

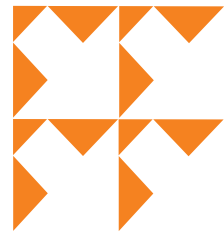
# C D W G

CEAM  
Differentiated  
Wires  
Gauge

Patented technology Patent No. PI2003A000103



The power of ideas



CEAM Control Equipment

Temperature Sensors Division

## The Observation:

Over the years observing the broken probes that came back to our company for regeneration, we found that in all applications, both glass-making, and ceramics it emerges always that the probes have only the final and exposed to the process part, worn or even missing, but with all the rest, then for most of the remaining length of the filament, still perfectly intact and functional, the sensors are worn out precisely in the only exposed and stressed part, which typically represents from 20% to a maximum of 35% of its length.

So since it is well known that the duration of a probe is determined by both the quality of the external protection (sheath) that must be suited to the process, but also and especially by the diameter of the measuring filament, which then in the case of the probes in precious metals is also the parameter which strongly influences the price and is often chosen with the logic of the lowest cost on the purchase, without considering that a probe more suitable for the use is definitely more expensive, but its durability makes it actually cheaper on long term, and this thing is incomprehensible, as for example no taxi driver would ever buy for his work the cheapest car but perhaps unreliable, preferring the more reliable and durable one, well knowing that he is paying it a higher price, but on the long run it is still the best deal for him.

## The Idea

So we studied the problem and thanks to our know-how and the proverbial fantasy, we have developed a new technology that allowed us to achieve the goal that seemed impossible to reach, that is, it allows to make compatible an increased sensor reliability with the maximum economic savings

## Our Solution:

Thus was born the patented technology CDWG that stands for **CEAM Differentiated Wires Gauge** (Patent No. PI2003A000103)

The idea is simple, but original, simply by using a filament with different diameters on the two parts of the probe, that is to distribute the greater diameter and more robust in the terminal part which is also the most stressed, and a smaller diameter and more economical for all the rest of the probe, since it only serves to transmit the signal and is not at all stressed.

