



**FLOW TECHNOLOGY LTD**

**TEST CERTIFICATE**

**VERIFIED TRUE**

**COPY OF ORIGINAL**

 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.: 0000138510					
	Unsere Innere Verweisung / Our Int. Ref/ N/ ref int 5600039125 000010										Datum / Date / Data 09.02.2018					
Spezifikation / Standards / Normas 1.4401/1.4404 acc. to EN 10088-3:2014, TYPE 316/UNS31600 and TYPE 316L/UNS 31603 acc. to ASTM A276/A276M-16a, ASTM A479/A479M-16a, ASTM A262-15 Pract. E, NACE MR0175-2015 and NACE MR0103-2015, execution as per EN 10058:2003, with size tolerances +0/ -1 mm																
Bestell Nr./Order Nr./ Enc.Nr. 005381							Bestell Nr./ Order Nr./ Enc.Nr. 005381.1									
Produktgruppe / Product Group / Grupo Produto AISI 316/L FLAT 40,2 X 27,5 MM					Gewicht / Weight / Peso 5.679 kg				Bunde / Bundle / Atados 05							
Werkstoff-Nr. Material-no. Qualidade 1.4404				Werkstoff-Normbezeichnung / Material standard grade / Norma do material X 2 CrNiMo 17-12-2												
Beschreibung / Description / Descrição Stainless steel flat bars, hot rolled, heat treated, straightened and pickled																
Schmelzen Nr. Cast nr. / Fusão nr.		Chemische Analyse in % / Chemical composition in % / Análise química em %														
56171943		C	0.017	Si	0.500	Mn	1.540	P	0.040	S	0.026	Cr	18.860	Ni	10.040	
EAF+AOD		Mo	2.060	Co	0.212	Cu	0.320	N	0.049	Ti	0.003	Al	0.005	-	-	
Proben Nr. Test no. Amostra no.				ISO 148-1 Kerbschlagarbeit Impact Test Resiliência {Charpy V} [J]			Streckgrenze Yield point Tensão limite Rp 0,2 % [MPa]		Dehngrenze 1% point Limite de extensão Rp 1,0% [MPa]		Zugfestigkeit Tensile strength Tensão de rotura Rm [MPa]		Dehnung Elongation Alongamento A5 4D [%] [%]		Einschnürung Reduction of area Coef. Estricção Z [%]	
3067880.02.01				234.0			257		308		809		63.5		65.4	
3067880.02.02				231.0			263		314		614		62.8		64.9	
3067880.02.03				227.0			270		321		619		61.9		64.2	
Visuelle Kontrolle Visual inspection Inspeção visual		<input checked="" type="checkbox"/> OK		DIN EN ISO 6506-1 Härte Hardness Dureza 144 [ HB ]				DIN EN ISO 3651 - 2A Korrosionsbeständigkeit IC Test Corrosão intercrystalina <input checked="" type="checkbox"/> OK				Wärmebehandlung Heat treatment Tratamento térmico Solution annealing 1050 °C (Water quenched)				
DIN EN 10058 Maßkontrolle Dimensional inspection Inspeção dimensional		<input checked="" type="checkbox"/> OK		Korngröße Grain size Tamanho de grão				Abnahmebeauftragter Authorized inspection Representative Inspector da Qualidade  Vasco Ferreira (Q - VF)				Bollinghaus Steel, SA				
Verwechslungsprüfung Test of identity Teste de identificação		<input checked="" type="checkbox"/> OK		Makroskopische Untersuchung Macrographic test Material free from segregation defects.				<input checked="" type="checkbox"/> OK								
Bemerkungen / Remarks / Observações Country of origin: Portugal. No weld repair done. Material is free of mercury and radiation contamination.							Hiermit bestätigen wir, dass das Material der oben genannten Spezifikation entspricht. We confirm that this material meets the specification according the mentioned standards. Confirmamos que este material respeita as especificações de acordo com as normas referidas.									

I3.SPG03-10.CA

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 1/4" NPT F/F/F FXD TEE 10K 316L