MUSSARI S.r.l.
Trafileria tubi inox di alta precisione
Via Repubblica 11/B - Tel 031/390677 - 031/492476
Fax 031/390010
22075 LURATE CACCIVIO/COMO (ITALY)
web-site: www.mussari.com

TEST CERTIFICATE ACCORDING TO EN 10204 / 3.1

ABNAHMEPRUFZEUGNIS
CERTIFICAT D'ESSAIS
CERTIFICATO DI COLLAUDO

N. 818 - 2015

DATE - Datum/Data: 10 marzo 2015

Comm. Nr.: 1877/14 - 640/15**

DELIVERY BILL - Lieferschein/Bulletin de Livraison/Bolla di consegna: 574

CUSTOMER ORDER N° - Bestellung/Commande Client/Ordine Cliente: 2015038

SPECIFICATIONS Anforderugen/Specifiations/Normative: ASTM A 213/269 - MSR-HP Tubes

MECHANICAL TEST
Mechanische Prufungen/Essai Mécaniques/Caratteristiche meccaniche

STEEL GRADE	DIMENSIONS	QUANTITY			YIELD POINT		TENSILE STRENGHT		ELONGATION		HARDNESS	
		Menge/Quantité/Quantità			Streck-Dehngrenze / Limite d'élasticité / Limite di snervamento		Zugfestigkeit / Résistance à traction / Limite di Rottura		Bruchdehnung / Allongement / Allungamento		Haerte / Dureté / Durezza	
Werkstoff/Nuance	Abmessungen	MT	PC.	LGTH	RP0.2%	N/mm²	N/mm²		% LO2"		HRB	
Materiale	Dimensions/Dimensioni	Mt	pz.	mm	req.	result	req.	result	req.	result	req.	result
TP 316 - 316L	3/8" x 0.125" 9.52 x 3.10	301,87			≥ 689	700,0 715,0	≥ 758	899,0 902,0	≥ 18%	19,0 18,0	≥ 95	95,0 97,0

RP1.0%N/mm2: req. / result

FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

TECHNOLOGICAL TEST
Technologische Prufung / Examen Technologique / Prove tecnologiche

FLARING TEST: Erweiteunversuch/Evasement/Allargamento	=
FLANGE TEST: Krempeversuch/Bordage/Bordatura	=
FLATTENING TEST: Abflashungversuch/Aplatissement/Schiacciamento	=
BENDING REV.TEST: Faltversuch/Pliange/Piegamento	=
RING FLATTENING TEST: Ring Faltversuch/Ecrasement anneau/Prova di Schiacciamento	=
DRIFT EXPANDING TEST : Aulweitversuch/Mandrin.ann./Mandrinatura Anello	=

STEEL GRADE Werkstoff/Nuance Materiale	DIMENSIONS Abmessungen Dimensions/Dimensioni	HEAT N° Schmelze Coulée/Colata	%C MAX 0.035	%Mn MAX 02:00	%SI MAX 0.75	%P MAX 0.045	%S MAX 00:03	%NI MIN 10.00 MAX 14.00	%Cr MIN 16.00 MAX 18.00	%Mo MIN 2.00 MAX 3.00	%TI
TP 316 - 316L	3/8" x 0.125" 9.52 x 3.10	13/1037	0,029	1,800	0,430	0,037	0,004	11,050	16,820	2,080	0,058

PRODUCT ANALYSIS:

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REMARKS
Bemerkungen/Notes/Note

smls tubes cold drawn HARD pickled

nahtloses rohr kalt gezogen HART gebeizt - Tubes sans soudure étirés à froid

Ecrui décapés - Tubi senza saldatura trafilati a freddo CRUDI decapati

Suitable for 60.000 Psi

HEAT TREATMENT : Warmebehandlung/Traitement Termique/trattamento termico	N.A.
PMI TEST on each tube: Verwechlungsprufung/Essai P.M.I./Prova anti mescolanze	=
Intergranular corrosion test acc. To A262/pract. E Korrosionsforderncle Ruckstanden/Essai residues corrosif/Prova residui corrosivi	=

100% hydrostatic pressure tested at ========== *During 5 sec :*
Wasserdruckversuch/Essai Hydraulique/Prova idraulica

100% eddy current test acc.to A1016-NFA 49872-SEP 1914-ASTM A450/E426-EN 10893-1-EN 10893-2-EN10246-2 :GOOD
Eddy current/Courant de Foucault/Eddy Current

Visual and Dimensional control : Besichtugung und Ausmessung/Controle Visuel et Dimensionel/Controllo Visivo e Dimensionale	OK	*Straightness control* Geradheit Kontrolle/Contrôle de rectitude/Controllo rettilineità	=

MARKING-Kennzeichnung/Marquage/Marcatura

MSR - ASTM A213/269 - AISI 316-316L Heat Nr.... SMLS MSR-HP Tubes Size 3/8"x0.125" O.D....x....mm I.D. C.D. tubes Suit. For 60.000 PSI

We certify that the material described has been manifactured acc. With above standards and specifications and satisfies the order's requirements.
Wir bestaegen, dass die gelieferte Ware den Bestelleverschriften entspricht/Nous attestons que les produits livres sont conformes aux réferences de la commande/Noi attestiamo che il materiale spedito e' conforme ai requisiti dell'ordine

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INSPECTION DEPARTMENT SIGNATURE
Unters. Des Wersuchs ervandlungen
Visa de l'Inspecteur
Visa controllo materiale

MUSSARI S.r.l

F13196 - 3/8" High Pressure Nipple 3" Long 60K 316L