



METALFAR PRODOTTI INDUSTRIALI SPA
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COMPANY WITH
 MANAGEMENT SYSTEM
 CERTIFIED BY DNV
 = ISO 9001 =
 = ISO 14001 =

INSPECTION CERTIFICATE EN 10204:2004 / 3.1		Nr ^{A03} 2016-C_MFF-00229	Data / Dated 21.01.2016
		Ordine / PO	FFF 4160/C
		Item	028
		DDT / Delivery note	2016-3E301-0000213
		Packing List	2016-3E401-0000157
		Fattura / Invoice	2016-3E401-0000157
		Ns. rif. / Our ref.	2016-3E201-0000132-0028

Cod. colata Heat Code	Nr. colata Heat Nr	Quantita Quantity	Descrizione Description
	15/38137	153,00	WN 150 RF 6" STD LF2CL1

Mat. in acc. a / Mat. in acc. to
 ASTM/ASME A 350/SA 350 M - 15 ASME CODE SECT. II, PART A, ED. 2013
 ASTM A350 LF2 CL1
 NACE MR-0175/2009 ISO 15156 - SOUR SERVICE
 NACE MR-0103/2012 - SOUR SERVICE
 CSA Z245.12 GRADE 248 CAT.II SOUR SERVICE
 Q.A.S.IN ACCORD.WITH PRESS.EQUIPM.DIRECT.97/23/EC(PED) ANNEX I,PARAGRAPH 4.3
 CERT.4687-2014-CE-ITA-ACCREDIA

Elementi / Elements	C	SI	Mn	S	P	Cr	Ni	Mo	Ti	Cu	V	Nb	N
LADLE ANALYSIS	0,185	0,230	0,930	0,010	0,014	0,120	0,100	0,020	0,018	0,140	0,003	0,002	0,010
PRODUCT ANALYSIS	0,182	0,239	0,924	0,008	0,015	0,124	0,104	0,023	0,015	0,133	0,002	0,003	0,012
LADLE ANALYSIS	0,027								CE LF	CE SF	F1	F2	PREN
PRODUCT ANALYSIS	0,031								0,385	0,340	0,383	0,140	--
									0,382	0,336	0,386	0,147	--

Provetta Test specimen	Forma Shape	Snervamento > 0,2% Yield Strength > 0,2%	Snervamento > 1,0% Yield Strength > 1,0%	Rottura Tensile	Allungamento Elongation	Contrazione Reduction of area
Sez/Sect mm2 L. mm	1=O-2=□	MPa	MPa	MPa	%	%
126,60 60,80	1	353,0	--	507,0	33,0	65,0

DUREZZA / HARDNESS	RESILIENZA / IMPACT TEST
HBW 156,0 - 160,0	Tipo/Type KV KV
	Provetta / Test Specimen 10x10 mm
	°C C10 1-Joule C42 2-Joule C42 3-Joule C42 Media/Average C43
	-46 74 78 68 73,3

Tratt. Term. / Heat treatment	NORMALIZED AT 830° C - COOLED IN STILL AIR	ELECTRIC FURNACE
Dim in acc. a / Dim. acc. to	ASME/ANSI B16.5 -2013	ASME/ANSI B36.10M -2015

Finitura / Roughness	125/250 MICROINCH AARH				
Marcatura in acc. Marking in acc. to	MSS-SP25 Ed. 2013	Vis. & Dim.	SATISFACTORY	Origine Origin of Steel	EUROPEAN UNION

Note / Notes
 100% MANUFACTURED IN ITALY
 MANUFACTURING IN ACCORDANCE WITH ORDER AND SPECIFICATION

VERIFIED TRUE COPY
 OF ORIGINAL
 FORGED FLANGES & FITTINGS
 LIMITED

UFFICIO CONTROLLO QUALITA' QUALITY CONTROL DEPARTMENT	ENTE UFFICIALE DI COLLAUDO INSPECTION AUTHORITY	MARCHIO PRODUZIONE MANUFACTURER'S SYMBOL
<i>S. Frigerio</i>		MFF