

# Certificate

## Quality management system for Manufacturer of Materials acc. to Directive 2014/68/EU

Certificate no.: 01 202 I/Q-13 6602.01

Name and address of the certificate holder:  
**Forgiatura A. Vienna S.r.l.**  
**Via Ospiate 46/48**  
**20017 Rho MI**  
**Italy**

Herewith we certify that the material manufacturer has established and applies a Quality Management System. The system was audited according to the European Directive 2014/68/EU, Annex I, point 4.3, with regard to the materials as listed in the scope of approval.

Test basis: **QM System acc. to EN 764-5, Clause 4.2 and AD 2000-Merkblatt W0**

Audit report no.: 01 202 I/Q-13 6602

Scope: **Production of open die forgings, hot rolled rings and shell rings, pre machined and finish machined items for various application**  
**Production of ingot with Electroslag Remelting Process (ESR), see annex to certificate: 01 202 I/Q-13 6602, revision 05 from 18.12.2024**

Manufacturing plant: see annex 2

Validity: **This certificate is valid to 2028-02-08.**

Cologne, 2025-01-11

Ines Krüger-Führ



# Annex 2

## Quality management system for Manufacturer of Materials acc. to Directive 2014/68/EU

Certificate no.: 01 202 I/Q-13 6602.01

Name and address of the  
certificate holder:  
**Forgiatura A. Vienna S.r.l.**  
**Via Ospiate 46/48**  
**20017 Rho MI**  
**Italy**

Manufacturing plants:  
Forgiatura A. Vienna S.r.l.  
Via Ospiate 46/48  
20017 Rho MI  
Italy

Forgiatura A. Vienna S.r.l.  
Via Alfeo snc  
26040 Cella Dati CR  
Italy

Cologne,  
2025-01-11

Ines Krüger-Führ

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

E-999



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	1	
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024	
Rev.:									Rev.:	05	
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications	Remarks	
					Thick-ness mm	∅ mm		1=et / 2=kg ↓ res ult	Requirements Technical Regulations		
1	2	3	4	5	6a	6b	7a	7b	8a	9	10

### 1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU

The use of the materials according to Directive 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.

1	P245GH (1.0352)	EN 10222-2	+N	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging & ring rolling up to 200 tons	EN 10222-1	(*) as per relevant standards
2	P250GH (1.0460)	EN 10222-2	+N				EN 10222-1	
3	P265GH (1.0425)	EN 10222-2	+N				EN 10222-1	
4	P280GH (1.0426)	EN 10222-2	+N				EN 10222-1	
5	P295GH (1.0481)	EN 10222-2	+N				EN 10222-1	
6	P305GH (1.0436)	EN 10222-2	+N				EN 10222-1	
7	P285NH (1.0477)	EN 10222-4	+N				EN 10222-1	
8	P355NH (1.0565)	EN 10222-4	+N				EN 10222-1	
9	P420NH (1.8932)	EN 10222-4	+N				EN 10222-1	
10	P285QH (1.0478)	EN 10222-4	+QT				EN 10222-1	
11	P355QH (1.0571)	EN 10222-4	+QT				EN 10222-1	

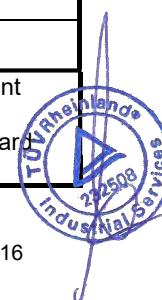
Remarks

- +AT = solution annealed
- +AR = as rolled
- +M = thermo mechanical treated
- +N = normalized or normalizing formed

- +NT = normalized and tempered
- +QT = quenched and tempered
- +S = soft annealed
- +SR = stress relieved

a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary

d = dimension acc. to the technical standard



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	2	
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024	
Rev.:									Rev.:	05	
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications	Remarks	
					Thick-ness mm	Ø mm		1=t / 2=kg ↓ res ult	Requirements Technical Regulations		
1	2	3	4	5	6a	6b	7a	7b	8a	9	10

### 1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU

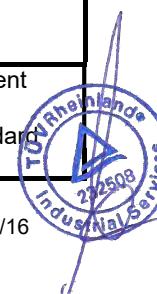
The use of the materials according to Directive 2014/68/EU is bound to the publication of Harmonized European Standards or to the qualification by a European material approval or to the particular material appraisal. With that the manufacturing reliability for equivalent material grades according to 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.

