Materials acc. to Directive 97/23/EC

Certificate no.: 01 202 USA/Q-03 8928

Name and address of the manufacturer: **Carpenter Technology Corporation
101 W Bern Street
Reading, PA 19601, USA**

Herewith we certify that the material manufacturer has established and applies a Quality Management System. The system was audited according to the European Directive 97/23/EC, Annex I, Par. 4.3, with regard to the materials as listed in the scope of approval.

Tested acc. to Directive 97/23/EC: **QM System acc. to EN 764-5, article 4.2 and AD 2000-Merkblatt W0**

Audit report no.: USA/Q-03 8928

Range of materials: Manufacturing of Austenitic Steel and Non-Ferrous Bars, Forgings and Wire Products, see annex to certificate

Manufacturing plant:

Carpenter Technology Corp. 101 W Bern Street Reading, PA 19601, USA	Carpenter Harstville Operations 205 Talley Metals Ln. McBee, SC 29101, USA	Carpenter Deer Lake Operations 116 Pinedale Ind. Rd. Orwigsburg, PA 17961, USA
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Valid until: **July 30, 2018**


Cologne, August 20, 2015  Dipl. Wirt.-Ing. Smitha Pazhamannil




TÜV Rheinland-Certification Body for
Pressure Equipment
TÜV Rheinland Industrie Service GmbH
Notified Body, ID-No. 0035
Am Grauen Stein, D-51105 Köln

E-106b-Rev7

Scope according to		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4		<input checked="" type="checkbox"/> AD 2000-Merkblatt W0		<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)					
Manufacturer				Work				Nationality	Date	Page No..		
Company Name: Carpenter Technology Corporation Location: 101 Bern Street, Reading, PA 19601, USA				-Same As Manufacturer -116 Pinedale Ind. Rd., Orwigsburg, PA 17961 -205 Talley Metals Ln, Hartsville, SC 29101				USA	16-Mar-2018	1	TÜV Rheinland Industrie Service	
								Rev.: 15	of : 4		GmbH	
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max		Technical Specifications Requirements Technical Regulations	Remarks
					Thick-ness mm		Ø mm		1=t / 2=kg			
					from	Up to	from	Up to	↓	result		
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
1) Materials according to international standards (e. g. ASTM, ASME, IBR etc.)												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
	<u>Reading & Orwigsburg</u>											
01	316, 316L, 304, 304L	ASTM / ASME A/SA276	A/WH	Bars	3.2	83	3.2	83	-	-	ASTM/ASME	a
02	316, 316L, 304, 304L	ASTM / ASME A/SA479	A/WH	Bars	3.2	250	3.2	250	-	-	ASTM/ASME	a
03	F316, F316L, F304, F304L	ASTM / ASME A/SA182 (Chemistry Only)	A	Bars	3.2	83	3.2	83	-	-	ASTM/ASME	a*
04	Grade 660	ASTM / ASME A/SA453	AT/UA	Bars	3.2	250	3.2	250	-	-	ASTM/ASME	a
05	N04400	ASTM / ASME B/SB164	SR	Bars	3.2	250	3.2	250	-	-	ASTM/ASME	a
06	Alloy N10276	ASTM / ASME B/SB574	A	Bars	3.2	250	3.2	250	-	-	ASTM/ASME	a
07	N07750	ASTM / ASME B/SB637	A	Bars	3.2	250	3.2	250	-	-	ASTM/ASME	a
08	N06625	ASTM / ASME B/SB446	A	Bars	3.2	255	3.2	255	-	-	ASTM/ASME	a
09	N08020	ASTM / ASME B/SB473	A	Bars	3.2	255	3.2	255	-	-	ASTM/ASME	a
Results	+AT = solution annealed +UA = Un-annealed +M = thermo mechanical treated +N = normalized or normalizing formed +WH = Work Hardening			+NT = normalized and tempered +QT = quenched and tempered +A = annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary * = Equipment Manufacturer to carry out EN 10204 3.2/3.1.C					

