



RINA



ACCREDITAMENTO ORGANISMI DI CERTIFICAZIONE E SPEZIALE

SGQ N° 002A - SGA N° 002D
PRD N° 002B - PRS N° 006C
SCR N° 003F - SSI N° 001G

Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF Mutual Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 10FI00255PO1/A

Manufacturer L.A.F.A.P. Srl Montefalco (PG)
WPQR No. LAF BW 10-12/10 Dated 14.12.2010
Manufacturer's welding procedure (WPS) No. LAF BW 10-12/10 Dated 25.11.2010

RANGE OF APPROVAL

Welding process 135 Type Partly mechanized
Joint type Plates and Pipes BW bsgg/FW
Single/Multiple pass Multiple
Parent material group(s) 1-1 (subgroup 1.1 only) ISO/TR 15608
with a specified minimum yield strength ≤ 235 Mpa
Parent material thickness (mm) Butt Joint = N.A. Fillet Joint t₁ = 5.0 to 12.0 t₂ = 5.0 to 12.0
Throat thickness (mm) No restriction
Weld deposit thickness (mm) 3.0 to 20.0
Outside diameter (mm) 500 and over
Filler metal type Solid wire ISO 14341-A: G3Si1
Shielding gas (ISO 14175) M20 with max. CO₂ % = 8,8 Backing gas (ISO 14175) None
Type of welding current DCEP Heat input Kj/cm Max. 10,9
Welding position PA, PB
Preheat min. (°C) 50 Interpass temp. Max. (°C) 250
Post weld heat treatment / Ageing None
Other information -

Welders name FLAMINI Claudio Stamp No. FC
Welding test conducted by L.A.F.A.P. Srl
Mechanical test conducted by TecnoLab Rina IIS SRL Laboratory test No. 862 dated 14/12/2010
At presence of RINA Surveyor Mauro Arecco

We certify that statements in this certificate are correct and that the test welds were prepared, welded and tested in accordance with the requirements of UNI EN ISO 15614-1: 2008 Standard

Issued at: Genova

on 22 December 2010

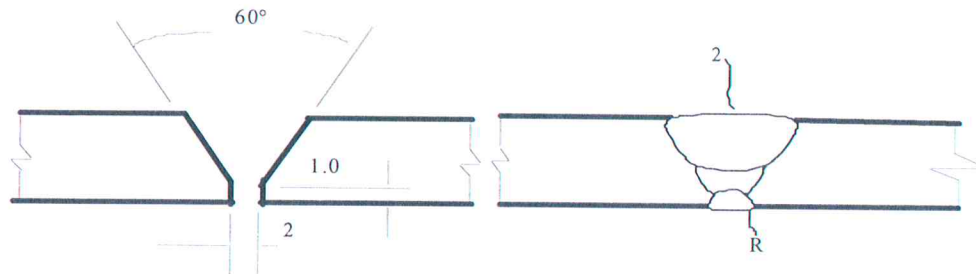


RINA Services S.p.A.

JOINT DETAILS AND WELDING SEQUENCES

SINGLE V; BUTT WELD; BOTH SIDE WELDING; WITH BACKGOUGING.

Pass No.	Process	Filler metal diam. (mm)	Filler metal classification	Amps	Volt	Travel speed (cm/min)	Heat input (kJ/cm)	Other
1	135	1.2	G3Si1	185	21	28	6,7	-
2	135	1.2	G3Si1	220	24	29	8,7	-
R	135	1.2	G3Si1	225	25	40	6,7	-



PARENT MATERIAL

Material specification	EN 10025-2		
Type or grade	S235JR		
Group(s)/Subgroup(s) No. (ISO/TR 15608)	1.1		
Thickness (mm)	10	Throat thickness (mm)	N.A.
Diameter (mm)	N.A.		
Branch connection angle	N.A.		
Other	-		

WELDING CONSUMABLES

Process	135		
Trade name(s)	UltraMag		
Specification	ISO 14341A		
Classification / designation	G3Si1		
Size (mm)	1,2		
Deposited metal thickness			
Groove	10 mm		
Throat	N.A.		
Flux trade name	N.A.		
Consumable insert	N.A.		
Other	-		



GAS			
	Gas	Mixture	Flow rate (l/min.)
Shielding	-	Argon 92% + CO2 8%	15
Trailing	None	-	-
Backing	None	-	-

POSITION	
Welding position	PA
Other	-

PREHEAT		POSTWELD HEAT TREATMENT	
Preheat temperature	50 °C min.	Temperature	None
Interpass temperature	250 °C max.	Time	N.A.
Other	-	Other	-

ELECTRICAL CHARACTERISTICS			
Current	DC EP		
Ampere (range)	See table	Volts (Range)	See table
Mode of metal transfer	Short arc (1 st pass only) + spray arc		
Tungsten electrode size and type	N.A.		
Other	-		

TECHNIQUE	
Travel speed (range)	See table
String or weave bead	String
Oscillation (*)	N.A.
Method of groove/edge preparation	Machining/Grinding
Interpass cleaning	Grinding/Brushing
Method of back gouging	Grinding to sound metal
Orifice or gas cup size	16 mm
Stand off distance (*)	N.A.
Multiple or single pass	Multiple
Multiple or single electrodes	Single
Torch angle (*)	N.A.
Other	(*) for fully mechanized/robotic only



TRANSVERSE TENSILE TEST						
Spec. (No.)	Width (mm)	Thickness (mm)	Area (mm ²)	Total load (kN)	R _m (N/mm ²)	Fracture location
TT1	25,08	9,61	241,01	135.00	404	Base metal
TT2	25,08	9,58	240,26	139.00	404	Base metal

BEND TEST		
Type	No.	Result
FACE TRANSVERSE	2 OFF	Acceptable
ROOT TRANSVERSE	2 OFF	Acceptable

IMPACT TEST				
Subsize test specimen 10 x 7.5 x 55 mm				
Spec No.	Notch location	Notch type	Test Temp. (°C)	Impact values (J)
VWT _{0/1,5}	WELD	ISO-V	20	120 – 104 - 93
VHT _{1,5/1,5}	H.A.Z.	ISO-V	20	90 – 41 - 43

OTHER TEST

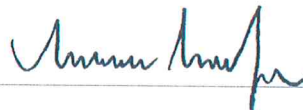
MACROGRAPHIC EXAMINATION **Acceptable**
 MICROGRAPHIC EXAMINATION **Not required**

NON DESTRUCTIVE EXAMINATION

VISUAL EXAMINATION **Acceptable**
 RADIOGRAPHIC EXAMINATION **Acceptable**
 PENETRANT TEST **Not required**
 MAGNETIC PARTICLE **Acceptable**
 ULTRASONIC TEST **Not required**

Issued at: Genova

on 22 December 2010




RINA Services S.p.A.