12	P420QH (1.8936)	EN 10222-4	+QT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling, rings	d d d d 1	Forging & ring rolling up to 200 tons	EN 10222-1	
13	11CrMo9-10 (1.7383)	EN 10222-2	+NT +QT				EN 10222-1	
14	12Ni14 (1.5637)	EN 10222-3	+N +NT +QT				EN 10222-1	
15	13CrMo4.5 (1.7335)	EN 10222-2	+NT +QT				EN 10222-1	
16	16Mo3 (1.5415)	EN 10222-2	+N +QT				EN 10222-1	
17	X10CrMoVNb9-1 (1.4903)	EN 10222-2	+NT				EN 10222-1	
18	X1CrNiMoCuN20-18-7 (1.4547)	EN10272 EN 10222-5	+AT				EN 10222-1	
19	X2CrNi18-9 (1.4307)	EN 10222-5 EN 10272	+AT				EN 10222-1	

<b>Remarks</b>	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed
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 +SR = stress relieved

a = PMA for the use in pressure equipment  
in Directive 2014/68/EU necessary  
d = dimension acc. to the technical standard



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	3	
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024	
Rev.:									Rev.:	05	
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications	Remarks	
1	2	3	4	5	6a	6b	7a	7b	8a	9	10
1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU											

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20	X2CrNi19-11 (1.4306)	EN 10222-5 EN 10272	+AT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging & ring rolling up to 200 tons	EN 10222-1	
21	X2CrNiMo17-12-2 (1.4404)	EN 10222-5 EN 10272	+AT				EN 10222-1	
22	X2CrNiMo 17-12-3 (1.4432)	EN 10222-5 EN 10272	+AT				EN 10222-1	
23	X2CrNiMo18-14-3 (1.4435)	EN 10222-5 EN 10272	+AT				EN 10222-1	
24	X2CrNiMoCuWN25-7-4 (1.4501)	EN 10222-5 EN 10272	+AT				EN 10222-1	
25	X2CrNiMoN 22-5-3 (1.4462)	EN 10222-5 EN 10272	+AT				EN 10222-1	
26	X3CrNiMo17-13-3 (1.4436)	EN 10222-5 EN 10272	+AT				EN 10222-1	

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Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	4	
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024	
Rev.:									Rev.:	05	
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications	Remarks	
					Thick-ness mm	∅ mm		1=t / 2=kg ↓ res ult	Requirements Technical Regulations		
1	2	3	4	5	6a	6b	7a	7b	8a	9	10

### 1. Materials according to harmonized European standards (hEN) and European Approval for Materials (EAM) acc. Directive 2014/68/EU

The use of the materials according to Directive 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.

27	X5CrNi18-10 (1.4301)	EN 10222-5 EN 10272	+AT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging & ring rolling up to 200 tons	EN 10222-1		
28	X5CrNiMo17.12.2 (1.4401)	EN 10222-5 EN 10272	+AT				EN 10222-1		
29	X6CrNi18-10 (1.4948)	EN 10222-5	+AT				EN 10222-1		
30	X6CrNiNb18-10 (1.4550)	EN 10222-5 EN 10272	+AT				EN 10222-1		
31	X6CrNiTi18-10 (1.4541)	EN 10222-5 EN 10272	+AT				EN 10222-1		
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard	



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Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality	Page No.:	5		
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT	of :	16	TÜV Rheinland Industrie Service GmbH	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR			Date:	18.12.2024		
								Rev.:	05		
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications	Remarks	
					Thick-ness mm	Ø mm		1=t / 2=kg ↓ res ult	Requirements Technical Regulations		
1	2	3	4	5	6a	6b	7a	7b	8a	9	10

## 2. Materials according to the AD 2000-Code

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.

