



COGNE ACCIAI SPECIALI S.p.a.
 ITALY - 11100 ACOSTA - VIA PARAVERA 18
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 CAP. SOC. 100.000.000 EUR INT. VERS.
 C.F. 0218795987
 VAT. IT0257132078 - R.E.A. n. AO-50474

HT# 602359

Company with management systems ISO 9001, ISO 14001, ISO 16949 according to ISO 9001, ISO 14001, ISO 16949.

INSPECTION CERTIFICATE 3.1 (EN 10204:2004)
 DOCUMENT NUMBER 2017001193
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CUSTOMER: COGNE SPECIALTY STEEL USA, INC
CUSTOMER'S ORDER: 4500271598
MANUFACTURER'S WORKS: AOSTA, VIA PARAVERA 16 - ITALY
PRODUCER OF THE DOC: QUALITY DEPARTMENT
MANUFACTURER'S WORKS ORDER NO: 25215708 / 20
MARK OF THE MANUFACTURER: COGNE
DISPATCH NOTE: 81093360 / 10
WEIGHT: 13,518.52
THE CERTIFIED PRODUCTS ARE COMPLYING TO THE PURCHASE ORDER
INTERNAL SPEC: AMSQ5763
PRODUCT: 40301 SPE ROUGHPEELED ROUND BARS TOLERANCE: + 0,0591 - 0
SURFACE FINISH: 1X Hot Finished
PRODUCT DELIVERY CONDITION: RS SOLUTION ANNEALED
PRODUCT DIMENSIONS (Inch): 6.250 LENGTH (Inch)
GRADE: AISI 316/316L - UNS31600/31603 INTERNAL GRADE: 00120 / 00168
IDENTIFICATION HEAT NO: 602359 IDENTIFICATION LOT NO: F316L IMCO
MARKING OF THE PRODUCT: 316L TEST PIECE N: 896200 620

REFERENCE NORMS: ASTM A276/276M(16), ASTM A479/A479M(16), ASTM A484/A484M(16), ASTM A193/A193M(16) B8MCL1, ASME SA276(16), ASME SA479(16), ASME SA484(16), ASME SA193(16) B8MCL1, AMS5653H, AMS5648L, AMS-QQS-763D2015, NACE MRO175/ISO15156-3(15), NACE MRO103 2015, NORSOK M630 MDS S01 Rev5, EN 10272(07),
REFERENCE NORMS FOR CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES: ASTM A182/A182M(15)/ASME SA182(15), ASTM A314/A314M(15)/ASME SA320(15), ASTM A320/A320M(15A)/ASME SA320(15) B8MCL1, EN 10222-5(2000).
 AISI 316/316L UNS S31600/S31603, EN 1.4401/1.4404.
SOLUTION TREATED AT 1050°C / 1 min x mm / WATER.
STEELMAKING EAF + AOD
MACROSTRUCTURE CONFORMING TO THE SPEC. ASTM E340.
QC ON PROLONGATION OF BARS TESTS AT MID RADIUS (CENTER POS. FOR SIZES <2 INCHES).
HOT ROLLED

REDUCTION RATIO	12.0										
INITIAL STATUS	0.0										
CHEM. COMP. (%W/W) - LADLE ANALYSIS ACCORDING TO ASTM E1019-A751-E1086-E415-A580											
Control lot No. - Weight	:020000663054	-	92,770	KG							
ELEMENTS OBTAINED	C	0.014	Si	0.37	P	0.028	S	0.021	N	0.060	
ELEMENTS OBTAINED	Co	0.13	Mn	1.82	Cr	16.78	Mo	2.05	Ni	10.28	
										Cu	0.38

HARDNESS TEST IN AS DELIVERY CONDITION
 Control lot No. - Weight :020000663056
 SPECIFICATION 171
 ASTM A370-E10 9,000 KG
 HARDNESS TEST HB TESTING METHOD: 10/3000

IMPACT TEST IN AS DELIVERY CONDITION
 Control lot No. - Weight :020000663056
 SPECIFICATION EN ISO 148-1-KV2
 TYPE OF TEST PIECE 196-
 TEST TEMPERATURE °C 197
 MEASUREMENT UNIT 202
 OBTAINED 197 205

