

F10472

1/2" NPT F/F/F FXD TEE 10K 316L

50114410W

<b>BOLLINGHAUS</b> <b>STEEL</b> Bollinghaus Steel, SA DIN EN ISO 9001:2008 TÜV CERT No. 01 100 030458	Abnahmeprüfzeugnis/Mill Test Certificate/Certif. de Qualidade EN 10204:2004 / 3.1								No.: / Nr.: /Nr.: 0000102367																				
	Unsere innere Verweisung /Our Int. Ref/ N/ ref int 5600024787 000020						Datum / Date / Data 19.02.2015																						
<b>Normen / Standards / Normas</b> grade 1.4404, acc to BS EN 10088-3:2014, BS EN 10272:2008-01, NACE MR 0175, valid as Type 316 , acc to ASTM A479,/A479M-14, execution as per EN 10058:2003, but with size tolerances: width/thickness -0/+1.0 mm, surface condition as per EN 10163-2 class B																													
<b>Kunde / Customer / Cliente</b> Zapp (GB) Ltd. Unit 1 The Thorncliffe S35 2PW Sheffield						<b>Endgültiger Kunde / Final Customer / Cliente Final</b> Zapp (GB) Ltd. Unit 1 Brookdale road S35 2PW Sheffield																							
Bestell Nr./Order Nr./ Enc.Nr. 7511004973						Bestell Nr./ Order Nr./ Enc.Nr. 7511004973.2																							
<b>Produktgruppe / Product Group / Grupo Produto</b> AISI 316/L FLAT 52,5 X 39,7 MM				<b>Gewicht / Weight / Peso</b> 4.391 kg				<b>Bunde / Bundle / Atados</b> 04																					
<b>Werkstoff-Nr. / Material-no. / Qualidade</b> 1.4404			<b>Werkstoff-Normbezeichnung / Material standard grade / Norma do material</b> X 2 CrNiMo 17-12-2																										
<b>Beschreibung / Description / Descrição</b> Stainless steel flat bars, hot rolled, heat treated, pickled.																													
<b>Schmelzen Nr. / Cast nr. / Fusão nr.</b> 56142010																													
<b>Chemische Analyse in % / Chemical composition in % / Análise química em %</b>																													
C:		0.019		Si:		0.530		Mn:		1.530		P:		0.036		S:		0.025		Cr:		16.980		Ni:		10.090			
EAF		Mo:		2.060		Co:		0.341		Cu:		0.460		N:		0.056		Ti:		0.004		W:		-		V:		-	
<b>Proben Nr. / Test no. / Amostra no.</b>		<b>DIN EN 10045</b>				<b>ISO 6892-1</b>																							
		<b>Kerbschlagarbeit / Impact Test / Resiliência</b> {Charpy V}				<b>Streckgrenze / Yield point / Tensão limite</b> Rp 0,2 %		<b>Dehngrenze 1% point / Limite de extensão</b> Rp 1,0%		<b>Zugfestigkeit / Tensile strength / Tensão de rotura</b> Rm		<b>Dehnung / Elongation / Alongamento</b> A {A5/4D}		<b>Einschnürung / Reduction of area / Coef. Estricção</b> Z															
		[ J ]				[ MPa ]		[ MPa ]		[ MPa ]		[ % ]		[ % ]															
		3043165.03.01		230		306		365		632		62.3		69.9															
3043165.03.02		228		311		370		639		61.0		68.6																	
3043165.03.03		225		319		378		649		60.1		67.1																	
<b>Visuelle Kontrolle / Visual inspection / Inspeção visual</b> <input checked="" type="checkbox"/> Ok		<b>DIN EN 6506-1</b> <b>Härte / Hardness / Dureza</b> 156 [ HB ]				<b>DIN EN ISO 3651 - 2A</b> <b>Korrosionsbeständigkeit / IC Test / Corrosão Intermetálica</b> <input checked="" type="checkbox"/> Ok				<b>Wärmebehandlung / Heat treatment / Tratamento térmico</b> Solution annealing 1050 °C (Water quenched)																			
<b>DIN EN 10058</b> <b>Maßkontrolle / Dimensional inspection / Inspeção dimensional</b> <input checked="" type="checkbox"/> Ok		<b>Korngröße / Grain size / Tamanho de grão</b> -				<b>Werkstoffverständiger / Quality Control Representative / Inspector da Qualidade</b> David Reis (Ω - DR)																							
<b>Verwechslungsprüfung / Test of identity / Teste de identificação</b> <input checked="" type="checkbox"/> Ok		<b>Makroskopische Untersuchung / Macrographic test</b> <input checked="" type="checkbox"/> Ok																											
<b>Bemerkungen / Remarks / Observações</b> Country of origin: Portugal. No weld repair done. Material is free of mercury and radiation contamination. Certified acc. PED 97/23/EC-EN 764-5 and AD 2000 W0 Notified Body 0035 - TUV Rheinland Industrie Service GmbH												<b>Hiermit bestätigen wir, dass das Material der oben genannten Spezifikation entspricht.</b> <b>We confirm that this material meets the specification according to the mentioned standards.</b> <b>Confirmamos que este material respeita as especificações</b>																	

