



ACCIAIERIE BERTOLI SAFAU
ABSOLUTE STEEL QUALITY

CERTIFICATO DI COLLAUDO

N. 243688 / 1
Data 03.09.2019
COLATA N. 454196 ✓
Riscaldamento-Schmelze
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ACCIAIERIE BERTOLI SAFAU SpA
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Inspection Certificate 3.1/Certificat de reception 3.1/
Abnahmeprüfzeugnis 3.1

CLIENTE
Customer-Client-Besteller

PROFILO
Shape-Section-Profil

ACCIAIO
Steel-Acier-Stahl

CAPITOLATO ABS.
Technical Specifications:

CAPITOLATO DI ANALISI:
Material Specification:

CAPITOLATO DI FORNITURA:
Technical Delivery Requirements:

HOT ROLLED ROUND BARS , 177,8 MM - 7" - ✓

LF-2/A105 ✓

ABS

LF2-HN REV.4 9/4/2018 ✓

ORDINE
Order-Commande-Bestellung

STATO DI FORNITURA
Supply Condition-Stat de livraison

COMMESSA/POS
Sales Order/Pos.

19592 ✓

NORMALIZED ✓

1061779/10

COMPOSIZIONE CHIMICA DI COLATA %

CAST ANALYSIS % - COMPOSITION CHIMIQUE DE COULEE % - SCHMELZE CHEMISCHE ANALYSE %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min		0,60	0,15									
Max	0,220	1,35	0,30	0,035	0,040	0,30	0,40	0,12	0,300	0,40	0,100	0,0500
Colata/Heat	0,160	1,25	0,26	0,014	0,003	0,16	0,10	0,03	0,031	0,21	0,010	0,0036
	B (T)	V	Nb	As	Ca	Sb	Ce	O/ppm	H/ppm	C,EO, LONG FORMULA	Cr+Mo	Cr+Ni+Mo+V+Cu
Min												
Max	0,0008	0,080	0,020	0,100	0,1000	0,100	0,300	20,00	2,00	0,450	0,31	0,99
Colata/Heat	0,0001	0,006	0,003	0,006	0,0009	0,001	0,010	14,00	1,20	0,428	0,19	0,51

CARATT. MECCANICHE

MECHANICAL PROPERTIES - CARACTERISTIQUES MECANIQUE - MECHANISCHE EIGENSCHAFTEN

TENSILE/IMPACT TEST ON PRODUCT

TRATTAMENTO TERMICO HEAT TREATMENT

TRAZIONE
TENSILE TEST

ATTACHED MECHANICAL PROPERTIES (243688/1-A)

INCLUSIONI NON METALLICHE

NON METALLIC INCLUSION - INCLUSIONS NON METALLIQUES - PRUFUNG NICHTMETALLISCHE EINSCHLUSSE

JK < 3

MICROINCLUSIONS : METHOD JK

MICROINCLUSIONS: STANDARD UNI 3244

GRANO

GRAIN - GRAIN - KORNGROSSE

AUSTENITIC GRAIN : STANDARD UNI 3245-72

AUSTENITIC GRAIN: METHOD MC.GUAID

TEMPERATURE AUSTENITIC GRAIN 920 °C

AUSTENITIC GRAIN SIZE 9 ✓

NOTE

INTERNAL DEFECT METHOD UT 100%

ANTIMIX 100 %

R/R = 5 ✓

TEST CERTIFICATE ISSUED ACCORDING TO: EN 10204/3.1 ✓

STARTING PRODUCT CONTINUOUS CASTING

"NO WELD REPAIR" ✓

"ASTM A105/A105M-18" "ASTM A350/A350M-18 GRADE LF2 CL.1" ✓

"ASTM A675/A675M-14 GRADE 70" "ASTM A696-90a -17 GRADE C" ✓

"NACE MR0175-2015" "NACE MR0103-2015" ✓

"ASME SA105/SA105M 2013" "ASME SA350/SA350M 2013 GRADE LF2 CL.1" ✓

"ASME SA675/SA675M 2013 GRADE 70" "ASME SA696 2013 GRADE C" ✓

FULLY KILLED ✓

FINE GRAIN STEEL ✓

ELECTRIC ARC FURNACE STEEL ✓

VACUUM DEGASSED STEEL ✓

COUNTRY OF ORIGIN : ITALY ✓

ANS



ACCIAIERIE BERTOLI SAFAU
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Real-Coulee-Schmelze
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- Material free from lead, mercury, cadmium and hexavalent chromium (dir. 2000/53/CE - dir. 2011/65/UE as amended) ✓
- Material with radioactivity not exceeding 0,1Bq/g (d.lgs. 230/1995 as amended) ✓

CONTROLLO QUALITA'
QUALITY CONTROL - CONTROLE DE QUALITE - QUALITÄTSTEILE

Company with a management system certified by IGQ to
ISO 9001 and ISO/TS 16949

Verif.: Giovanna Rojatti ✓

Giovanna Rojatti ✓



ACCIAIERIE BERTOLI SAFAU
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Heat	454196 ✓
Odv	1061779
Pos	10

Certificate n°	243688/1-A-
Date	03/09/2019

MECHANICAL PROPERTIES

	YS 0,2% (PSI)	TS (PSI)	E 4d (%)	R.A. (%)	Kv -50°F ✓						HBW on surface	HRC on surface			
					≥ 15 ft ² /lbs medium ≥ 12 ft ² /lbs single			Lat. Exp. (mm)					Shear Area (%)		
Limits	≥ 40000	70000/95000	≥ 22	≥ 30							≤ 187	≤ 22			
First Test	50763 ✓	74549 ✓	33,8 ✓	75 ✓	119	130	116	1,42	1,27	1,20	84	86	83	175 ✓	8
Second Test	51778 ✓	75564 ✓	32,7 ✓	73 ✓	106	125	110	1,15	1,35	1,18	81	85	83	177 ✓	8

Heat Treatment: Normalized 1724°F x 96' Air ✓

Quality Control

Name ROJATTI GIOVANNA ✓

ACCIAIERIE BERTOLI SAFAU S.p.A. ✓
Servizio Controllo Qualità