



Brazer's approval record form
Part. 1: Brazer's approval test certificate

Manufacturer's name : TERMOCONTROL SNC
Manufacturer's address : VIA COVIGNANO, 143
 47923 RIMINI (RN)
Manufacturer's brazing procedure reference No. : 01
Brazer's name : MARINELLI MIRO
Identification : MM
Method of identification : PAT.: U59187766M
Date and place of birth : 5.07.1972 – LECCO
Employer : TERMOCONTROL SNC
Job knowledge : Aeeeptable / Not tested (delete as necessary)
Range of approval : Position : All Positions
 " Material(s) : Brazing Group: D-D (ISO 15608: Group 31-32-33-34)
 " Diameters (mm) : ≤ 28 mm.
 " Thickness (mm) : 0,50 - 2,00 mm.
 " Joint clearance(mm) : 0,3 ÷ 0,5 mm
 " Overlap length (mm): ≤ 12 mm.
This approval is valid until : APRILE 2016
Reference numbers of documents submitted to justify range of approval : UNI EN ISO 13585: 2012

Examiner or examining body's name : TÜV SÜD (TÜV ITALIA SRL)
Examiner or examining body's address : Via Isonzo, 61
 40033 Casalecchio di Reno (BO)

Examiner or examining body reference No. : 0948/MI/S/T-3222-2013

Photograph (if required)

Certified that the brazer identified above has, when using the brazing procedure given in part 2 of this form, complied with the requirements of the following standards or other equivalent documents:

UNI EN ISO 13585: 2012

Name of examiner or examining body's representative

Name of manufacturer's representative



Stamp and Signature

date: 23.04.13

Stamp and Signature

date: 23.04.13

Prolongation of approval by employer (every six months)

Name of employer's representative	Position or title	Signature	Date

Prolongation of approval by examiner or examining body (every three years)

Name of examiner's representative	Position or title	Signature	Date



Brazer's approval record form Part 2: Approved brazing procedure

Manufacturer's name	: TERMOCONTROL SNC	Examiner or examining body's name	: TÜV SÜD (TÜV ITALIA SRL)
Manufacturer's address	: VIA COVIGNANO, 143 47923 RIMINI (RN)	Examiner or examining body's address	: Via Isorzo, 61 40033 Casalecchio di Reno (BO)
Manufacturer's brazing procedure reference No.	: 01	Examiner or examining body reference No.	: 0948/MI/S/T-3222-2013
Brazing location	: RIMINI (RN)	Test coupon brazed on date	: 23.04.13
Brazer's name	: MARINELLI MIRO	Parent materials	: EN 12449: CU DHP EN 12449: CU DHP
Brazing process	: Torch Brazing	Parent mater. thickness (mm)	: 1 mm.
Brazing position	: VU = VERTICALE ASCENDENTE	Parent materials O. D. (mm)	: 28 mm.

Joint type(s):

		Joint design
Joint type	: Lap Joint	
Joint clearance:	0,3 ÷ 0,5 mm	
Overlap length:	12 mm. mm	
Other	: ---	

Nozzle size and number	: Punta Ugello 160L/h	Heating gas pressure (bar)	: 4,5 bar - 0,5 bar
Heating gas type	: Ossigeno/ Acetilene	Specific or chemical composition	: N.A.
Brazing filler metal		Method of filler metal supply:	Manual
Type	: ISO 17672 CuP 282	Specific or chemical composition	: -
Form	: BACCHETTA 2mm	Method of flux supply	: -
Flux		Method of post-braze cleaning:	/
Type	: N.A.	Remark(s)	
Form	: N.A.		
Jig / fixture details	: N.A.		
Method of pre-braze cleaning	: Spazzolatura		
Post-braze Heat Treatment (temperature-time cycle)	: N.A.		

Name of manufacturer's representative

Name of examiner or examining body's representative

Stamp and Signature

date: 23.04.13



Stamp and Signature

date: 23.04.13

Benannte Stelle nach Druckgeräterichtlinie (97/23/EG)
der TÜV Süddeutschland Bau und Betrieb GmbH



**Brazer's approval record form
Part 3: Test results**

Manufacturer's name	: TERMOCONTROL SNC	Examiner or examining body's name	: TÜV SÜD (TÜV ITALIA SRL)
Manufacturer's address	: VIA COVIGNANO, 143 47923 RIMINI (RN)	Examiner or examining body's address	: Via Isonzo, 61 40033 Casalecchio di Reno (BO)
Manufacturer's brazing procedure reference No.	: 01	Examiner or examining body reference No.	: 0948/MI/S/T-3222-2013

Results of non-destructive tests agreed by the contracting parties:

Type of test	Result	Report no.	Report date	Laboratory
Visual examination	Acceptable	--	23.04.13	Carried out by TÜV Inspection
Liquid penetrant examination	Not tested	--	--	--
X-Ray examination	Not tested	--	--	--
Ultrasonic examination	Not tested	--	--	--

Results of destructive tests agreed by the contracting parties:

Type of test	Result	Report no.	Report date	Laboratory
Tensile test	Not tested	--	--	--
Bend test	Not tested	--	--	--
Peel test	Not tested	--	--	--
Sectioning test	Not tested	--	--	--
Macrographic examination	Acceptable	--	23.04.13	Carried out by TÜV Inspection

The above mentioned tests have been carried out in accordance with the following standards or other agreed documents:

UNI EN ISO 13585: 2012

Name of manufacturer's representative

Name of examiner or examining body's representative

Stamp and Signature

date: 23.04.13



Stamp and Signature

date: 23.04.13

SPECIFICA DI BRASATURA

Manufacturer's Brazing Procedure Specification (BPS) in according to UNI EN ISO 13585: 2012