FLOW TECHNOLOGY LTD

TEST CERTIFICATE

VERIFIED TRUE

COPY OF ORIGINAL

Bollinghaus Steel, SA



# NDT Limited

MATERIALS TESTING  
TRAINING AND CONSULTANCY

MALTRAVERS ROAD  
SHEFFIELD  
S2 5AD  
TEL: 0114 2727317  
FAX: 0114 2727319  
E-mail: sales@ndt.ltd.uk  
www.ndt.ltd.uk



0085

## TEST REPORT

Date Recd 04.03.15      Date Of Test 06.03.15      Test No. M112343

Customer : Zapp (GB) Ltd      Report No. M112343-1  
Unit 1      Order No. T03626  
The Thorncliffe Distribution Centre  
Chapelton  
Sheffield  
S35 2PW

Sample(s) 1 off test piece.  
  
Size. 2" x 1.1/2"  
Cast No. 56142010  
Batch No. G011441A00

Material Specification. ASTM A276/A479 UNS S31600/S31603 & BSEN 10088-3 1.4401/1.4404

TENSILE TEST : ASTM A370-14  
Longitudinal

dia mm	Test Piece Area mm <sup>2</sup>	0.2% Proof Stress MPa	1.0% Proof Stress MPa	Tensile Strength MPa	% EI		R of A %	ASTM E10-14 HBW 10/3000
					On 4D GL	On 5D GL		
12.55	123.70	523	559	675	42.0	39.0	62	231

HARDNESS TEST: ASTM E18-14

21 HRC

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NDT LTD. Approved Signatory

The results relate only to the item(s) tested  
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END OF REPORT

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# NDT Limited

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S2 5AD  
TEL: 0114 2727317  
FAX: 0114 2727319  
E-mail: met@ndt.ltd.uk  
www.ndt.ltd.uk



## TEST REPORT

**CLIENT:**

Zapp (GB) Ltd  
Unit 1  
The Thorncliffe Distribution Centre  
Chapelton  
Sheffield  
S35 2PW

**YOUR ORDER:**  
T03626

**DATE REC'D:**  
04.03.15

**REPORT No:**  
M112343-2

**DATE:**  
06.03.15

**DESCRIPTION OF ITEM:**

1 off test piece.

Size. 2" x 1.1/2"  
Cast No. 56142010  
Batch No. G011441A00

Material Specification. ASTM A276/A479 UNS S31600/S31603 & BSEN 10088-3 1.4401/1.4404

**NATURE OF TEST:**

Intercrystalline corrosion test to ASTM A262-14 Practice E.

**RESULTS:**

Duration of test: 15 Hrs

Heat treatment: 650 - 675°C for 1 Hr. Air cooled

Bend test: 180° over 1T diameter former.

Result: ACCEPTABLE

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K. Booth  
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