RINA



ACCREDITAMENTO ORGANISMI DI CERTIFICAZIONE E ISPEZIONE

SGQ N° 002A - SGA N° 002D
PRD N° 002B - PRS N° 066C
SCR N° 003F - SSI N° 001G

Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF Mutual Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 10FI000255PO2/A

Manufacturer L.A.F.A.P. Srl Montefalco (PG)
WPQR No. LAF FW 20-11/10 Dated 14.12.2010
Manufacturer's welding procedure (WPS) No. LAF FW 20-11/10 Dated 25.11.2010

RANGE OF APPROVAL

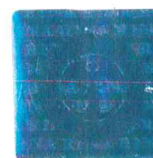
Welding process 135 Type Partly mechanized
Joint type Plates and Pipes FW
Single/Multiple pass Multiple
Parent material group(s) 1-1 (subgroup 1.1 only) ISO/TR 15608
with a specified minimum yield strength ≤ 235 Mpa
Parent material thickness (mm) Butt Joint = N.A. Fillet Joint t₁ = 10 to 24 t₂ = 10 to 24
Throat thickness (mm) No restriction
Weld deposit thickness (mm) N.A.
Outside diameter (mm) Over 150 (PA-PB); over 500 (other qualified positions)
Filler metal type Solid wire ISO 14341-A: G3Si1
Shielding gas (ISO 14175) M20 with max. CO₂ % = 8,8 Backing gas (ISO 14175) None
Type of welding current DCEP Heat input Kj/cm No restriction
Welding position All, vertical down excluded
Preheat min. (°C) 50 Interpass temp. Max. (°C) 250
Post weld heat treatment / Ageing None
Other information for mechanical properties see also WPQR LAF BW 10-12/10

Welders name FLAMINI Claudio Stamp No. FC
Welding test conducted by L.A.F.A.P. Srl
Mechanical test conducted by Tecnolab Rina IIS SRL Laboratory test No. 863 dated 14/12/2010
At presence of RINA Surveyor Mauro Arecco

We certify that statements in this certificate are correct and that the test welds were prepared, welded and tested in accordance with the requirements of UNI EN ISO 15614-1: 2008 Standard

Issued at: Genova

on 22 December 2010

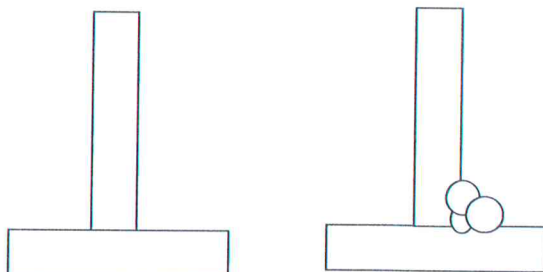


RINA Services S.p.A.

JOINT DETAILS AND WELDING SEQUENCES

FILLET WELD

Pass No.	Process	Filler metal diam. (mm)	Filler metal classification	Amps	Volt	Travel speed (cm/min)	Heat input (kJ/cm)	Other
1	135	1.2	G3Si1	260	25	23	13,5	-
2	135	1.2	G3Si1	250	24	35	8,22	-
3	135	1.2	G3Si1	250	24	25,9	11,11	-



PARENT MATERIAL

Material specification	EN 10025-2		
Type or grade	S235JR		
Group(s)/Subgroup(s) No. (ISO/TR 15608)	1.1		
Thickness (mm)	$t_1 = t_2 = 20$	Throat thickness (mm)	N.A.
Diameter (mm)	N.A.		
Branch connection angle	N.A.		
Other	-		

WELDING CONSUMABLES

Process	135
Trade name(s)	UltraMag
Specification	ISO 14341A
Classification / designation	G3Si1
Size (mm)	1,2
Deposited metal thickness	
Groove	N.A.
Throat	9,5 mm
Flux trade name	N.A.
Consumable insert	N.A.
Other	-



GAS			
	Gas	Mixture	Flow rate (l/min.)
Shielding	-	Argon 92% + CO2 8%	15
Trailing	None	-	-
Backing	None	-	-

POSITION	
Welding position	PB
Other	-

PREHEAT		POSTWELD HEAT TREATMENT	
Preheat temperature	50 °C min.	Temperature	None
Interpass temperature	250 °C max.	Time	N.A.
Other	-	Other	-

ELECTRICAL CHARACTERISTICS			
Current	DC EP		
Ampere (range)	See table	Volts (Range)	See table
Mode of metal transfer	Spray arc		
Tungsten electrode size and type	N.A.		
Other	-		

TECHNIQUE	
Travel speed (range)	See table
String or weave bead	String
Oscillation (*)	N.A.
Method of groove/edge preparation	Machining/Grinding
Interpass cleaning	Grinding/Brushing
Method of back gouging	N.A.
Orifice or gas cup size	16 mm
Stand off distance (*)	N.A.
Multiple or single pass	Multiple
Multiple or single electrodes	Single
Torch angle (*)	N.A.
Other	(*) for fully mechanized/robotic only



OTHER TEST

MACROGRAPHIC EXAMINATION	Acceptable
MICROGRAPHIC EXAMINATION	Not required

NON DESTRUCTIVE EXAMINATION

VISUAL EXAMINATION	Acceptable
RADIOGRAPHIC EXAMINATION	Acceptable
PENETRANT TEST	Not required
MAGNETIC PARTICLE	Acceptable
ULTRASONIC TEST	Not required

Issued at: Genova

on 22 December 2010



RINA Services S.p.A.