Società Company	TERMOCONTROL SNC	Brasatore: Brazer name	BPS. n°: BPS n°	01
Via Address	VIA COVIGNANO, 143	Nato a Been born to	Data: Date	23.04.13
Città e Prov. City	47923 RIMINI (RN)	Data Date	BPAR N°: BPAR n°	
P. IVA Value added tax	02526480401	Documento Document		

PROCESSO DI BRASATURA BRAZING PROCESS		Torch Brazing	
TIPO TYPE		Manuale	
GIUNTO JOINT TYPES	Lap Joint	SCHIZZO SKETCH 	
Tolleranza tra le due parti JOINT CLEARANCE	0,3 ± 0,5 MAX		
Lunghezza di sovrapposizione LENGTH OF OVERLAP	12 mm.		
Altro OTHER			
MATERIALE BASE BASE MATERIAL			
Materiale base MATERIAL SPECIFICATION	1) EN 12449: CU DHP		
	2) EN 12449: CU DHP		
Tipo e grado TYPE OR GRADE	31	31	
Spessore: THICKNESS	1,00 mm.	1,00 mm.	
Diametro del tubo: PIPE DIAMETER	28,00 mm.	28,00 mm.	
Altro: OTHER			
MATERIALE D'APPORTO FILLER METAL			
Tipo: TYPE	CuP 282	Nome commerciale: TRADE NAME	ROTHENBERGER :ROLOT S5
Classificazione: CLASSIFICATION	ISO 17672	Analisi chimica: CHEMICAL ANALYSIS (%)	N.A.
Dimensione e forma: SIZE OR SHAPE OF FILLER METAL		Bacchetta 2 mm.	
POSIZIONE DEL GIUNTO FLOW POSITION			
Posizione di brasatura: FLOW POSITION	VU = VERTICALE ASCENDENTE	Applicaz. materiale d'apporto: METHOD OF APPLYING FILLER METAL	N.A.
DISSODDANTE E TIPO DI ATMOSFERA BRAZING FLUX OR ATMOSPHERE			
Applicaz. del disossidante: METHOD OF FLUX SUPPLY	N.A.	Denominaz. del disossidante: FLUX FORM	N.A.
Tipo e comp. disossidante: FLUX KIND OR COMPOSITION	N.A.	Tipo di atmosfera del forno: ATMOSPHERE FOR FURNACE BRAZING	N.A.
TEMPERATURA di BRASATURA BRAZING TEMPERATURE		TRATTAMENTO TERMICO DOPO BRASATURA POST - BRAZE HEAT TREATMENT	
Valori di temperatura: TEMPERATURE RANGE	intervallo di fusione 645° + 825°	Temperatura: TEMPERATURE	N.A.
Altro: OTHER		Tempo di ciclo: TIME CYCLE	N.A.
TECNICA TECHNIQUE			
Tipo di gas: TYPE OF HEATING GAS	Ossigeno/Acetilene	Metodo di pulizia pre-brasatura: METHOD OF PRE-BRAZE CLEANING	SPAZZOLTURA
Pressione del gas: GAS PRESSURE	4,5 bar - 0,5 bar	Metodo di pulizia post-brasatura: METHOD OF POST-BRAZE CLEANING	/
Ugello diametro e tipo: NOZZLE SIZE AND NUMBER	Punta ugello 160 Lt/h	Altro: OTHER	/
Portata alla torcia (l/h): TORCH	160 Lt/h		
Restrizioni: RESTRICTIONS (ON ACCESS IF ANY)	/		

FIRMA di APPROVAZIONE
SIGNATURE OF APPROVAL

COSTRUTTORE
Timbro e Firma
MANUFACTURER'S STAMP AND COMPANY

MCO 033



servizi
elettrotecniche
di saldatura
FORMARE
SALDARE
QUALIFICARE

SEDE LEGALE

ASOSTS s.r.l.

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T. 0543 721967
F. 0543 729407
CFI 0140144890004

41100 Modena
via Malinotti 27
T. 059 2951132
F. 059 294994

35129 Padova
via Croce Rossa 56
T. 049 8002237
F. 049 8002200

Cariche sociali: 115.000.011
Rag. Imprese al Ferri n. 0348400014
REA n. 289144

info@saldatura.com
www.saldatura.com

DITTA: TERMOCENTROL SNC

LUOGO: Forlì (FC)

PG. 01 DI 01

IDENTIFICAZIONE PROVINO	RAPPORTO DI PROVA DI PIEGAMENTO			RAPPORTO DI PROVA DI MACRO		RAPPORTO DI PROVA DI FRATTURA		
	NUMERO E TIPO DI PROVA (*)	RISULTATO A (*)	N.A.	IDENTIFICAZIONE PROVINO	RISULTATO A (*)	N.A.	RISULTATO A (*)	N.A.
	<input type="checkbox"/> 1 FBB	<input type="checkbox"/> 1 RBB	<input type="checkbox"/> 2 SBB	MM - BPS01	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
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FBB = PIEGHE AL DIRITTO RBB = PIEGHE AL ROVESCIO SBB = PIEGHE LATERALI

NOTE: PROVE EFFETTUATE IN ACCORDO ALLA NORMA UNI EN ISO 5173: 2012 E NORMA DI RIFERIMENTO.

NOTE: PROVE EFFETTUATE IN ACCORDO ALLA NORMA UNI EN 1321 (SALDATORI) - EN 12979 (BRASATORI)

(*) BARRARE IL CASO CHE SI APPLICA A = ACCETTABILE N.A. = NON ACCETTABILE

DATA: 23/04/13

COD. ISPETTORE: AS-04

IL TECNICO ESAMINATORE: ING. ALBARELLI ENRICO