1	P245GH (1.0352)	EN 10222-2	+N +NT +QT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging & ring rolling up to 200 tons	AD2000 W9 – W13	Inspection Certificate 3.1 acc. EN 10204 is required
2	P250GH (1.0460)	EN 10222-2	+N					
3	P265GH (1.0425)	EN 10222-2	+N					
4	P280GH (1.0426)	EN 10222-2	+N +NT +QT					
5	P295GH (1.0481)	EN 10222-2	+N					
6	P305GH (1.0436)	EN 10222-2	+N +NT +QT					
7	P355NH (1.0565)	EN 10222-4 VdTuv 354-3	+N					

**Remarks**

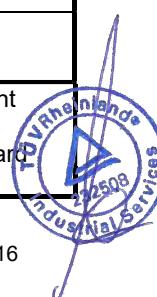
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a = PMA for the use in pressure equipment  
in Directive 2014/68/EU necessary  
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Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0						
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	6				
Company Name: Location:	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy	Forgiatura A.Vienna S.r.l.			IT		of :	16	TÜV Rheinland Industrie Service GmbH					
		Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR		Date: 18.12.2024									
		Rev.: 05												
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions		Weight max	Technical Specifications	Remarks					
1	2	3	4	5	Thick-ness mm	∅ mm	1=t / 2=kg ↓ res ult	Requirements Technical Regulations						
from	Up to	from m	Up to	8a	8b	9	10							
<b>2. Materials according to the AD 2000-Code</b>														
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.														
8	P420NH (1.8932)	EN 10222-4 VdTuv 356-3	+N	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses.  ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d	d	d	1	AD2000 W12 – W13 – W10	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.				
9	P460NH (1.8935)	VdTuv 357-3	+N						AD2000 W9 – W12 – W13 – W10	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.				
10	P420QH (1.8936)	EN 10222-4 VdTuv 356-3	+QT						AD2000 W12 – W13 – W10	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.				
11	S235 JR (1.0038)	EN 10250-2	+N						AD2000 W9 – W13					
12	S215G (1.0116)	EN 10250-2	+N						AD2000 W9 – W13					
13	S325G (1.0570)	EN 10250-2	+N						AD2000 W9 – W13					
14	P355 NL (1.0566)	EN 10222-4	+N						AD2000 W9 – W13 – W10					
15	11CrMo9-10 (1.7383)	EN 10222-2	+NT +QT						AD2000 W12 – W13	Certificate 3.2 acc. EN 10204 is required.				
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard						



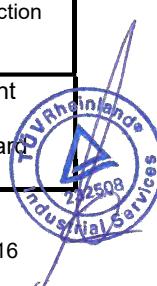
Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0				
Certificate holder (Manufacturer of materials)				Manufacturing plant				Nationality		Page No.:	7	
Company Name: Location:	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho - MI				via Alfeo snc I-26040 Cella Dati-CR		IT	of :	16	TÜV Rheinland Industrie Service GmbH	
									Date:	18.12.2024		
									Rev.:	05		
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications Requirements Technical Regulations	Remarks		
1	2	3	4	5	Thick-ness mm	from	Up to	∅ mm		1=t / 2=kg ↓ res ult	9	10

## 2. Materials according to the AD 2000-Code

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.

16	12CrMo9-10 (1.7375)	VdTuv 404-3	+NT +QT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging & ring rolling up to 200 tons	AD2000 W12-W10-W13	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.
17	12Ni14 (1.5637)	EN 10222-3	+N +NT +QT				AD2000 W9 – W10 - W12 – W13	Certificate 3.2 acc. EN 10204 is required
18	13CrMo4.5 (1.7335)	EN 10222-2	+NT +QT				AD2000 W9 –W12 – W13	Certificate 3.2 acc. EN 10204 is required
19	16Mo3 (1.5415)	EN 10222-2	+N +QT				AD2000 W9 –W13	
20	C21 (1.0432)	VdTuv 399-3	+N				AD2000 W13-W9	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.
21	P250GH / C22.8 (1.0460)	EN 10222-2 VdTuv 350-3	+N				AD2000 W13-W9	Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.

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	+AR = as rolled	+QT = quenched and tempered	d = dimension acc. to the technical standard
	+M = thermo mechanical treated	+S = soft annealed	
	+N = normalized or normalizing formed	+SR = stress relieved	



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0				
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	8		
Company Name: Location:	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy	Forgiatura A.Vienna S.r.l.			IT		of :	16	TÜV Rheinland Industrie Service GmbH			
		Via Ospiate, 46/48	via Alfeo snc				Date:	18.12.2024				
		I-20017 Rho - MI	I-26040 Cella Dati-CR				Rev.:	05				
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions		Weight max	Technical Specifications Requirements Technical Regulations	Remarks			
1	2	3	4	5	Thick-ness mm	∅ mm	1=t / 2=kg ↓ res ult		9	10		
<b>2. Materials according to the AD 2000-Code</b>												
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.												
22	X2CrNi18-9 (1.4307)	EN 10222-5 EN 10272	+AT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d	d	d	1	AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm		
23	X2CrNi19-11 (1.4306)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm		
24	X2CrNiMo17-12-2 (1.4404)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm		
25	X2CrNiMo 17-12-3 (1.4432)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm		
26	X2CrNiMo18-14-3 (1.4435)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm		
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved	a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard						



