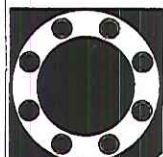


H# 1341480

2

PO# 132291



OFFICINE NICOLA GALPERTI E FIGLIO S.p.A.

Capitale Sociale € 2.582.500,00 interamente versato

Sede Legale e Amministrativa: 23824 DERIVO (LC) - Via Enrico Fermi, 46

C.C.I.A.A. Lecco n.00205990138 - R.E.A. 70815 - C.F. e P.IVA IT00205990138

Stabilimento - Uffici Amministrativi / Workshop - Warehouse - Offices - Mailing address:

22010 GERA LARIO (CO) - Via Trivio Fuentes, 4 - Tel. 0344-97200 - Fax 0344-97210

E-mail: galperti@galperti.com - www.galperti.com

CERTIFICATO DI COLLAUDO

EN 10204

TEST CERTIFICATE

EN 10204

NS. ORDINE / INTERNAL JOB

121447

SPETT. LE / MESSRS:

MRC CANADA ULC

7072 - 112 AVE SE - 5220 51 STREET
CALGARY AB, T2C 4Z1 (CDN)

CERTIFICATE N.

The Original
061406/1

DATA / DATE

16/09/2013

VS. ORDINE / YOUR

S 759 180758 REV.1

DATA / DATE

28/09/2012

POS / ITEM	DESCRIZIONE / DESCRIPTION	QUANTITA' / QUANTITY	S/A	MATERIALE / MATERIAL	N° COLATA / PROVA / HEAT N°/TEST N°	ACCIAIERIA / STEEL MILL	#
001/001	2" 600 WN RF XS A105 B1 FSF4	4.400	S	ASTM A105/10 N	1341480.L1/50	LUCCHINI PIOMBI	A

ANALISI CHIMICA / CHEMICAL ANALYSIS

#	C %	MN %	SI %	P %	S %	CR %	NI %	MO %	CU %	V %	SN %	AL %	NB %	TI %	N %	B %	H %	O %
A	0.170	1.180	0.245	0.016	0.009	0.165	0.018	0.005	0.046	0.018	0.004	0.028	0.002	0.005	0.005	0.0002	0.0002	0.0009
A C	0.160	1.193	0.236	0.011	0.008	0.163	0.018	0.005	0.066	0.015	0.004	0.045	0.002	0.005	0.005	0.0002	0.0002	0.0009
#	CA %														04 %	03 %	FC %	FL %
A	0.001														0.252	0.170	0.366	0.40
A C	0.001														0.267	0.168	0.358	0.40

NOTE / NOTES

C = ANALISI DI PRODOTTO / CHECK ANALYSIS

04=Copper+Nickel+Chromium+Molybd.+Vanadium CU+NI+CR+MO+V

03=Chromium + Molybdenum CR+MO

FC=Carbon Equivalent Short Formula C+(MN/6)

FL=Carbon Equivalent Long Formula C+(MN/6)+((CR+MO+V)/5)+((NI+CU)/15)

CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

#	TRAZIONE / TENSILE										RESILIENZA / CHARPY TEST				DUREZZA HB (AVERAGE)
	TIPO TYPE	DIAMETRO PROVETTA mm	SEZIONE AREA mm ²	LUNGHEZZA LENGTH mm	TEMP. TEMPERATURE C	ROTTURA TENSILE Mpa	SNERVAMENTO YIELD Mpa	ALL. ELONG %	CONTR. REDUCT. %		TIPO TYPE	TEMP. TEMPERATURE	VALORI / VALUES		
A S		12,50	122,70	50,00	20	485	250	22,0	30,0						187
A O		12,50	122,70	50,00	20	517	323	28,6	67,9						156

NOTE / NOTES

O = OTTENUTE / OBTAINED
S = STANDARD

TRATTAMENTI TERMICI / HEAT TREATMENTS

A Normalized at 900 dgr.C for 1 h.-Cooling from 900 dgr.C in still air

NOTE GENERALI / GENERAL NOTES

FINITURE / ROUGHNESS
FSF4=Ra = 125 AARHSTANDARD
B1 = ASME B16.5 ED.09 Inch STD

NOTE / NOTES

Material according to Technical Specification MRC-FLG-001 Rev.0.

