

## THE PERFECT 'SOLUTION' FOR THERMAL ANALYSIS AND TEMPERATURE MEASUREMENT



**QUALITY BEYOND SPECIFICATIONS** 



Digital Temperature Indicators with temperature latching MHD-136 Suyash

Cable

## Temperature Indicators

Lance Tip Holder Mark VII / Male

|                                       | Micro processor based<br>Portable Temp. Indicator<br>HH-136 | Micro processor based<br>Wireless Portable<br>Temp. Indicator<br>WHH-136 | Micro processor based<br>Mains Temp. Indicator<br>MHD-136 |
|---------------------------------------|---|--|---|
| Temperature Measuring<br>Range        | 500°C to 1760°C   | 500°C to 1760°C  | 500°C to 1760°C   |
| Operating Temperature<br>Range        | 0 to 55°C   | 0 to 55°C  | 0 to 55°C   |
| Accuracy                              | ± 3°C   | ± 3°C  | ± 3°C   |
| Supply Voltage                        | 5.5 V DC<br>4 AA size Ni/Cad battery                        | 5.5 V DC<br>4 AA size Ni/Cad battery                                     | 110/230 VAC 50 Hz   |
| Housing                               | Aluminium   | Aluminium  | M. S.   |
| Thermocouple Element                  | Pt/PtRh 10% & 13%   | Pt/PtRh 10% & 13%  | Pt/PtRh 10% & 13%   |
| Calibration                           | IPTS 68   | IPTS 68  | IPTS 68   |
| Display                               | 10 mm LED   | 10 mm LED  | 100 mm LED  |
| Memory                                | 100 Readings<br>(1000 Readings on request)                  | 100 Readings<br>( 1000 Readings on request )                             | 256 Readings  |
| Facility to connect printer, computer | Provided  | Provided   | Provided  |
| Out put Signal                        |   |  | RS 232  |





