



COGNE ACCIAI SPECIALI S.p.a.

ITALY - 11100 AOSTA - VIA PARAVERA, 16
TEL. +39.0165.3021 - FAX +39.0165.302296
CAP. SOC. 115.000.000 EUR INT. VERS.
C.F. 02187360967
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 2019015645
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CUSTOMER: COGNE SPECIALTY STEEL USA, INC
CUSTOMER'S ORDER: Oda: US01 4900072634
MANUFACTURER'S WORKS: AOSTA, VIA PARAVERA 16 - ITALY
PRODUCER OF THE DOC: QUALITY DEPARTMENT
MANUFACTURER'S WORKS ORDER NO: 50366773 / 140 MARK OF THE MANUFACTURER: COGNE
DISPATCH NOTE: 81268173 / 10 WEIGHT: 16843 LB

THE CERTIFIED PRODUCTS ARE COMPLYING TO THE PURCHASE ORDER

INTERNAL SPEC: AMSQSQS763
PRODUCT: 50368 SPE ROUGHPEELED ROUND BARS TOLERANCE: + 0,0985 - 0
SURFACE FINISH: 1X Hot Finished
PRODUCT DELIVERY CONDITION: RS SOLUTION ANNEALED
PRODUCT DIMENSIONS (Inch): 13.000 LENGTH (inch) 00120 / 00168
GRADE: AISI 316/316L - UNS31600/31603 INTERNAL GRADE: F316L IMCO
IDENTIFICATION HEAT NO: 900372 IDENTIFICATION LOT NO: 228420
MARKING OF THE PRODUCT: 316L TEST PIECE N: 842

REFERENCE NORMS: ASTM A276/276M(17), ASTM A479/A479M(18), ASTM A484/A484M(18a), ASTM A193/A193M(17) B8MCL1, ASME SA276(17), ASME SA479(17), ASME SA484(17), ASME SA193(17) B8MCL1, AMS5653J, 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(17), ASTM A314/A314M(19)/ASME SA314(17), 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.

STEELMAKING EAF + AOD

MACROSTRUCTURE CONFORMING TO THE SPEC. ASTM E340.

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

HOT FORGED

REDUCTION RATIO 5.0
INITIAL STATUS 0.0

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

| Control lot No. - Weight | C | Si | Mn | P | S | N | Cr | Mo | Ni | Cu |
|---------------------------|-------|------|------|-------|-------|-------|-------|------|-------|------|
| :020000781743 - 91,138 KG | 0.018 | 0.40 | 1.78 | 0.031 | 0.023 | 0.080 | 16.55 | 2.12 | 10.16 | 0.51 |
| ELEMENTS OBTAINED | Co | | | | | | | | | |
| ELEMENTS OBTAINED | 0.14 | | | | | | | | | |

HARDNESS TEST IN AS DELIVERY CONDITION

| Control lot No. - Weight | ASTMA370-E10 | HARDNESS TEST | HB | TESTING METHOD |
|---------------------------|--------------|---------------|----|----------------|
| :020000781940 - 11,180 KG | 160 | | | 10/3000 |

IMPACT TEST IN AS DELIVERY CONDITION

| Control lot No. - Weight | EN ISO 148-1-KV2 | DIRECTION OF THE TEST PIECE |
|---------------------------|------------------|-----------------------------|
| :020000781940 - 11,180 KG | | T |
| SPECIFICATION | KV | |
| TYPE OF TEST PIECE | | |
| TEST TEMPERATURE °C | 196- | |
| MEASUREMENT UNIT | J | |
| OBTAINED | 98 111 116 | |

P120600 R158815 52/534 900372 875

ANS



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TENSILE TEST IN AS DELIVERY CONDITION

Control lot No. - Weight :020000781940 - 11,180 KG
SPECIFICATION EN-ISO6892-1

DIRECTION OF THE TEST PIECE: L

| MEASUREMENT UNIT | Rm MPA | Rp0.2% MPA | A % | Z % | Rp1% MPA |
|------------------|-----------|---------------|---------------|--------|-------------|
| OBTAINED | 528 | 241 | 5.0 D 62.4 | 74.5 | 266 |

GRAIN SIZE

Control lot No. - Weight :020000781940 - 11,180 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 :020000781940 - 11,180 KG
SPECIFICATION ASTMA370-E8-0.5"SPEC

DIRECTION OF THE TEST PIECE: T

| MEASUREMENT UNIT | UTS KSI | YS KSI | RA % | EL % |
|------------------|------------|-----------|---------|---------------|
| OBTAINED | 78 | 36 | 68.5 | 4,0 D 59.2 |

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 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.