RINA



SGQ N° 002A - SGA N° 002D
PRD N° 002B - PRS N° 066C
SCR N° 003F - SSI N° 001G
Membro degli Accordi di Mutuo
Riconoscimento EA e IAF
Signatory of EA and IAF Mutual
Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 10FI000255PO3/A

Manufacturer L.A.F.A.P. Srl Montefalco (PG)
WPQR No. LAF FW 10-10/10 Dated 14.12.2010
Manufacturer's welding procedure (WPS) No. LAF FW 10-10/10 Dated 25.11.2010

RANGE OF APPROVAL

Welding process 135 Type Partly mechanized
Joint type Plates and Pipes FW
Single/Multiple pass Multiple
Parent material group(s) 1-1 (subgroup 1.1 only) ISO/TR 15608
with a specified minimum yield strength ≤ 235 Mpa
Parent material thickness (mm) Butt Joint = N.A. Fillet Joint t₁ = 5 to 12 t₂ = 5 to 12
Throat thickness (mm) No restriction
Weld deposit thickness (mm) N.A.
Outside diameter (mm) Over 150 (PA-PB); over 500 (other qualified positions)
Filler metal type Solid wire ISO 14341-A: G3Si1
Shielding gas (ISO 14175) M20 with max. CO₂ % = 8,8 Backing gas (ISO 14175) None
Type of welding current DCEP Heat input Kj/cm No restriction
Welding position All, vertical down excluded
Preheat min. (°C) 50 Interpass temp. Max. (°C) 250
Post weld heat treatment / Ageing None
Other information for mechanical properties see also WPQR LAF BW 10-12/10

Welders name FLAMINI Claudio Stamp No. FC
Welding test conducted by L.A.F.A.P. Srl
Mechanical test conducted by TecnoLab Rina IIS SRL Laboratory test No. 863 dated 14/12/2010
At presence of RINA Surveyor Mauro Arecco

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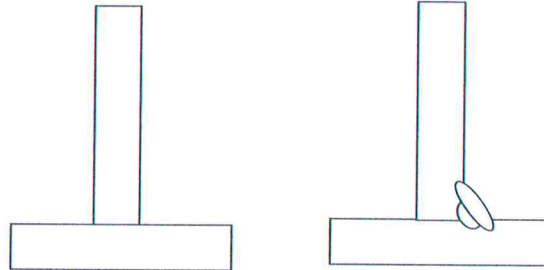


RINA Services S.p.A.

JOINT DETAILS AND WELDING SEQUENCES

FILLET WELD

Pass No.	Process	Filler metal diam. (mm)	Filler metal classification	Amps	Volt	Travel speed (cm/min)	Heat input (kJ/cm)	Other
1	135	1.2	G3Si1	225	22	27	8,8	-
2	135	1.2	G3Si1	245	23	24,5	11	-



PARENT MATERIAL

Material specification **EN 10025-2**
 Type or grade **S235JR**
 Group(s)/Subgroup(s) No. (ISO/TR 15608) **1.1**
 Thickness (mm) **t₁ = t₂ = 10** Throat thickness (mm) **N.A.**
 Diameter (mm) **N.A.**
 Branch connection angle **N.A.**
 Other **-**

WELDING CONSUMABLES

Process **135**
 Trade name(s) **UltraMag**
 Specification **ISO 14341A**
 Classification / designation **G3Si1**
 Size (mm) **1,2**
 Deposited metal thickness
 Groove **N.A.**
 Throat **7 mm**
 Flux trade name **N.A.**
 Consumable insert **N.A.**
 Other **-**



GAS			
	Gas	Mixture	Flow rate (l/min.)
Shielding	-	Argon 92% + CO2 8%	15
Trailing	None	-	-
Backing	None	-	-

POSITION	
Welding position	PB
Other	-

PREHEAT		POSTWELD HEAT TREATMENT	
Preheat temperature	50 °C min.	Temperature	None
Interpass temperature	250 °C max.	Time	N.A.
Other	-	Other	-

ELECTRICAL CHARACTERISTICS			
Current	DC EP		
Ampere (range)	See table	Volts (Range)	See table
Mode of metal transfer	Spray arc		
Tungsten electrode size and type	N.A.		
Other	-		

TECHNIQUE	
Travel speed (range)	See table
String or weave bead	String
Oscillation (*)	N.A.
Method of groove/edge preparation	Machining/Grinding
Interpass cleaning	Grinding/Brushing
Method of back gouging	N.A.
Orifice or gas cup size	16 mm
Stand off distance (*)	N.A.
Multiple or single pass	Multiple
Multiple or single electrodes	Single
Torch angle (*)	N.A.
Other (*)	for fully mechanized/robotic only



OTHER TEST

MACROGRAPHIC EXAMINATION	Acceptable
MICROGRAPHIC EXAMINATION	Not required

NON DESTRUCTIVE EXAMINATION


VISUAL EXAMINATION	Acceptable
RADIOGRAPHIC EXAMINATION	Acceptable
PENETRANT TEST	Not required
MAGNETIC PARTICLE	Acceptable
ULTRASONIC TEST	Not required

Issued at: Genova

on 22 December 2010



RINA Services S.p.A.

 TECNOLAB RINA IIS - srl Via G. Mauro De Angelis D'Ossat snc 00053 - Civitavecchia RM	SAGGIO TEC / JOB N. 14N	DATA / DATE 14/12/2010	RAPPORTO / REPORT N. 862	PAGINA/PAGE 1 / 2
	ORDINE / ORDER N. QIB/FMD/50872 del 27/11/2009 .		SAGGIO / TEST N. 135BW10PA-FC	

CLIENTE/CUSTOMER

L.A.F.A.P. SRL MONTEFALCO PG

DESCRIZIONE/DESCRIPTION

Qualifica procedimento di saldatura "135" WPS LAFBW10-12/10 Pos. PA
Materiale base: UNI EN 10025-2:2005 S235JR
Norma: UNI EN ISO 15614-1:2008
Saldatore: FLAMINI Claudio pratica RINA 10FIPO255 (L.A.F.A.P. SRL)

