



Temperature Sensor Technology

news

Issue - 2

Jan. 04

Visit us at!



Dear Customers,

We from Team Tempsens wish you a very happy and prosperous new year. We are thankful for your continued support since last 30 years.

We have taken strides with achieving various projects in Glass, Steel and Power sectors. Today the company is well positioned to attend the unique and demanding needs of our customers. This has been possible with a high level commitment of our employees. Our team is advancing towards their goal of 40% growth comparing to last year.

Your response to our first news letter has highly encouraged us. Hope our effort in this line is providing you the information about our activities and developments in the field of "Temperature Sensing Technology".

As a part of our customer contact program, we are participating in ELECRAMA 2004 and Glass India 2004. These are the two major exhibitions in the field of instrumentation and Glass technologies.

You are invited to visit our stall at ELECRAMA 2004 (Stall No. : E50, Hall No. 18, 3rd to 7th February 2004 at Pragati Maidan, New Delhi) and Glass India 2004 (Stall No. : 22, 6th and 7th February 2004 at Exhibition Centre, Goregaon, Mumbai).

We shall try to explain and demonstrate you our products line and facilities. You can have interaction with experts from our foreign collaboration partners who shall help you for your temperature sensing solutions.

Your recommendations and suggestions are our motivation.

Regards

NK Pande, V.P. Rathil
P.S. Telesara, C.P. Talesara

GLASS INDUSTRY Special Temperature Sensors

The Brand "Made In India" is capturing the global market. With our continual efforts to meet our customers demand, and the trust of our customers, today we are providing Special Thermocouples which were being imported till date, at a very economic price and same quality. Our effort and success in this line helped our customers to get the sensor immediately at economic price and to reduce their stock level.

We provide fully digital Radiation non-contact pyrometers from IMPAC Germany, for all application in glass industry. We are proud to state that, Indian Glass manufacturers irrespective of their size and demand, are being catered by our quality products and services.



Glass Customers Those who Trusted on us

MOHAN BREWERIES AND DISTILLERS
SURYA ROSE LIMITED
BOROSIL GLASS WORKS LIMITED
BHBI B K A GLASS INDUSTRIES LTD.,
GE LIGHTING INDIA PVT LTD.
THE MAHALAKSHMI GLASS WORKS LTD
THE HOD-ASHI GLASS CO. LTD.
HINDUSTAN SANITARYWARE & INDUS. LTD.
VIGORON NAMADA GLASS
PUNJAB ANAND LAMP INDUSTRIES LTD.,
HALDYN GLASS LIMITED,
ADARSH KANCH ODGOV (P) LTD.,
HALDYN GLASS GUJARAT LIMITED,
GUJARAT GLASS LIMITED
GOA GLASS FIBRE LTD.
BELGUM GLASS & CERAMICS (P) LTD.,
PRAGATI GLASS WORKS LTD
PHEPS INDIA LIMITED,
HIND LAMPS LTD.,
EMPIRE INDUSTRIES LTD.
ADIGLASSPAC
HOTLINE GLASS LIMITED,
GUJARAT GLASS LIMITED,
EMPIRE INDUSTRIES LIMITED,
NEUTRAL GLASS AND ALLED IND LTD
ACE GLASS CONTAINERS LIMITED,
UNIVERSAL GLASS
BISAZZA INDIA LIMITED,
SANCOR GLASS LIMITED
SRI BADYANATH GLASS WORKS P. LTD.,
TIGER SONS GLASS INDUS PVT. LTD.,
HINDUSTAN NATIONAL GLASS AND LTD.
TRIVENI GLASS LIMITED,
HINDUSTAN NATIONAL GLASS AND LTD.
PINO BISAZZA GLASS PVT. LTD.,
LA OPALA NO LIMITED
BDI GLASS INDUSTRIES PVT. LTD.,
BURGER BLOCK & CHANA GLASS WORKS
CENTRE FOR THE DEV. OF GLASS INDUS.
HIND GLASS INDUSTRIES
LANSER & TOURNO LIMITED,
BHARAT GLASS TUBE LTD
HANUMAL GLASS LIMITED,
EXCEL GLASSES LIMITED,
BRIHA NOK INSULATORS PVT. LTD.,
ACE GLASS CONTAINERS LIMITED,
ADVANCE LAMP COMPONENT PVT. LTD.,
OSRAM INDIA PVT. LTD.,
BRIHA NOK INSULATORS PVT. LTD.,
CEYLON GLASS COMPANY LIMITED,
GOPAL GLASS LIMITED,
SHANVIK GLASSTECH PVT. LTD.,

"We bet on people."