Products with CE marking

Wireless Portable Indicator WHH-136 | Gateway & Router | Various Displays

Peak Latch Temp.Indicator MHD-136 | Gateway & Router | Various Displays

Industry 4.0 Compatible Data Compilation And Analysis

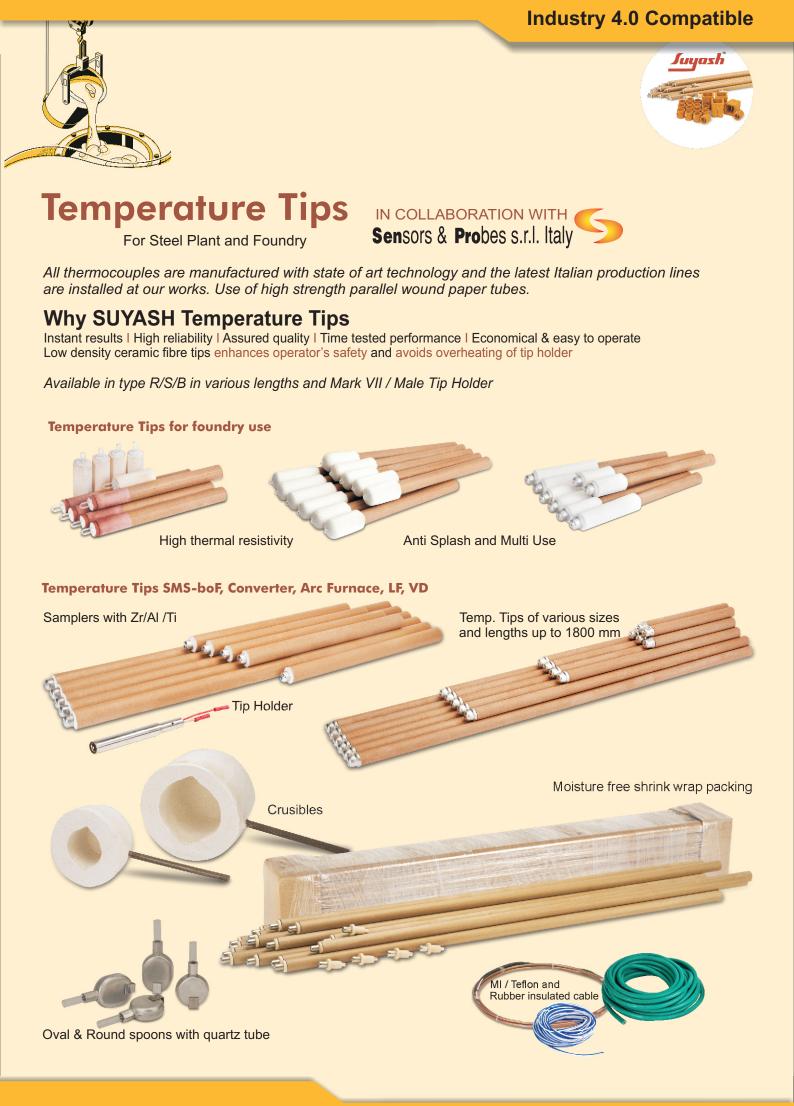


Wireless Portable Indicator - WHH-136

Portable Indicator HH-136



Jumbo display with wire or without wire (Wireless communication)







Oxilab<sup>©</sup>

Display | Gateway | Oxylab



| Steel making plants applications |                         |                      |     |                           |  |  |
|----------------------------------|-------------------------|----------------------|-----|---------------------------|--|--|
| Oxyprobe<br>Model                | Applications            |                      |     | Suyash<br>Instrumentation |  |  |
|                                  | Electric Arc<br>Furnace | Induction<br>Furnace | BOF | OXYLAB                    |  |  |
| Oxyprobe<br>Oxypro OM            | >>                      | >>                   | >>  | \$                        |  |  |

Low PPM (less than 30 PPM) and High PPM probes available.

Type S R or B Platinum calibration.

Measure to 1750°C type S and R, 1800°C type B.

Get very quick, reliable and accurate Carbon prediction in BOF and EAF.

Help to control the de-oxidation in steel and in ductile iron.

Non splash protection in different lengths.



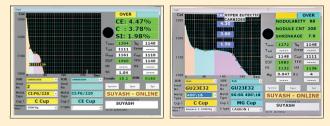
Suyash



# Suyash ONLINE<sup>©</sup> SG Iron & Cast Iron

#### **Salient Features**

- Job name, heat number, Iron type stored with curve for data analysis.
- Various target levels are set for each job to alert the operator.
- Detects several points on cooling curve to understand behavior of solidification.







## For S G Iron

#### Features with Carbon cup

- Can analyse composition of very high CE values. Target levels for each job to alert the operator.
- Job, Heat / Melt number, Iron type are stored for data analysis.
- Job-wise charge calculation can be seen.
- Facility to feed composition of Steel, Pig iron, Returns etc. to calculate charge mix.
- Recommended alloy addition from the results of Spectrometer/Carbon Silicon Analyser is displayed.

#### Features with CE cups

- Nodule count
- Hypo-Eutectic, Eutectic Hyper- Eutectic or their combination is detected.
- Carbides detection
- Residual Magnesium detection

#### For Cast Iron

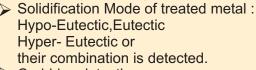
#### Features with Carbon cup

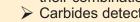
- Job-wise charge calculation can be seen.
- Facility to feed composition of Steel, Pig iron, Returns etc.in order to calculate suitable charge mix.
- Complete Log sheet is maintained.
- Recommended additions are displayed after cup is poured.
- Micro shrinkage tendency is predicted by detection of low melting point alloys like phosphide eutectic etc.
- Hardness and Tensile strength of unalloyed cast iron.

#### Features with CE cups

- Prediction of type of graphite (microstructure Type A, C, D /E)
- Undercooling & Recalescence
- Eutectic Cell count
- Degree of saturation
- Shrinkage tendency
- Chilling tendency
- Inoculation factor

- > Nodularity
- Secondary Shrinkage







Carbon Silicon Analyser<sup>®</sup> I Gateway & Router I Various Displays

MOST ECONOMICAL WAY FOR INSTANTANEOUS AND DEPENDABLE ANALYSIS OF MOLTEN GREY / S.G./ MALLEABLE IRON BEFORE POURING ......

Specially designed equipments considering extreme foundry conditions. Online temperature indication during the process. Self diagnosis for various errors during process. Practically maintenance free.