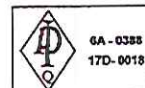
Material according to NACE MR-01-75 / ISO 15156-2 Sour service Region 3-2009 and NACE MR0103-2010.

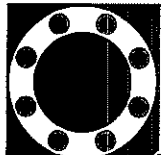
MARCHIO DI FABBRICA
TRADE MARKDATA COLLAUDO INT.
INT. INSPECT DATE

16/09/2013

COLLAUDATORE INT.
INT. INSPECTOR

J.ANDILORO

ENTE UFFICIALE DI COLLAUDO
INSPECTION AUTHORITY6A - 0385
17D-0018Certified acc. PED 97/23/EC
By LLOYD'S Register
No. LRC 160212



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CALGARY AB, T2C 4Z1 (CDN)

CERTIFICATO DI COLLAUDO / TEST CERTIFICATE N.

061428/1

DATA / DATE

16/09/2013

VS. ORDINE / YOUR

S 759 180758 REV.1

DATA / DATE

28/09/2012

POS / ITEM	DESCRIZIONE / DESCRIPTION	QUANTITA' / QUANTITY	S/A	MATERIALE / MATERIAL	N° COLATA / PROVA / HEAT N°/TEST N°	ACCIAIERIA / STEEL MILL	#
001/001	2" 600 WN RF XS A105 B1 FSF4	4.400	S	CSA Z245.12-09 GR248	1341480.L1/50	LUCCHINI PIOMBI	A

ANALISI CHIMICA / CHEMICAL ANALYSIS

#	C %	MN %	SI %	P %	S %	CR %	NI %	MO %	CU %	V %	SN %	AL %	NB %	TI %	N %	B %	H %	O %
A	0.170	1.180	0.245	0.016	0.009	0.165	0.018	0.005	0.046	0.018	0.004	0.028	0.002	0.005	0.005	0.0002	0.0002	0.0009
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FC=Carbon Equivalent Short Formula C+(MN/6)

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CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES

#	TRAZIONE / TENSILE										RESILIENZA / CHARPY TEST			
	TIPO TYPE	DIAMETRO PROVETTA MM/METER	SEZIONE AREA MMQ.	LUNGHEZZA LENGTH MM.	TEMP. TEMPERATURE C	ROTTURA TENSILE Mpa	SNERVAMENTO YIELD Mpa	ALL. ELONG.	CONTR. REDUCT.	TIPO TYPE	TEMP. TEMPERATURE	VALORI / VALUES	DUREZZA H HARDNESS (AVERAGE)	
A	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187	
A	O	12,50	122,70	50,00	20	517	323	28,6	67,9				156	

NOTE / NOTES

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NOTE GENERALI / GENERAL NOTES

FINITURE / ROUGHNESS

FSF4=Ra = 125 AARH

STANDARD

B1 = ASME B16.5 ED.09 Inch STD

NOTE / NOTES

MATERIAL : CSA Z245.12 GR. 248 (OR 290) CAT I SS.

Material according to NACE MR-01-75 / ISO 15156-2 Sour Service Region 3-2009 and NACE MR0103-2010.

MARCHIO DI FABBRICA / TRADE MARK



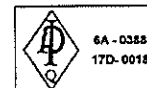
DATA COLLAUDO INT. / INT. INSPECT DATE

16/09/2013

COLLAUDATORE INT. / INT. INSPECTOR

J.ANDILORO

ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY



Certified acc. PED 97/23/EC
By LLOYD'S Register
No. LRC 180212