Scope according to		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4		<input checked="" type="checkbox"/> AD 2000-Merkblatt W0		<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)					
Manufacturer				Work				Nationality	Date	Page No..		
Company Name: Carpenter Technology Corporation Location: 101 Bern Street, Reading, PA 19601, USA				-Same As Manufacturer -116 Pinedale Ind. Rd., Orwigsburg, PA 17961 -205 Talley Metals Ln, Hartsville, SC 29101				USA	16-Mar-2018	2	TÜV Rheinland Industrie Service	
								Rev.: 15	of : 4	GmbH		
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max 1=t / 2=kg ↓ result	Technical Specifications Requirements Technical Regulations	Remarks 	
					Thick-ness mm	∅ mm	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
1) Materials according to international standards (e. g. ASTM, ASME, IBR etc.)												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
10	Hartsville 316, 316L, 304, 304L	ASTM / ASME A/SA 276	A/WH	Bars	22	38	22	76	-	-	ASTM/ASME	a
11	316, 316L, 304, 304L	ASTM / ASME A/SA 479	A/WH	Bars	22	38	22	76	-	-	ASTM/ASME	a
12	F316, F316L, F304, F304L	ASTM / ASME A/SA 182 (Chemistry Only)	A	Wire	-	-	13	38	-	-	ASTM/ASME	a
				Bars	22	38	22	76	-	-	ASTM/ASME	a*
13	All Facilites 17-4 PH (H900, H1150)	ASTM / ASME A/SA 564	AT/A/H	Bars	-	-	3.2	102	-	-	ASTM/ASME	a
				Wire	-	-	9.1	38	-	-	ASTM/ASME	a
Results	+AT = solution annealed +UA = Un-annealed +M = thermo mechanical treated +N = normalized or normalizing formed +WH = Work Hardening			+NT = normalized and tempered +QT = quenched and tempered +A = annealed +SR = stress relieved +H = Age Hardening			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary * = Equipment Manufacturer to carry out EN 10204 3.2/3.1.C					

Scope according to		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4	<input checked="" type="checkbox"/> AD 2000-Merkblatt W0	<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)							
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						Rev.: 15		of : 4				
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max 1=t / 2=kg ↓ result	Technical Specifications Requirements Technical Regulations	Remarks 	
					Thick-ness mm	Ø mm	from	Up to				from
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
2) Materials according to AD 2000												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
	Reading & Orwigsburg											
01	1.4301, 1.4306, 1.4401, 1.4404	DIN 17440	A	Wire	-	-	2.5	32	-	-	AD2000-W0, W2, W10	
02	1.4303	DIN 17440	A	Wire	-	-	2.5	32	-	-	AD2000-W0, W2, W10	
Results	+AT = solution annealed +UA = Un-annealed +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +A = annealed +SR = stress relieved								

Scope according to		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I §4.3	<input type="checkbox"/> EN 764-4	<input checked="" type="checkbox"/> AD 2000-Merkblatt W0	<input type="checkbox"/> FPC, Regulation (EU) No. 305/2011(System 2+)							
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						Rev.: 14	of : 4					
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max		Technical Specifications Requirements Technical Regulations	Remarks
					Thick-ness mm		Ø mm		1=t / 2=kg ↓ result			
					from	Up to	from	Up to				
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
1) Materials according to EN Standards												
The use of the materials according to DGR 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to other standards (e.g. BS, AFNOR, ASME) is proved. The requirements and limits of the applicable code respectively the PED must be observed for the use of material grades listed in column 2 to 4.												
	Reading & Orwigsburg											
01	1.4301, 1.4306, 1.4401, 1.4404	EN 10088-2 & -3	A	Bar	3.2	250	3.2	250	-	-		
02	1.4303	EN 1008-2 & -3	A	Bar	3.2	250	3.2	250	-	-		
03	1.4301, 1.4306, 1.4401, 1.4404	EN 10272	A	Bar	3.2	250	3.2	250	-	-		
	Hartsville											
04	1.4401, 1.4401	EN 10088-3	A	Bar	-	-	22	76	-	-		
Results		+AT = solution annealed		+NT = normalized and tempered								
		+UA = Un-annealed		+QT = quenched and tempered								
		+M = thermo mechanical treated		+A = annealed								
		+N = normalized or normalizing formed		+SR = stress relieved								