


**FLOW TECHNOLOGY LTD**

**TEST CERTIFICATE**

**VERIFIED TRUE**

**COPY OF ORIGINAL**

 Bollinghaus Steel, SA DIN EN ISO 9001:2008 TÜV CERT No. 01 100 03045a	Abnahmeprüfzeugnis/MIU Test Certificate/Certif. de Qualidade EN 10204:2004 / 3.1		No.: / Nr.: / Nr.: 0000146739												
	Unsere innere Verweisung / Our Int. Ref/ N/ ref int 5600042836 000010		Datum / Date / Data 10.10.2018												
Spezifikation / Standards / Normas 1.4401/1.4404 acc. to EN 10088-3:2014, TYPE 316/UNS31600 and TYPE 316L/UNS 31603 acc. to AS/MA276/A276M-17, ASTM A478/A478M-18, ASTM A262-15 Pract. E, NACE MR0175-2015 and NACE MR0103-2015, execution as per EN 10058:2003, with size tolerances +0/-1 mm.															
Kunde / Customer / Cliente			Endgültiger Kunde / Final Customer / Cliente Final												
Bestell Nr./Order Nr./ Enc.Nr. 005530			Bestell Nr./ Order Nr./ Enc.Nr. 005530.04												
Produktgruppe / Product Group / Grupo Produto AISI 316L FLAT 52.80 x 40.15 mm		Gewicht / Weight / Peso 5.697 kg		Bunde / Bundle / Atados 06											
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 %													
56181375		C	0.024	Si	0.440	Mn	1.490	P	0.031	S	0.028	Cr	18.780	Ni	10.160
EAF+AOD		Mo	2.040	Co	0.200	Cu	0.500	N	0.061	Ti	0.003	Al	0.006	-	-
Proben Nr. Test no. Amostra no.	ISO 148-1		DIN EN ISO 8892-1												
	Karoschlagarbeit Impact Test Resiliência {Charpy V}		Streckgrenze Yield point Tensão limite Rp 0,2 %		Dehngrenze 1% point Limite de extensão Rp 1,0%		Zugfestigkeit Tensile strength Tensão de rotura Rm		Dehnung Elongation Alongamento A5    4D		Einschnürung Reduction of area Coef. Estricção Z				
	[ J ]		[ MPa ]		[ MPa ]		[ MPa ]		[ % ]    [ % ]		[ % ]				
	3073984.06.01		229.0		254		286		574		56.0    58.4				
3073984.06.02		227.0		261		293		581		55.3    58.7					
3073984.06.03		226.0		269		301		589		54.6    58.0					
Visuelle Kontrolle Visual inspection Inspeção visual		<input checked="" type="checkbox"/> OK		DIN EN ISO 6506-1 Härte Hardness Dureza [ HB ]		148		DIN EN ISO 3651 - 2A Korrosionsbeständigkeit IC Test Corrosão intermetálica		<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 de Qualidade							
Verwechselungsprüfung 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		Vasco Ferreira (Q - VF)							
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 to the mentioned standards. Confirmamos que este material respeita as especificações de acordo com as normas referidas.										

13.SPG03-10.CA

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 1/2" NPT F/F FXD 90 ELBOW 10K 316L