|                                    | CSA Model III                      | Suyash ONLINE <sup>©</sup>  |  |
|------------------------------------|------------------------------------|---|--|
| Accuracy<br>( Specified or better) | CE ± 0.05<br>C ± 0.05<br>Si ± 0.10 | $\begin{array}{c} {\sf CE} \pm 0.05 \\ {\sf C} \pm 0.05 \\ {\sf Si} \pm 0.10 \end{array}$ |  |
| Recommended<br>Use                 | C.I./S.G./M.C.I.                   | C.I./S.G./M.C.I.  |  |
| Temp. measurement<br>with Tips     | Provided                           | Provided  |  |
| Number of<br>Channels              | 3                                  | 3   |  |
| Graphical PC<br>interface          |                                    | Provided  |  |
| Data transfer to<br>computer       | Provided                           | Provided  |  |
| 4" Jumbo<br>Display                | Optional                           | Optional  |  |
| Processing time                    | @ 45 Sec.                          | @ 45 Sec.   |  |
| Hardness /<br>Tensile Strength     | Provided for Cl                    | Provided for Cl   |  |
| Printing                           | ← Serial Port & Parallel Port →    |   |  |
| Operating Range                    | - 20 to +55°C                      | - 20 to +55°C   |  |
| Voltage                            | 110 / 230 V AC                     | 110 / 230 V AC  |  |
| Frequency                          | 50/60Hz,±2%                        | 50/60Hz,±2%   |  |
| Display                            | 25 mm LED Hi Glow Type             | User Provided PC  |  |
| Memory                             | 96 Readings                        | User Defined  |  |
| Dimensions ( mm )                  | 350 X 180 X 230                    | 350 X190 X 270  |  |
| Net Weight                         | 6.5 Kg.                            | 7.5 Kg.   |  |

Products with CE marking

Juyash





Environment friendly design

State of art automation to ensure high level of consistency.

#### **Patented Technology**

India Patent No. 222847 Malaysia Patent No. MY-146981-A China Patent No. ZL 2007 8 0043601.9 Australia Patent No. 2007301495 EU Patent No. 2067032 Quicker thermal analysis is essential for modern / fast melting furnaces



New Super Cup

Squre Cup

|                             | NEW SUPER CUP              | SQUARE CUP                   |
|-----------------------------|----------------------------|------------------------------|
| Time Required               | 30-35 Seconds              | 150 Seconds                  |
| Metal in the<br>Cup         | 30 gms                     | 240 gms                      |
| Storage &<br>Transport cost | 1                          | 4                            |
| Energy Saving               | Yes                        |                              |
| Accuracy                    | Consistent with<br>High CE | Inconsistent<br>with High CE |

Sampling Crucible available in different diamentions



Suyash Solutions Private Limited (India) started in 1988, when two young engineers, just graduated from renowned engineering college in India, with a desire to design their own products and market, got together and launched a company.

#### That was the beginning of Suyash Solutions Pvt. Ltd.

Situated in Pune, an IT and Auto hub, 150 km from Mumbai, India, SUYASH is a technology driven organization. SATISH KELKAR and ANANT KAKATKAR, the two Promoters and Directors specialized themselves in Thermal Technology. They mainly targeted Steel and

Iron Market. Their design competence and the back up of Research & Development gave birth to Temperature Measuring Instruments, Carbon Silicon Analysers, Temperature measurement tips and Carbon Cups used for chemical analysis, Oxylab and Oxyprobes for measurement of dissolved oxygen in steel.



Unique design of Carbon Cups with its state of the art software, encouraged SUYASH to go for world wide Patent. With all the systems as well as SAP in place, ISO 9001 certification and CE marking has been a natural outcome.

To accelerate the process of further improvements in Automation, Manufacturing Techniques and addition to Product Range, both the directors decided to join hands with an Italian company **SENSORS & PROBES Srl. Italy.** This major decision has given SUYASH improvement in productivity, elimination of possible human errors and addition of established high temperature measuring thermocouples for steel along with Oxygen Measuring Probes.

Ultimate desire of promoters, to go global, has now started taking shape. Appointment Of agents in Indonesia, Italy, Malaysia, Philippines, Thailand, Spain, Turkey, UAE & USA is just a beginning.





Survey No.145, Pune-Saswad Road Near Railway overbridge, Fursungi **Pune 412308, INDIA Phone:**+91 9822060278 & +91 9822060279 **Email : hopune@suyashsolutions.com Web:** www.suyashsolutions.com

#### Sales & Service:

Agra- 81269 31395, Ahmedabad- 93773 92925, Bangalore- 93448 51324, Belgaum- 93424 12677 Chennai- 93855 16277, Coimbatore- 93448 51324, Delhi-93574 16579, Hyderabad- 98220 75819 Indore-93710 11575, Jaipur- 93773 92925, Jalana- 93702 85333, Jalandhar- 93574 16579 Kolhapur- 98220 75819, Kolkata- 93311 21590, Nagpur- 93710 11575, Raipur- 93311 21590 Rajkot- 93773 92925, Trichy- 93448 51324

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