COLLAUDO/INSPECTION

RINA Services

PLACCA / PLATE

COLATA / HEAT

DIMENSIONI DEL MATERIALE / DIMENSIONS OF MATERIAL (mm) spess. 10

Senso e Posizione Orientation	Spessore Larghezza Diametro Thickness Width Diameter (mm)	TRAZIONE / TENSION TEST						PIEGA BEND TEST α = 180° d = 40mm	RESILIENZA IMPACT TEST			
		Area della Sezione Section (mm ²)	Lunghezza Utile Gage Length (mm)	Snervamento Yield Strength	Rottura Tensile Strength	Allungamento Elongation	Strizione Reduction of Area		Tipo Type KV	Temperatura °C Temperature +20	min. sing. min for 1	min. medio min. average J
				N/mm ² min. max	N/mm ² min. 360 max	% min. max	% min. max					

T	9,61 x 25,08	241,01			404		(Rotta in materiale base)			
T	9,58 x 25,08	240,26			404		(Rotta in materiale base)			
T	10,0 x 20,0		PIEGA AL DRITTO					Soddisfacente		
T	10,0 x 20,0		PIEGA AL DRITTO					Soddisfacente		
T	10,0 x 20,0		PIEGA AL ROVESCIO					Soddisfacente		
T	10,0 x 20,0		PIEGA AL ROVESCIO					Soddisfacente		
	10x 7,5x55		VWT 0/1,5							120, 0-104, 0- 93, 0
	10x 7,5x55		VHT 1,5/1,5							90, 0- 41, 0- 43, 0

MACRO

Esito/Result: Soddisfacente

NORME / STANDARDS:

UNI EN 895:97 ; UNI EN ISO 6892-1:09

UNI EN 875:97 ; UNI EN 10045-1:92

UNI EN ISO 5173:10

UNI EN 1321:97

NOTE / REMARKS

(*) Valore richiesto diminuito proporzionalmente per provini a sezione ridotta.

RESPONSABILE DEL LABORATORIO
HEAD OF THE LABORATORY

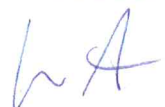


MANUELA ROMANELLO
RINA IIS

OPERATORE
OPERATOR



ISPETTORE
INSPECTOR



 TECNOlab RINA IIS TECNOLAB RINA IIS srl Via G. Mauro De Angelis D'Ossat snc 00053 - Civitavecchia RM	SAGGIO TEC / JOB N. 14N	DATA / DATE 14/12/2010	RAPPORTO / REPORT N. 862	PAGINA/PAGE N. 2 di/of 2
	ORDINE / ORDER N. QIB/FMD/50872 del 27/11/2009		SAGGIO / TEST N. 135BW10PA-FC	


CLIENTE/CUSTOMER

L.A.F.A.P. SRL

MONTEFALCO

PG


ESAME MACROSCOPICO

	Macrografia: N° 14N Macro 1
	Attacco: Nital 5%
	Ingrandimento: 1,0x
	Riferimento Normativo: UNI EN ISO 5817:2008
	Esito : Soddisfacente

NORME / STANDARDS : UNI EN 1043-1:1997; UNI EN 1321:1997.

NOTE / REMARKS

RESPONSABILE DEL LABORATORIO
HEAD OF THE LABORATORY

Manuela Romiti


OPERATORE
OPERATOR

Manuela Romiti

ISPETTORE
INSPECTOR

[Signature]

 TECNOLAB RINA IIS srl Via G. Mauro De Angelis D'Ossat snc 00053 - Civitavecchia RM	SAGGIO TEC / JOB	DATA / DATE	RAPPORTO / REPORT	PAGINA/PAGE
	N. 15N	14/12/2010	N. 863	N. 1 di/ of 1
ORDINE / ORDER		SAGGIO / TEST		
N. QIB/FMD/50872 del 27/11/2009		N. 135BW10PB-FC		

CLIENTE/CUSTOMER

L.A.F.A.P. SRL MONTEFALCO PG

DESCRIZIONE/DESCRIPTION

Qualifica procedimento di saldatura – 135 WPS LAFFW10-10/10 Posizione PB

Materiale base: UNI EN 10025-2:2005 S235JR

Normativa di riferimento: UNI EN ISO 15614-1: 2008

Saldatore: FLAMINI Claudio

Pratica RINA 2010FIPO255

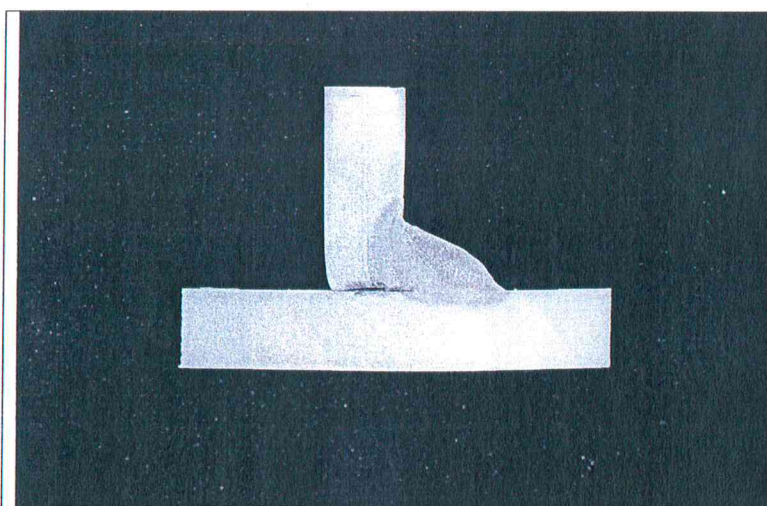
PLACCA / PLATE -

COLATA / HEAT -

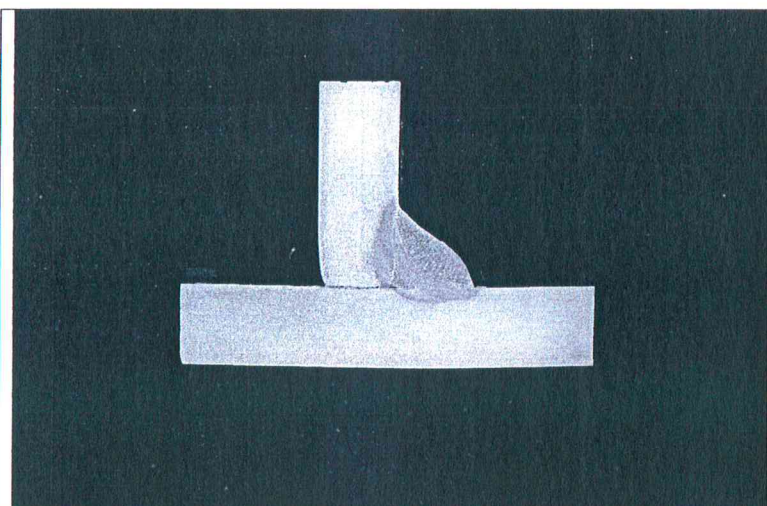
COLLAUDO / INSPECTION
Rina Services

DIMENSIONI DEL MATERIALE / DIMENSIONS OF MATERIAL (mm) 10 con 10

ESAME MACROSCOPICO



Macrografia: N° 15N Macro 1
 Attacco: Nital 5%
 Ingrandimento: 1x
 Riferimento Normativo: UNI EN ISO 5817:2008
 Gola: 6,5 mm
 Esito : Soddisfacente