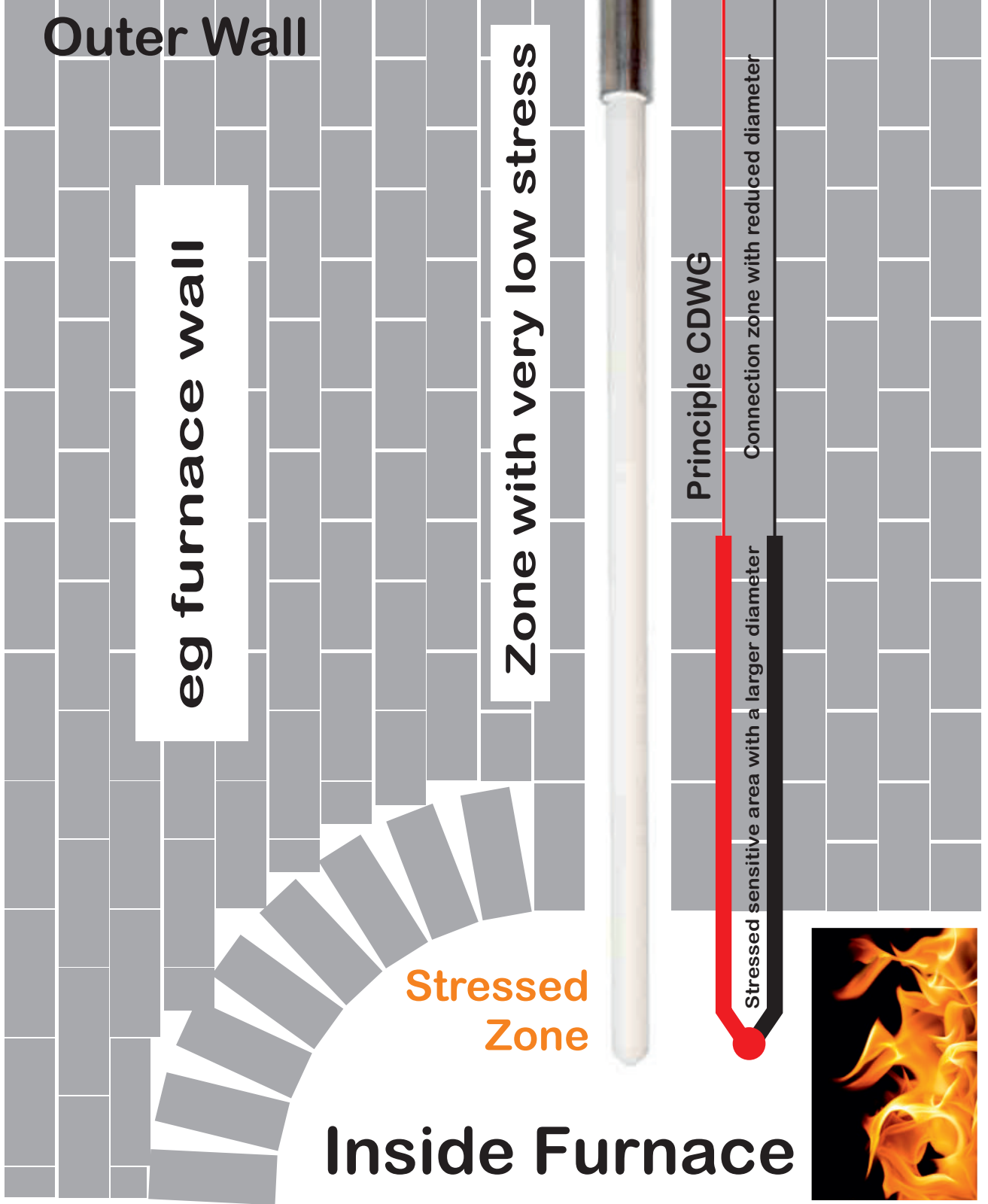
The rest of the work is done by a mechanical construction and the choice of external protection made in a professional way and without compromise, using the best materials that only a company with over 50 years of history and successes can do.

The result is a probe with a very competitive price thanks to a lower amount of precious metal, while maintaining a duration equivalent if not superior to traditional probes thanks to a robust filament and without compromise in the Stressed part where it is really needed.

Thanks to this new technology it is possible to rethink the sensors without compromise or market conventions, and you can also get to use filaments with diameters much higher than the market standard, particularly suitable for intensive use, without waste and / or incompatible costs.



# CDWG Ceam Patent PI2003A000103



# MANAGEMENT SYSTEM CERTIFICATE

Certificato No./Certificate No.: 36954-2009-AQ-ITA-SINCERT Data prima emissione/Initial date: 02 luglio, 2009 Validità/Valid: 19 giugno, 2015 - 02 luglio, 2018

Si certifica che il sistema di gestione di/This is to certify that the management system of

## CEAM CONTROL EQUIPMENT S.r.l

Via Val d'Orme, 291 - 50053 Empoli (FI) - Italy

È conforme ai requisiti della norma per il Sistema di Gestione Qualità/  
has been found to conform to the Quality Management System standard:

### UNI EN ISO 9001:2008 (ISO 9001:2008)

Questa certificazione è valida  
per il seguente campo applicativo:

Progettazione, produzione, installazione e assistenza di termocoppie, forni di taratura, componenti e sistemi di regolazione di processo. Erogazione di servizi di taratura di trasduttori per temperatura, pressione, umidità, resistenza elettrica, tensione e corrente e relativa strumentazione industriale e analizzatori di combustione  
(Settore EA: 19)

This certificate is valid  
for the following scope:

Design, production, installation and assistance of thermocouples, furnaces assembly of components for control equipments and system process regulations. Calibration service for temperature, pressure, humidity, electric resistance, voltage, current transducers and relatives industrial instruments and combustion analyzer  
(EA Sector: 19)

Luogo e Data/Place and date:  
Vimercate, 19 giugno, 2015



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For the Certification Body

Vittore Marangon  
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Member of Ceam Group

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