

C20730A 1/2



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 IGO  
approved and certified according to ISO 9001,  
ISO/TS 16949 e ISO 14001.

INSPECTION CERTIFICATE 3.1 (EN 10204:2004)  
DOCUMENT NUMBER 2018004530  
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CUSTOMER: COGNE SPECIALTY STEEL USA, INC  
CUSTOMER'S ORDER: P041762  
MANUFACTURER'S WORKS: AOSTA, VIA PARAVERA 16 - ITALY  
PRODUCER OF THE DOC: QUALITY DEPARTMENT  
MANUFACTURER'S WORKS ORDER NO: 25227801 /10 MARK OF THE MANUFACTURER: **COGNE**  
DISPATCH NOTE: 81176261 /10 WEIGHT: 19,764.11  
THE CERTIFIED PRODUCTS ARE COMPLYING TO THE PURCHASE ORDER  
INTERNAL SPEC: AMSQ05763  
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: 702281 IDENTIFICATION LOT NO: 425080  
MARKING OF THE PRODUCT: 316L TEST PIECE N: 508

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 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

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) - TABLE ANALYSIS ACCORDING TO ASTM E1019-A751-E1086-E415 A580

Control lot No. - Weight	:020000714596	-	90,711	KG								
ELEMENTS OBTAINED			C	Si	Mn	P	S	N2	Cr	Mo	Ni	Cu
ELEMENTS OBTAINED			0.018	0.42	1.86	0.027	0.0005	0.080	16.78	2.05	10.07	0.37
ELEMENTS OBTAINED			Co									
ELEMENTS OBTAINED			0.11									

HARDNESS TEST IN AS DELIVERY CONDITION

Control lot No. - Weight	:020000714955	-	15,720	KG			
SPECIFICATION			ASTMA370-E10	HARDNESS TEST	HRC	TESTING METHOD: 10/3000	
OBTAINED			21				

IMPACT TEST IN AS DELIVERY CONDITION

Control lot No. - Weight	:020000714955	-	15,720	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	98	110	104				

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## GRAIN SIZE

Control lot No. - Weight :020000714955 - 15,720 KG  
 SPECIFICATION : ASTME112 --  
 OBTAINED 0 1

## HARDNESS TEST

Control lot No. - Weight :020000714955 - 15,720 KG  
 SPECIFICATION : ENISO6506 HARDNESS TEST HB TESTING METHOD:  
 OBTAINED 163

## TENSILE TEST

Control lot No. - Weight :020000714955 - 15,720 KG  
 SPECIFICATION : ASTMA370-E8-0.5"SPEC DIRECTION OF THE TEST PIECE: T

MEASUREMENT UNIT	TS KSI	YS KSI	RA %	EL4 %
OBTAINED	80	45	79.9	4,0 D 66.4

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 DFARS

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.