Macrografia: N° 15N Macro 2
 Attacco: Nital 5%
 Ingrandimento: 1x
 Riferimento Normativo: UNI EN ISO 5817:2008
 Gola: 7,0 mm
 Esito : Soddisfacente

NORME / STANDARDS : UNI EN 1043-1:1997; UNI EN 1321:1997.

NOTE / REMARKS

RESPONSABILE DEL LABORATORIO
HEAD OF THE LABORATORY

Manuela Romanello


OPERATORE
OPERATOR

Manuela Romanello

ISPETTORE
INSPECTOR

WA



CND SERVICE Controlli non distruttivi srl
ROMA - CIVITAVECCHIA

RAPPORTO ESAME RADIOGRAFICO

RADIOGRAPHIC EXAMINATION REPORT



UNI EN ISO 9001-2008
Certificato n. 98.107



EASA PART 145
Certificato ENAC n. IT.145.128

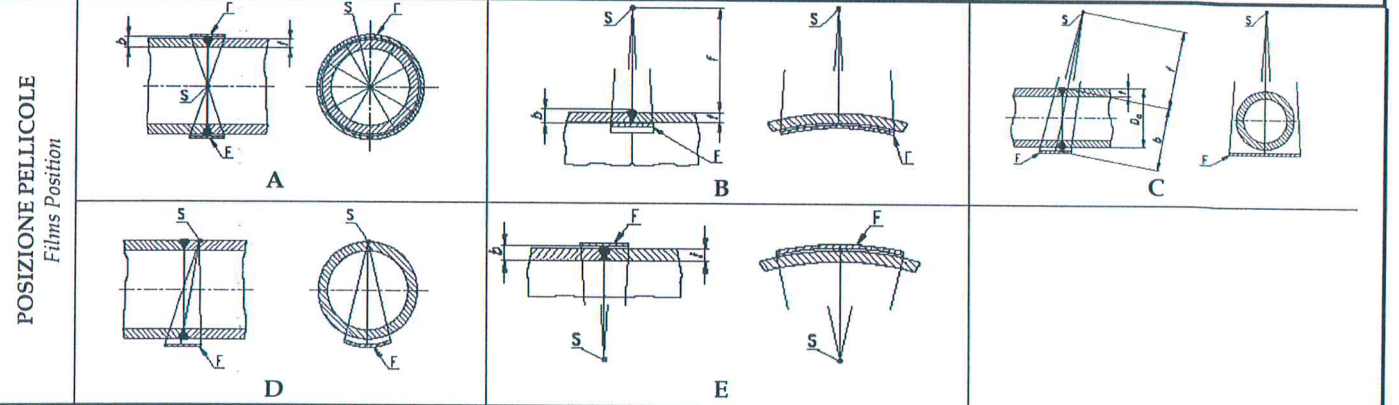
CERTIFICATO N. 1383/10
Report n.

Foglio n. 1 di 2
Sheet Of

COMMITTENTE <i>Customer</i>	TECNOLAB SRL	COSTRUTTORE <i>Constructor</i>	L.A.F.A.P. SRL	ORDINE <i>Order</i>
IMPIANTO <i>Plant</i>	QUALIFICA PROCEDIMENTO DI SALDATURA 135 POS. PA IN ACCORDO ALLA NORMA UNI EN ISO 15614-1:2008			COMMESSA <i>Job</i>
OGGETTO <i>Object</i>	WPS LAFBW10-12/10 SAGGIO 14 N			

DISEGNO <i>Drawing</i>	====	MATERIALE <i>Material</i>	S 235JR
TIPO DI GIUNTO <i>Type of Joint</i>	BW	TECNICA DI SALDATURA <i>Weld Procedure</i>	
DIAMETRO <i>Diameter</i>	SPESSORE <i>Thickness</i>	10,0 mm	TRATTAMENTO TERMICO <i>Heat Treat</i>
PROCEDURA D'ESAME <i>Examination Procedure</i>		UNI EN 1435	LIMITI DI ACCETTABILITÀ <i>Accept Criteria</i>
			EN ISO 5817 LIV. B

PROCEDURA <i>Procedure</i>	CLASSE RADIOGR. <i>Radiographic Class</i>	LIV. B			PELLICOLA <i>Film</i>	TIPO <i>Type</i>	KODAK T 200	FORMATO <i>Size</i>	10X48
	TECNICA D'ESP <i>Exposure Techn</i>	B			SCHERMO/ANT. <i>Front Screen</i>	PB 0,05	SCHERMO/POST. <i>Back Screen</i>	PB 0.10	
	DISTANZA S. F. <i>Distance S.F.</i>	700 mm			ESPOSIZIONE <i>Exposure</i>	2 MINUTI			
	APPARECCHIO RX <i>Equipment Rx</i>	MARCA - S/N <i>Mark - s/n</i>	ICM		TECNICA DI TRATTAMENTO <i>Development</i>	<input type="checkbox"/> MANUALE/Manual <input checked="" type="checkbox"/> AUTOMATICA/Autom			
	APPARECCHIO RY <i>Equipment Ry</i>	MARCA - S/N <i>Mark - s/n</i>			IQI RICHIESTO <i>IQI Required</i>	10 FE EN			
	MACCHIA FOCALE RX <i>Focal Spot Rx</i>	3X3	KV	200	mA	6	QUALITÀ RICHIESTA <i>Qualità Level</i>	W 14	
	MACCHIA FOCALE RY <i>Focal Spot Ry</i>		Ci		GBq		DENSITÀ RICHIESTA <i>Density Required</i>	2,3-4	



