



# ISTITUTO DI RICERCHE E COLLAUDI

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Notificato CE 0068 - Accreditato SINCERT 047A - Accreditato SINAL 0019 - Competent Body: EMC 2004/108 CE e BT 2006/95 CE

**Autorizzazioni:**

Ministero delle Infrastrutture e dei Trasporti per legge 1086 - Ministero dell'Università e della Ricerca Scientifica e Tecnologica per Legge 46/82 - Ministero delle Attività Produttive - Ministero dell'Interno per prove reazione al fuoco, estintori portatili e carrellati, evacuatori di fumo e calore - Ministero della Salute per analisi in BPL e prove I.S.P.E.S.L. - Regione Lombardia per analisi acque potabili e non - Ministère de l'Industrie, de la Poste et des Télécommunications per pentole a pressione e verifiche di sorveglianza alla produzione

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**English translation of the original italian test report  
(issued on 17/03/2008 - request of 13/03/2008)**

Rho, 13 March 2008

**BECA ENGINEERING S.r.l.**  
**Via Magnago, 2**  
**20010 BUSCATE (MI)**

**TEST REPORT No. 851-2008**  
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NPA 359/08

**SUBJECT:** Tests on connecting flue pipe.

Order no. 024/08/cl dated 26/02/2008 - DDT no. 48 dated 27/02/2008

On 27 February 2008 our laboratory received no. 1 enbloc non-rectilinear connecting flue pipe, length 2700 mm, in composed material (glass fibers and particular thermosetting resins), identified "**HT 1000 DN250**", to be submitted to:

- thermal performance test at 1000°C according to standard UNI EN 1856-2:2006 pt. 6.2.1 and standard UNI EN 1859:2007 pt. 4.5.3.2;
- gas tightness test, according to standard UNI EN 1856-2:2006 pt. 6.3 and standard UNI EN 1859:2007 pt. 4.4 for negative pressure chimneys.

Test methods and results are reported in the following page.

Test performed in the period from 10 to 13/03/2008.

The present test report refers only to the tested sample and it can be reproduced only in its full version.

Laboratory technician

Technical Manager



## TEST METHODS AND RESULTS

### GAS TIGHTNESS TEST (pt. 6.3 - UNI EN 1856-2:2006)

Test performed according to method reported on standard UNI EN 1859:2007 pt. 4.4., increasing airstream until reaching 40 Pa pressure into the flue pipe.

Test has been performed after the thermal performance test.

	<i>pressure (Pa)</i>	<i>leakage rate (L/s*m<sup>2</sup>)</i>	<i>limit (L/s*m<sup>2</sup>)</i>
after test at 1000 °C	40	0,58	<2,0

Relating to gas tightness test, flue pipe type HT 1000 DN250 has been classified in pressure class N1.

### THERMAL PERFORMANCE TEST (pt 6.2.1 – UNI EN 1856-2:2006)

#### *TEST AT 1000°C*

Test has been performed with gas temperature of 1000 °C according to thermal shock method reported on standard UNI EN 1859:2007 pt. 4.5.3.2

The following temperatures has been recorded, expressed in °C

Room T area A	35,9
Room T area B	23,7
Hot gas T at 50 mm before the chimney entrance	1003,7
Hot gas T at 1 m above the chimney entrance	682
Hot gas T at 2 m above the chimney entrance	604
External wall T at 1 m above the chimney entrance	420,1
External wall T at 2 m above the chimney entrance	331,2
Room T at 1 m above the chimney entrance	29,5
Room T at 2 m above the chimney entrance	21,8
Room T at 3 m above the chimney entrance	17,9

*NOTE: reported values are the maximum temperature reached in all the position required and identified in standard UNI EN 1859:2007.*