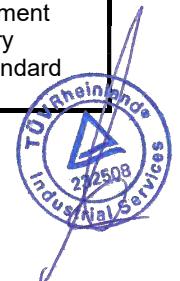
Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3				<input type="checkbox"/> EN 764-4				<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)		Manufacturing plant				Nationality		Page No.:	9				
Company Name:	Forgiatura A.Vienna S.r.l.				Forgiatura A.Vienna S.r.l.				IT		of :	16	TÜV Rheinland Industrie Service GmbH
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy				Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024		
Rev.:											Rev.:	05	
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications Requirements Technical Regulations	Remarks			
1	2	3	4	5	Thick-ness mm	from	Up to	∅ mm		1=t / 2=kg ↓	from	Up to	res ult
					6a	6b	7a	7b	8a	8b		9	10
<b>2. Materials according to the AD 2000-Code</b>													
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.													
27	X2CrNiMoCuWN25-7-4 (1.4501)	EN 10222-5 EN 10272	+AT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d d d	1	Forging & ring rolling up to 200 tons	AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required				
28	X2CrNiMoN 22-5-3 (1.4462)	EN 10222-5 EN 10272 VdTuv 418	+AT						Material Manufacturer is listed in the VdTUV material data sheet. Inspection Certificate 3.2 acc. EN 10204 is required.				
29	X3CrNiMo17-13-3 (1.4436)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10				
30	X5CrNi18-10 (1.4301)	EN 10222-5 EN 10272	+AT						Certificate 3.2 acc. EN 10204 is required for thickness > 160 mm				
31	X5CrNiMo17.12.2 (1.4401)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10				
32	X6CrNi18-10 (1.4948)	EN 10222-5	+AT						Certificate 3.2 acc. EN 10204 is required for thickness > 250mm				
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed				+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved				a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard			

Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3				<input type="checkbox"/> EN 764-4				<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)						Manufacturing plant				Nationality	Page No.:	10	
Company Name:	Forgiatura A.Vienna S.r.l.				Forgiatura A.Vienna S.r.l.				IT	of :	16	TÜV Rheinland Industrie Service GmbH	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy				Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024		
Cur -	Materials-term Materials-No.		Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max	Technical Specifications Requirements Technical Regulations	Remarks	
1	2		3	4	5	6a	6b	7a	7b	8a	8b	9	10

## 2. Materials according to the AD 2000-Code

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.

34	X6CrNiMoTi17-12-2 (1.4571)	EN 10222-5 EN 10272	+AT	* Discs, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d	d d d	1	Forging & ring rolling up to 200 tons	AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm							
35	X6CrNiNb18-10 (1.4550)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm							
36	X6CrNiTi18-10 (1.4541)	EN 10222-5 EN 10272	+AT						AD2000 W2 – W10	Certificate 3.2 acc. EN 10204 is required for thickness > 250mm							
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed										a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard					
+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved																	



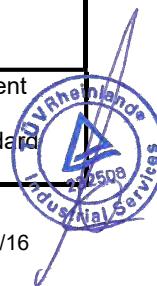
Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0				
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	11		
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16	TÜV Rheinland Industrie Service GmbH	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024		
Rev.:									Rev.:	05		
Cur -	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications		Remarks	
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10

### 3. Materials according to international standards ( e. g. ISO, 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.