SIMBOLI DEI DIFETTI *Defects Symbol*

ISO 6520-1	DESCRIZIONE	ISO 6520-1	DESCRIZIONE	ISO 6520-1	DESCRIZIONE
100	E CRICCHE <i>Cracks</i>	301-302	Ba INCLUSIONI DI SCORIA/FLUSSO <i>Slag-flux inclusions</i>	5013	F INCISIONE AL VERTICE <i>Shrinkage groove</i>
2011 2012	Aa POROSITÀ <i>Gas pore</i>	303	J INCLUSIONI DI OSSIDO <i>Oxide inclusions</i>	504	Ep ECCESSO DI PENETRAZIONE <i>Excessive penetration</i>
2013	A NIDO DI SOFFIATURE <i>Clustred localized porosity</i>	304	H INCLUSIONE METALLICA <i>Metallic inclusion</i>	507	Sl SLIVELLAMENTO <i>Linear misalignment</i>
2014	Ab PORI ALLINEATI <i>Linear porosity</i>	401	C MANCANZA DI FUSIONE <i>Lack of fusion</i>	515	Ins INSELLAMENTO AL VERTICE <i>Root concavity</i>
2015 2016	Ab CAVITÀ ALLUNGATE-TARLI <i>Elongated cavity-wormholes</i>	402	D MANCANZA DI PENETRAZIONE <i>Lack of penetration</i>	516	== SPUGNOSITÀ AL VERTICE <i>Root restart</i>
202	K CAVITÀ DI RITIRO <i>Shrinkage cavity</i>	5011 5012	F INCISIONE MARGINALE <i>Undercut</i>	517	== DIFETTO DI RIPRESA <i>Poor restart</i>

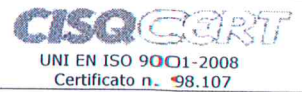
OPERATORE <i>Operator</i>	LIV <i>Lev</i>	DATA <i>Date</i>	COMMITTENTE <i>Customer</i>	ISPETTORE COMMITTENTE <i>Customer Inspector</i>
VEZIO PANTALONE EN 473 ISO 9712	3	06/12/2010		FIRMA (Sgna) DATA (Date)
				06/12/10



CND SERVICE Controlli non distruttivi srl
ROMA - CIVITAVECCHIA

**RAPPORTO ESAME
PARTICELLE MAGNETICHE
MAGNETIC EXAMINATION REPORT**

CERTIFICATO N. 1384/10 Foglio n. 1 di 1
Report n. Sheet n. Of



UNI EN ISO 9001-2008
Certificato n. 98.107



EASA PART 145
Certificato ENAC n. IT.145.128

COMMITTENTE: <i>Customer</i>	TECNOLAB srl	COSTRUTTORE: <i>Manufacturer</i>	L.A.F.A.P. SRL	ORDINE: <i>Order</i>
IMPIANTO <i>Plant</i>	QUALIFICA PROCEDIMENTO DI SALDATURA 135 POS. PA IN ACCORDO ALLA NORMA UNI EN ISO 15614-1-2008			COMMESSA <i>Job</i>
OGGETTO: <i>Object:</i>	WPS LAFBW 10-12/10 SAGGIO 14 N			
DISEGNO: <i>Drawings</i>	===	PULIZIA DOPO ESAME: <i>Cleaning after examination</i>	NO	
MATERIALE: <i>Material</i>	S 235JR	ESTENSIONE ESAME: <i>Test exstension</i>	100%	
DIMENSIONI: <i>Dimensions</i>	Sp 10 mm	SMAGNETIZZAZIONE: <i>Demagnetization</i>	NO	
TIPO DI GIUNTO: <i>Type of joint</i>	BW	PROCEDURA D'ESAME: <i>Examination procedure</i>	UNI EN 1290	
STADIO DI LAVORAZIONE: <i>Fabrication step</i>	COME SALDATA	LIMITI DI ACCETTABILITA' <i>Acceptance standards</i>	UNI EN 1291	
CONDIZIONI SUPERFICIALI: <i>Test surface status</i>	SPAZZOLATA			

TECNICA DI MAGNETIZZAZIONE
Magnetization method

<input type="checkbox"/> PUNTALI <i>Prods</i>	<input checked="" type="checkbox"/> GIOGO <i>Yoke</i>	<input type="checkbox"/> BOBINA <i>Coil</i>
CORRENTE: <i>Current</i>	CORRENTE: <i>Current</i> AC	CORRENTE: <i>Current</i>
INTENSITA' (A): <i>Intensity</i>	DISTANZA (mm): <i>Distance</i> 100	INTENSITA' (A): <i>Intensity (A)</i>
DISTANZA (mm): <i>Distance</i>	CAMPO MAGNETICO: <i>Magnetic Field</i> 50 A/Cm 180 mm	DIAMETRO: <i>Diameter</i>
TIPO APPARECCHIO: <i>Equipment type</i>	TIPO APPARECCHIO: <i>Equipment type</i> YOKE (CGM)	TIPO APPARECCHIO: <i>Equipment type</i>

RILEVATORE MAGNETICO
Inspection medium




MEZZO DI CONTRASTO
Contrast paint

<input checked="" type="checkbox"/> VISIBILE <i>Visible</i>		<input type="checkbox"/> FLUORESCENTE <i>Fluorescent</i>			
MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Type</i>
CGM LK 35				CGM VECOPLAST	

INDICAZIONI: NESSUNA
Indication

CONFORME <i>Conforming</i>	<input checked="" type="checkbox"/>	NOTE: <i>Remarks:</i>
NON CONFORME <i>Not conforming</i>	<input type="checkbox"/>	

OPERATORE <i>Operator</i>	LIV. <i>Lev.</i>	DATA <i>Date</i>	COMMITTENTE <i>Customer</i>	ISPETTORE COMMITTENTE <i>Customer Inspector</i>
VEZIO FANTALONE EN473/ISO9712	2	06/12/2010		FIRMA (<i>Signe</i>) DATA (<i>Date</i>) 06/12/10

