

## COGNE ACCIAI SPECIALI S.p.a.

ITALY - 11100 AOSTA - VIA PARAVERA, 16 TEL +39.0165.3021 - FAX +39.0165.302296 CAP, SOC, 100.000.000 EUR INT, VERS. C.F. 02187360967 VAT: IT00571320076 - R.E.A. n. AO-50474 Company with management systems IGQ approved and certified according to ISO 9001, ISO/TS 16949 e ISO 14001.

INSPECTION CERTIFICATE 3.1 (EN 10204:2004)

DOCUMENT NUMBER 2016048159

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COGNE SPECIALTY STEEL USA, INC CUSTOMER: CUSTOMER'S ORDER: P038572 AOSTA, VIA PARAVERA 16 - ITALY MANUFACTURER'S WORKS: OUALITY DEPARTMENT PRODUCER OF THE DOC: MANUFACTURER'S WORKS ORDER NO: 25210588 /20 MARK OF THE MANUFACTURER: COGNE 7,491.18 81074519 /10 DISPATCH NOTE: WEIGHT: THE CERTIFIED PRODUCTS ARE COMPLYING TO THE PURCHASE ORDER INTERNAL SPEC: AMSQQS763 58943 SPE ROUGHPEELED ROUND BARS TOLERANCE: + 0,0985 - 0 PRODUCT: SURFACE FINISH: 1X Hot Finished RS SOLUTION ANNEALED PRODUCT DELIVERY CONDITION: LENGTH (inch) 00217 /00288 PRODUCT DIMENSIONS (Inch): 12.000 F316L IMCO AISI 316/316L - UNS31600/31603 INTERNAL GRADE: GRADE: IDENTIFICATION LOT NO: 669860 601443 IDENTIFICATION HEAT NO: TEST PIECE N: 986 MARKING OF THE PRODUCT: 316L REFERENCE NORMS: ASTM A276/276M(16), ASTM A479/A479M(16), ASTM A484/A484M(16), ASTM A193/A193M(16) B8MCL1, ASME SA276(15), ASME SA479(15), ASME SA484(15), ASME SA193(15) B8MCL1, AMS5653H, AMS5648L, AMS-QQS-763D2015, NACE MR0175/ISO15156-3(15), NACE MR0103 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 OTC ON PROLONGATION OF BARS TESTS AT MID RADIUS (CENTER POS. FOR SIZES <2 INCHES). HOT FORGED REDUCTION RATIO 4.6 0.0 INITIAL STATUS CHEM. COMP. (%W/W) - LADLE ANALYSIS ACCORDING TO ASTME1019-A751-E1086-E415-A580 86,255 KG Control lot No. - Weight :020000644607 -Mn C Si S N Cr Mo Ni ELEMENTS 0.29 0.015 0.33 1.75 0.028 0.028 0.078 16.66 2.02 10.18 OBTAINED ELEMENTS Co 0.13 OBTAINED HARDNESS TEST IN AS DELIVERY CONDITION Control lot No. - Weight :020000644995 4,542 KG ASTMA370-E10 HARDNESS TEST HB TESTING METHOD: 10/3000 SPECIFICATION OBTAINED 189 IMPACT TEST IN AS DELIVERY CONDITION Control lot No. - Weight :020000644995 4,542 KG EN ISO 148-1-KV2 DIRECTION OF THE TEST PIECE: T SPECIFICATION KV TYPE OF TEST PIECE 196-TEST TEMPERATURE °C MEASUREMENT UNIT 114 97 91 OBTAINED



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GRAIN SIZE
Control lot No. - Weight :020000644995 - 4,542 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 sizez <=250 mm) and FBH8 (sizes >250 mm): SATISFACTORY.

ANTIMIX TEST: SATISFACTORY.

TENSILE TEST

Control lot No. - Weight :020000644995 - 4,542 KG

SPECIFICATION ASTMA370-E8-0.5"SPEC DIRECTION OF THE TEST PIECE: T

MEASUREMENT UNIT	Rm B KSI	Rp02 <u>B</u> KSI	Z B %	A12 B
OBTAINED	92	45	82.5	4,0 D 54.9

NO WELDING REPAIR ON THE MATERIAL
MARKING: PRODUCER LOGO, MATERIAL NO, HEAT NO, LOT NR.
THE PRODUCT SATISFIES CE DIRECTIVES: 2011/65 - 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.
QUALITY SYSTEM CERTIFIED BY I.G.Q ACCORDING TO UNI EN ISO
9001:2008 - ISO/TS 16949:2009 (THE LAST ONE ONLY FOR HOT ROLLED-PEELED-GROUND, STAINLESS STEEL BARS AND ATOMIZED METALLIC POWDERS).
ALL THE NORMS MENTIONED ARE INTENDED IN THEIR LATEST REVISION AT THE DATE OF ISSUE OF THIS DOCUMENT.
COUNTRY OF ORIGIN: ITALY, THE MATERIAL COMPLIES WITH FAR DFARS
252.225-7009 ALT 1.

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.