1	X2CrNiMo17.12.2 controlled Nitrogen 316L(N)-IG	(*)	AT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses.  ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	-	-	-	-	1	Press forging unit weight up to 20 tons	*) = As defined in the specifications ITER_D_2DX6KS v1.4, ITER_D_2EFZGP v1.3 and RCC-MR Edition 2007 Sect.RM 3321	a
2	A105/A105M	ASTM A105	+N +NT +QT		-	-	-	-	1	Forging & ring rolling up to 200 tons	ASTM A105	a
3	F1, F2, F5, F9 F6, Cl.1 / Cl.2 / Cl.3/NM F11, Cl.1 / Cl.2 / Cl.3 F12, Cl.1 / Cl.2 F21/ F22, Cl.1 / Cl.2 / Cl.3 F51 / F53 / F55 / F91 F304 / 304L / 304H F310 / 310H / 310MoLN F316 / F316L / 316LN / F316Ti / Urea grade F317L / 317LN F321 / 321H F347 / 347H	ASTM A182/A182M	+AT +N +NT +SR +QT		-	-	-	-	1		ASTM A182	a

<b>Remarks</b>	+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed	+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved	a = PMA for the use in pressure equipment in Directive 2014/68/EU neccessary d = dimension acc. to the technical standard
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Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0				
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	12		
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16		
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024		
									Rev.:	05		
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions		Weight max	Technical Specifications		Remarks		
1	2	3	4	5	Thick-ness mm	∅ mm	1=t / 2=kg ↓ res ult	Requirements Technical Regulations				
6a	6b	7a	7b	8a	8b			9	10			

### 3. Materials according to international standards ( e. g. ISO, 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.

4	A350-LF2 / LF3 / LF6	ASTM A350/350M	+N +QT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging and ring rolling up to 50/200 Tons Forging & ring rolling up to 200 tons	ASTM A350	a
5	Cl.1/2/4 , A266 Gr.2/4	ASTM A266/266M	+N +QT				ASTM A266	a
6	F1 / F5 / F5A / F11 / F22 / F91	ASTM A336/336M	+AT +NT				ASTM A336	a
7	F304 / 304L / 304H F310H / F316 / 316L F321/ 321H / F347 / 347H	ASTM A695/695M	+AT				ASTM A695	a
8	Gr.1/ Gr.2 Cl.1/Gr.3 Cl.1/Gr.4N Cl.1	ASTM A508/508M	+QT				ASTM A508	a
9	Gr.I / Gr.II / Gr.III	ASTM A765/765M	N+SR				ASTM A765	a

**Remarks**

- +AT = solution annealed
- +AR = as rolled
- +M = thermo mechanical treated
- +N = normalized or normalizing formed

- +NT = normalized and tempered
- +QT = quenched and tempered
- +S = soft annealed
- +SR = stress relieved

a = PMA for the use in pressure equipment  
in Directive 2014/68/EU necessary

d = dimension acc. to the technical standard



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3				<input type="checkbox"/> EN 764-4				<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0					
Certificate holder (Manufacturer of materials)		Manufacturing plant				Nationality		Page No.:		13					
Company Name: Location:	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy	Forgiatura A.Vienna S.r.l. Via Ospiate, 46/48 I-20017 Rho - MI				IT		of :		16		TÜV Rheinland Industrie Service GmbH			
		via Alfeo snc I-26040 Cella Dati-CR						Date:		18.12.2024					
								Rev.:		05					
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications			Remarks			
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10			
<b>3. Materials according to international standards ( e. g. ISO, ASTM, ASME, IBR etc. )</b>															
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	F52 / F60 / F65 / F70	ASTM A694/694M	+QT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d	d	d	d	1	ASTM A694		a			
11	UNS NO4400/NO8811 UNS NO8800/NO8810 UNS NO8825/NO10276	ASTM B564/564M	+AT							Forging and ring rolling up to 5 Tons					
12	UNS N08904	ASTM A480/480M	+AT							ASTM A480					
13	S355 JR (1.0570)	EN 10250-2	+N							EN 10250-1					
14	WStE355 (P355NH) (1.0565)	DIN 17102 (EN 10222-4)	+N							DIN 17102					
15	WStE460 (1.8935)	DIN 17102	+QT							DIN 17102					
16	X6CrNiTiMoVB25-15-2	(*)	+AT							*) = As defined in the specifications ITER_D_AHJPJ v1.2					
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed				+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved				a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard					



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3				<input type="checkbox"/> EN 764-4				<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)				Manufacturing plant				Nationality		Page No.:	14		
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.				IT		of :	16	TÜV Rheinland Industrie Service GmbH	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR					Date:	18.12.2024		
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions			Weight max	Technical Specifications		Remarks		
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10	

### 3. Materials according to international standards ( e. g. ISO, 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.