DIRECTION OF THE TEST PIECE: L

64 pcs
 [Signature]

From: TK Materials CA, Ltd.
 Cust: M2M MACHINING
 CstAr : 465 LB
 Wgt.: 465 LB
 Del.: 2405686679
 CstOr 2018-841
 Date 01/17/2018



COGNE ACCIAI SPECIALI S.p.A.
 ITALY, 11100 ASTA, VIA PARAVERA, 16
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 C.F. 02187565967
 VAT: IT00571200076 - R.E.A. n. AO-50474

Company with management systems ISO
 approved and certified according to ISO 9001,
 ISO 14001 e ISO 18001.

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GRAIN SIZE
 Control lot No. - Weight :020000663606 - 9,000 KG
 SPECIFICATION -- ASTME112 --
 OBTAINED 4 6

HEAT TREATMENT PERFORMED IN CALIBRATED FURNACES ACCORDING TO INTERNAL PROCEDURE PR-GDQ. ITT COMPLYING WITH API6A Annex M.
 CORROSION TEST ACCORDING TO ASTM A262 Practice E EN ISO 3651-2 (NO SIGNS OF FISSURES OR CRACKS AT 20X MAGNIFICATION): SATISFACTORY.
 SURFACE CONTROL BY VISUAL INSPECTION: CONFORMING.
 DIMENSIONAL CONTROL ACCORDING TO ASTM A484: CONFORMING.
 ULTRASONIC TEST ACCORDING TO EN 10308 Class.3, equivalent to
 ASTM A388 FBH5 (for size <=250 mm) and FBH8 (sizes >250 mm): SATISFACTORY.
 ANTIMIX TEST: SATISFACTORY.
 TENSILE TEST

Control lot No. - Weight :020000663606 - 9,000 KG
 SPECIFICATION - ASTM A370-E8-0.5" SPEC DIRECTION OF THE TEST PIECE: L

MEASUREMENT UNIT	Rm B KSI	Rp02_B KSI	Z B %	A12 B %
OBTAINED	84	43	79.1	4,0 D 61.0

NO WELDING REPAIR ON THE MATERIAL
 MARKING: PRODUCER LOGO, MATERIAL NO, HEAT NO, LOT NR.
 THE PRODUCT SATISFIES CE DIRECTIVES: 2011/65 (ROHS2) - 2000/53 - 2002/95(ROHS) - 2003/11 - 2005/618 AND PED 2014/68/EU.
 THE MATERIAL IS FREE OF ANY MERCURY, MERCURY COMPOUNDS AND OR RADIUM CONTAMINATION AT TIME OF SHIPMENT AND WAS PRODUCED WITHOUT
 USING OZONE DEPLETING SUBSTANCES OF CLASS I AND II.
 THE ABOVE ARE TRUE AND CORRECT RESULTS OF TESTS ON SAMPLES OF THE MATERIAL. RESULTS ARE CONFORM TO THE SPECIFICATION(S) APPLICABLE
 AND ARE RECORDED.
 THE RECORDING OF FALSE, FICTIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER U.S.
 FEDERAL STATUTES.
 ALL THE NORMS MENTIONED ARE INTENDED IN THEIR LATEST REVISION AT THE DATE OF ISSUE OF THIS DOCUMENT.
 COUNTRY OF ORIGIN: ITALY, THE MATERIAL COMPLEIES WITH FAR DEARS
 252.225-7009 ALI 1.
 COUNTRY OF MELT AND MANUFACTURING: ITALY
 MAT. NO: SSRD0372 PO # 5400351331-R02
 SOLD TO: THYSSENKRUPP MATERIAL - CBS NORTHWOOD
 8001 IHYSSENKRUPP PARKWAY, NORTHWOOD, OH 48086

DATE 17.01.2017
 CRISTINA DE PASQUALE MV(QUALITY CERTIFICATOR) - ELECTRONICALLY GENERATED CERTIFICATE -Cogne

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 Cust. M2M MACHINING
 CstAR
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