



COGNE ACCIAI SPECIALI S.p.a.

ITALY - 11100 AOSTA - VIA PARAVERA, 16  
TEL +39 0165 3021 - FAX +39 0165 302206  
CAP. SOC. 115.000.000 EUR INT. VERS.  
C.I. 02187380967  
VAT IT00571320076 - R.E.A. n. AO-50474

Company with Management Systems certified  
according to ISO 9001, IATF 16949, EN 9100 and  
ISO 14001.

INSPECTION CERTIFICATE 3.1 (EN 10204:2004)  
DOCUMENT NUMBER 2018049209  
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CUSTOMER: COGNE SPECIALTY STEEL USA, INC  
CUSTOMER'S ORDER: P043717  
MANUFACTURER'S WORKS: AOSTA, VIA PARAVERA 16 - ITALY  
PRODUCER OF THE DOC: QUALITY DEPARTMENT  
MANUFACTURER'S WORKS ORDER NO: 25238951 /60 MARK OF THE MANUFACTURER: COGNE  
DISPATCH NOTE: 81228717 /10 WEIGHT: 17780 LB  
THE CERTIFIED PRODUCTS ARE COMPLYING TO THE PURCHASE ORDER  
INTERNAL SPEC: AMSQOS763  
PRODUCT: 58945 LMA MACHINED ROUND BARS TOLERANCE: + 0,197 - 0  
SURFACE FINISH: 1X Hot Finished  
PRODUCT DELIVERY CONDITION: RS SOLUTION ANNEALED  
PRODUCT DIMENSIONS (Inch): 23.500 LENGTH (inch) 00071 /00079  
GRADE: AISI 316/316L - UNS31600/31603 INTERNAL GRADE: 316L 4  
IDENTIFICATION HEAT NO: 801616 IDENTIFICATION LOT NO: 917470  
MARKING OF THE PRODUCT: 316L TEST PIECE N: 747

REFERENCE NORMS: ASTM A276/276M(17), ASTM A479/A479M(18), ASTM A484/A484M(18), ASTM A193/A193M(17) B8MCL1, ASME SA276(15), ASME SA479(15), ASME SA484(15), ASME SA193(15) B8MCL1, AMS5653H, AMS5648M, AMS-QQS-763D2015, NACE MR0175/ISO15156-3(15), NACE MR0103 2015, NORSOK M630 MDS S01 Rev5, EN 10272(16).

REFERENCE NORMS FOR CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES: ASTM A182/A182M(18)/ASME SA182(15), ASTM A314/A314M(15)/ASME SA314(15), ASTM A320/A320M(18)/ASME SA320 (15)B8MCL1, EN 10222-5(2017).

AISI 316/316L UNS S31600/S31603, EN 1.4401/1.4404.

SOLUTION TREATED AT 1050°C / 1 min x mm / WATER.

STERILIZING EAF + AOD

QTC ON PROLONGATION OF BARS TESTS AT MID RADIUS (CENTER POS. FOR SIZES <2 INCHES).

HOT FORGED

REDUCTION RATIO 5.4  
INITIAL STATUS 0.0

CHEM. COMP. (%W/W) - LADLE ANALYSIS ACCORDING TO ASTM E1019-A751-E1086-E415-A580

Control lot No. - Weight :020000753423 - 86,462 KG

ELEMENTS	C	Si	Mn	P	S	N	Cr	Mo	Ni	Cu
OBTAINED	0.022	0.43	1.89	0.029	0.0005	0.078	16.63	2.05	10.11	0.45
ELEMENTS	Co									
OBTAINED	0.12									

HARDNESS TEST IN AS DELIVERY CONDITION

Control lot No. - Weight :020000753915 - 13,963 KG  
SPECIFICATION ASTM A370-E10 HARDNESS TEST HRC TESTING METHOD: 10/3000  
OBTAINED 21

IMPACT TEST IN AS DELIVERY CONDITION

Control lot No. - Weight :020000753915 - 13,963 KG  
SPECIFICATION EN ISO 148-1-KV2 DIRECTION OF THE TEST PIECE: T  
TYPE OF TEST PIECE KV  
TEST TEMPERATURE °C 196-  
MEASUREMENT UNIT J  
OBTAINED 104 120 100

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GRAIN SIZE  
Control lot No. - Weight :020000753915 - 13,963 KG  
SPECIFICATION ASTME112 --  
OBTAINED 2 4

HARDNESS TEST  
Control lot No. - Weight :020000753915 - 13,963 KG  
SPECIFICATION ENISO6506 HARDNESS TEST HB TESTING METHOD:  
OBTAINED 165

TENSILE TEST  
Control lot No. - Weight :020000753915 - 13,963 KG  
SPECIFICATION ASTMA370-E8-0.5"SPEC DIRECTION OF THE TEST PIECE: T

MEASUREMENT UNIT	TS KSI	YS KSI	RA %	EL4 %
OBTAINED	81	44	75.5	4,0 D 62.9

SURFACE CONTROL BY VISUAL INSPECTION: SATISFACTORY.  
DIMENSIONAL CONTROL ACCORDING TO ASTM A484: SATISFACTORY.  
ULTRASONIC TEST ACCORDING TO ASTM A388 FBH 8 (FBH11 FOR SIZES >400 MM): SATISFACTORY.  
MARKING: PRODUCER LOGO, MATERIAL NO, HEAT NO, LOT NR.  
ALL THE NORMS MENTIONED ARE INTENDED IN THEIR LAST REVISION AT THE DATE OF ISSUE OF THIS DOCUMENT.  
COUNTRY OF ORIGIN: ITALY, THE MATERIAL COMPLIES WITH FAR DEARS  
252.225-7009 ALT 1.  
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.  
THE PRODUCT SATISFIES CE DIRECTIVES: 2011/65 (RoHS2) - 2000/53 - 2002/95 (RoHS) - 2003/11 - 2005/618 AND PED 2014/68/EU.

ANS