 CND SERVICE Controlli non distruttivi srl ROMA - CIVITAVECCHIA	RAPPORTO ESAME PARTICELLE MAGNETICHE MAGNETIC EXAMINATION REPORT			 UNI EN ISO 9001-2008 Certificato n. 98.107  EASA PART 145 Certificato ENAC n. IT.145.128
	CERTIFICATO N. 1385/10 Report n.	Foglio n. 1 Sheet n.	di 1 Of 1	


COMMITTENTE: <i>Customer</i>	TECNOLAB srl	COSTRUTTORE: <i>Manufacturer</i>	L.A.F.A.P. SRL	ORDINE: <i>Order</i>
IMPIANTO <i>Plant</i>	QUALIFICA PROCEDIMENTO DI SALDATURA 135 POS. PB IN ACCORDO ALLA NORMA UNI EN ISO 15614-1-2008			COMMESSA <i>Job</i>
OGGETTO: <i>Object:</i>	WPS LAFBW 10-10/10 SAGGIO 15 N			
DISEGNO: <i>Drawings</i>	===	PULIZIA DOPO ESAME: <i>Cleaning after examination</i>	NO	
MATERIALE: <i>Material</i>	S 235JR	ESTENSIONE ESAME: <i>Test exstension</i>	100%	
DIMENSIONI: <i>Dimensions</i>	Sp 10 su 10 mm	SMAGNETIZZAZIONE: <i>Demagnetization</i>	NO	
TIPO DI GIUNTO: <i>Type of joint</i>	FW	PROCEDURA D'ESAME: <i>Examination procedure</i>	UNI EN 1290	
STADIO DI LAVORAZIONE: <i>Fabrication step</i>	COME SALDATA	LIMITI DI ACCETTABILITA' <i>Acceptance standards</i>	UNI EN 1291	
CONDIZIONI SUPERFICIALI: <i>Test surface status</i>	SPAZZOLATA			

TECNICA DI MAGNETIZZAZIONE <i>Magnetization method</i>		
<input type="checkbox"/> PUNTALI <i>Prods</i>	<input checked="" type="checkbox"/> GIOGO <i>Yoke</i>	<input type="checkbox"/> BOBINA <i>Coil</i>
CORRENTE: <i>Current</i>	CORRENTE: AC <i>Current</i>	CORRENTE: <i>Current</i>
INTENSITA' (A): <i>Intensity</i>	DISTANZA (mm): 100 <i>Distance</i>	INTENSITA' (A): <i>Intensity (A)</i>
DISTANZA (mm): <i>Distance</i>	CAMPO MAGNETICO: 50 A/Cm 180 mm <i>Magnetic Field</i>	DIAMETRO: <i>Diameter</i>
TIPO APPARECCHIO: <i>Equipment type</i>	TIPO APPARECCHIO: YOKE (CGM) <i>Equipment type</i>	TIPO APPARECCHIO: <i>Equipment type</i>

RILEVATORE MAGNETICO <i>Inspection medium</i>				MEZZO DI CONTRASTO <i>Contrast paint</i>	
<input checked="" type="checkbox"/> VISIBILE <i>Visible</i>		<input type="checkbox"/> FLUORESCENTE <i>Fluorescent</i>			
MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Type</i>
CGM LK 35				CGM VECOPLAST	

INDICAZIONI: NESSUNA
Indication

CONFORME <i>Conforming</i>	<input checked="" type="checkbox"/>	NOTE: <i>Remarks:</i>
NON CONFORME <i>Not conforming</i>	<input type="checkbox"/>	

OPERATORE <i>Operator</i>	LIV. <i>Lev.</i>	DATA <i>Date</i>	COMMITTENTE <i>Customer</i>	ISPETTORE COMMITTENTE <i>Customer Inspector</i>
VEZIO PANTALONE EN473/ISO9712	2	06/12/2010		FIRMA (Signe) 
				DATA (Date) 06/12/10

 TECNOlab RINA IIS TECNOLAB RINA IIS srl Via G. Mauro De Angelis D'Ossat snc 00053 - Civitavecchia RM	SAGGIO TEC / JOB	DATA / DATE	RAPPORTO / REPORT	PAGINA/PAGE
	N. 16N	14/12/2010	N. 864	N. 1 di/ of 1
ORDINE / ORDER		SAGGIO / TEST		
N. QIB/FMD/50872 del 27/11/2009		N. 135BW20PB-FC		

CLIENTE/CUSTOMER

L.A.F.A.P. SRL MONTEFALCO PG

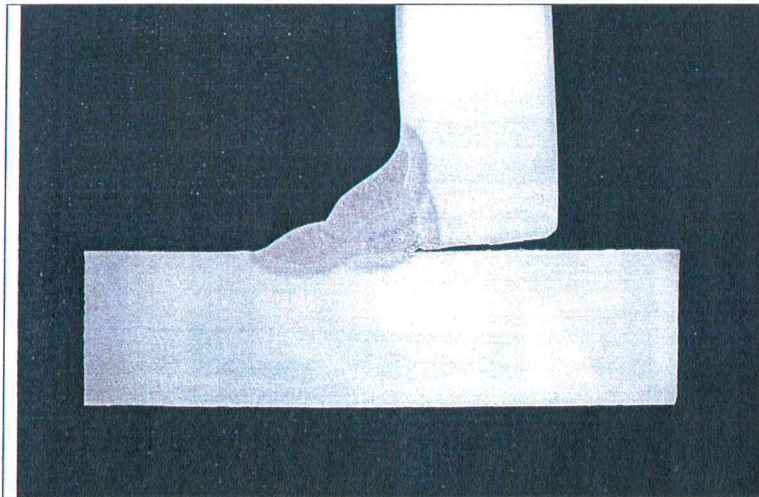
DESCRIZIONE/DESCRIPTION

Qualifica procedimento di saldatura – 135 WPS LAFFW20-11/10 Posizione PB
 Materiale base: UNI EN 10025-2:2005 S235JR
 Normativa di riferimento: UNI EN ISO 15614-1: 2008
 Saldatore: FLAMINI Claudio