17	20MnMoNi4-5 (1.6311)	EN 10250-3	+QT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging and ring rolling up to 200 Tons	EN 10250-1	a	
18	X1CrNiMoCuN20-18-7 (1.4547)	EN 10250-4	+AT				EN 10250-1	a	
19	X2CrNi18-9 (1.4307)	EN 10250-4	+AT				EN 10250-1	a	
20	X2CrNi19-11 (1.4306)	EN 10250-4	+AT				EN 10250-1	a	
21	X2CrNiMo17-12-2 (1.4404)	EN 10250-4	+AT				EN 10250-1	a	
22	X2CrNiMo18-14-3 (1.4435)	EN 10250-4	+AT				EN 10250-1	a	
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed				+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3				<input type="checkbox"/> EN 764-4				<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0			
Certificate holder (Manufacturer of materials)		Manufacturing plant				Nationality				Page No.:	15		
Company Name:	Forgiatura A.Vienna S.r.l.				Forgiatura A.Vienna S.r.l.				IT	of :	16	TÜV Rheinland Industrie Service GmbH	
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy				Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR				Date:	18.12.2024		
Rev.:										Rev.:	05		
Cur	Materials-term Materials-No.	Material Specification	Delivery Cond.	Article Type of Product	Dimensions				Weight max	Technical Specifications		Remarks	
1	2	3	4	5	6a	6b	7a	7b	1=t / 2=kg ↓ res ult	Requirements	Technical Regulations		
<b>3. Materials according to international standards ( e. g. ISO, ASTM, ASME, IBR etc. )</b>													
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.													
23	X2CrNiMoCuWN25-7-4 (1.4501)	EN 10250-4	+AT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses. ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d d d d 1	Forging and ring rolling up to 50/200 Tons	EN 10250-1	a					
24	X2CrNiMoN 22-5-3 (1.4462)	EN 10250-4	+AT										
25	X3CrNiMo17-13-3 (1.4436)	EN 10250-4	+AT										
26	X5CrNi18-10 (1.4301)	EN 10250-4	+AT										
27	X5CrNiMo17.12.2 (1.4401)	EN 10250-4	+AT										
28	X6CrNi18-10 (1.4948)	EN 10250-4	+AT										
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed				+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved				a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard			



Scope:		<input checked="" type="checkbox"/> Directive 2014/68/EU Annex I point 4.3			<input type="checkbox"/> EN 764-4			<input checked="" type="checkbox"/> AD 2000-Merkblatt W 0				
Certificate holder (Manufacturer of materials)				Manufacturing plant			Nationality		Page No.:	16		
Company Name:	Forgiatura A.Vienna S.r.l.			Forgiatura A.Vienna S.r.l.			IT		of :	16		
Location:	Via Ospiate, 46/48 I-20017 Rho (Milan) - Italy			Via Ospiate, 46/48 I-20017 Rho - MI	via Alfeo snc I-26040 Cella Dati-CR		IT		Date:	18.12.2024		
Cur	Materials-term Materials-No.		Delivery Cond.	Article Type of Product	Dimensions			Weight max 1=t / 2=kg ↓ res ult	Technical Specifications Requirements Technical Regulations		Remarks	
					Thick-ness mm	∅ mm						
1	2	3	4	5	6a	6b	7a	7b	8a	8b	9	10
<b>3. Materials according to international standards ( e. g. ISO, ASTM, ASME, IBR etc. )</b>												
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.												
29	X6CrNiMoTi17-12-2 (1.4571)		EN 10250-4	+AT	* Disks, flanges, shafts, plates, rods and mechanical pieces for several uses.  ** Production Process: Hot-Forging Hot Pressing and Ring-Rolling	d	d	d	d	1	Forging and ring rolling up to 50/200 Tons	
30	X6CrNiNb18-10 (1.4550)		EN 10250-4	+AT								
31	X6CrNiTi18-10 (1.4541)		EN 10250-4	+AT								
<b>Remarks</b>		+AT = solution annealed +AR = as rolled +M = thermo mechanical treated +N = normalized or normalizing formed			+NT = normalized and tempered +QT = quenched and tempered +S = soft annealed +SR = stress relieved			a = PMA for the use in pressure equipment in Directive 2014/68/EU necessary d = dimension acc. to the technical standard				