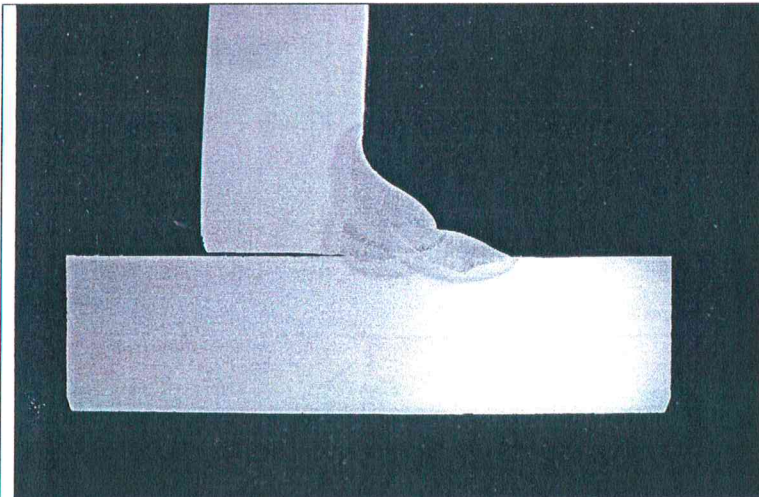
Pratica RINA 2010FIPO255

PLACCA / PLATE -	COLATA / HEAT -	COLLAUDO / INSPECTION Rina Services
DIMENSIONI DEL MATERIALE / DIMENSIONS OF MATERIAL (mm) 10 con 10		

ESAME MACROSCOPICO



Macrografia: N° 16N Macro 1
 Attacco: Nital 5%
 Ingrandimento: 1x
 Riferimento Normativo: UNI EN ISO 5817:2008
 Gola: 9,0 mm
 Esito : Soddisfacente



Macrografia: N° 16N Macro 2
 Attacco: Nital 5%
 Ingrandimento: 1x
 Riferimento Normativo: UNI EN ISO 5817:2008
 Gola: 9,5 mm
 Esito : Soddisfacente

NORME / STANDARDS : UNI EN 1043-1:1997; UNI EN 1321:1997.

NOTE / REMARKS

RESPONSABILE DEL LABORATORIO
 HEAD OF THE LABORATORY




Manuela Romanello


OPERATORE
 OPERATOR

Manuela Romanello

ISPETTORE
 INSPECTOR

[Signature]

 CND SERVICE Controlli non distruttivi srl ROMA - CIVITAVECCHIA	RAPPORTO ESAME PARTICELLE MAGNETICHE MAGNETIC EXAMINATION REPORT			 UNI EN ISO 9001-2008 Certificato n. 98.107
	CERTIFICATO N. 1386/10 Report n.	Foglio n. 1 Sheet n.	di 1 Of 1	 EASA PART 145 Certificato ENAC n. IT.145.128


COMMITTENTE: <i>Customer</i>	TECNOLAB srl	COSTRUTTORE: <i>Manufacturer</i>	L.A.F.A.P. SRL	ORDINE: <i>Order</i>
IMPIANTO <i>Plant</i>	QUALIFICA PROCEDIMENTO DI SALDATURA 135 POS. PB IN ACCORDO ALLA NORMA UNI EN ISO 15614-1-2008			COMMESSA <i>Job</i>
OGGETTO: <i>Object:</i>	WPS LAFBW 20-11/10 SAGGIO 16 N			
DISEGNO: <i>Drawings</i>	===	PULIZIA DOPO ESAME: <i>Cleaning after examination</i>	NO	
MATERIALE: <i>Material</i>	S 235JR	ESTENSIONE ESAME: <i>Test exstension</i>	100%	
DIMENSIONI: <i>Dimensions</i>	Sp 20 su 20 mm	SMAGNETIZZAZIONE: <i>Demagnetization</i>	NO	
TIPO DI GIUNTO: <i>Type of joint</i>	FW	PROCEDURA D'ESAME: <i>Examination procedure</i>	UNI EN 1290	
STADIO DI LAVORAZIONE: <i>Fabrication step</i>	COME SALDATA	LIMITI DI ACCETTABILITA' <i>Acceptance standards</i>	UNI EN 1291	
CONDIZIONI SUPERFICIALI: <i>Test surface status</i>	SPAZZOLATA			

TECNICA DI MAGNETIZZAZIONE <i>Magnetization method</i>		
<input type="checkbox"/> PUNTALI <i>Prods</i>	<input checked="" type="checkbox"/> GIOGO <i>Yoke</i>	<input type="checkbox"/> BOBINA <i>Coil</i>
CORRENTE: <i>Current</i>	CORRENTE: AC <i>Current</i>	CORRENTE: <i>Current</i>
INTENSITA' (A): <i>Intensity</i>	DISTANZA (mm): 100 <i>Distance</i>	INTENSITA' (A): <i>Intensity (A)</i>
DISTANZA (mm): <i>Distance</i>	CAMPO MAGNETICO: 50 A/Cm <i>Magnetic Field</i> 180 mm	DIAMETRO: <i>Diameter</i>
TIPO APPARECCHIO: <i>Equipment type</i>	TIPO APPARECCHIO: YOKE (CGM) <i>Equipment type</i>	TIPO APPARECCHIO: <i>Equipment type</i>

RILEVATORE MAGNETICO <i>Inspection medium</i>				MEZZO DI CONTRASTO <i>Contrast paint</i>	
<input checked="" type="checkbox"/> VISIBILE <i>Visible</i>		<input type="checkbox"/> FLUORESCENTE <i>Fluorescent</i>			
MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Batch</i>	MARCA/TIPO <i>Trade mark/type</i>	LOTTO <i>Type</i>
CGM LK 35				CGM VECOPLAST	

INDICAZIONI: <i>Indication</i>	NESSUNA
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CONFORME <i>Conforming</i>	<input checked="" type="checkbox"/>	NOTE: <i>Remarks:</i>
NON CONFORME <i>Not conforming</i>	<input type="checkbox"/>	

OPERATORE <i>Operator</i>	LIV. <i>Lev.</i>	DATA <i>Date</i>	COMMITTENTE <i>Customer</i>	ISPETTORE COMMITTENTE <i>Customer Inspector</i>	
VEZIO PANTALONE EN473/ISO9712	2	06/12/2010		FIRMA (Signe)	DATA (Date)
					06/12/10