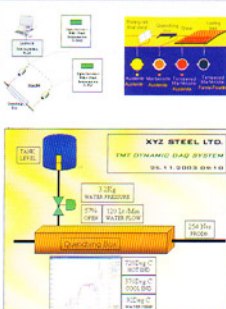
FULLY AUTOMATED QUENCHING SYSTEM IN STEEL ROLLING MILL OF TMT / THERMAX PROCESS

TMT/THERMAX is the process in which the ribbed bar is heat-treated in three stages during the production process itself. The desired level of strength is achieved by heat treatment, it offers excellent weldability, ductility and earthquake resistance and good fire resistance.

Temperature control plays a very important role in the heat treatment process, the 'Quenching' begins when the hot rolled bar leaves the final mill stand and is rapidly quenched by a special water spray system. This converts the surface layer of the bar to a hardened structure called 'Martensite' while the core remains austenitic.

The temperature measurement is done by non contact method using the state of art **Impac Germany make IGA 5/**

IGA 200 pyrometers. These fully digital Pyrometers assures, high accuracy, small spot size and fast response. The Pyrometers are installed at the entry and the exit of the quenching box. The system provides temperature display, data logging, graph, trending at Control room. We have tied up with the major consultant in this field and offer fully automated, quenching system for Steel Rolling Mills. We are also offering PLC system, with dynamic graphical mimics. The water flow is controlled by operating the control valve by PID controller built in the PLC and the logic for minimum water flow level for particular grade and size of rods. The PLC system comes with Pyrotech make state of art control desk which offers unmatched ergonomics and usability.

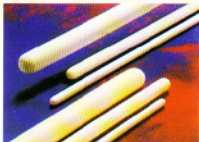


Ceramic Tubes



We offer ceramic tubes and insulating rods from M/s. Ceram Tec Germany who manufactures ceramic tubes for wide range of applications especially for glass industry.

At temperature above 1500°C (in reducing atmosphere above 1400°C) and in case of extreme corrosive environment the material Rubalit C 799 (KER 710) is the solution.



Material Properties (Rubalit C 799)

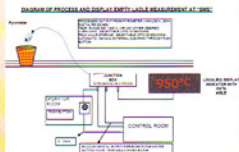
Properties	Units	Rubalit 717
DIN CDE 0335/IEC 672	-	C 799
Al ₂ O ₃ -content	%	99.7
Color	-	yellow
Specific gravity	Kg/dm ³	3.85
Water absorption	%	0
Flexural strength	N/mm ²	360
Max. Temp. Use*	°C	1700
Thermal conductivity	W/m ² K	28
Thermal expansion liner coefficient		
20-100°C	x10 ⁻⁶ /°C	5.4
20-300°C	-	6.5
20-600°C	-	7.7
20-1000°C	-	8.5
Volume resistivity		
200°C	Ohm.cm	10 ¹⁵
400°C	-	10 ¹³
600°C	-	10 ¹¹
Temperature stability		good/satis.
Chemical resistivity		Very good
Te value **	°C	1000
Main areas of application		<ul style="list-style-type: none"> - Protection tubes - Insulating rods - Insulating tubes for thermo elements - Resistance temp. Detectors - Tube for chemical process applications
Size OD x ID	mm	24x18 20x15 15x10 12x8 10x7 9x6 8x5 6x4
Length	mm	Standard upto 1500 Special upto 2500

* The actual maximum application temperature is dependent on the geometry of the product and the area of application.
** Te value is the temperature at which a cubic centimeter has a resistance of one megaohm.

CeramTec
Germany



STEEL PLANT SMS Empty Ladle Temp. Measurement



A company with Steel Back Bone.

Since the inception, we are catering to various temperature measuring requirements of our Steel customers. We are now providing solutions with high accuracy, special temperature measuring instruments like Radiation non-contact pyrometers.

We have executed empty ladle temperature measurement by Radiation non-contact pyrometers at TISCO, SAIL Bhilai, SAIL Durgapur. The system ensures only empty ladle temperature measurement eliminating the unwanted measurements like slag pot, hot metal ladle etc. The system is

incorporated with Large display indicator with data hold and automatic refreshing on next reading, Junction box with push button, special mounting and cooling arrangement to withstand harsh steel industry application.

End of an Era of Monopoly !

Our principal M/s.Impac Germany always understand the competition in Indian market. With their continued assistance, we have executed a major order for portable pyrometers.

POWER PLANT Special Thermocouples & RTDs for Mill, Flue Gas Bearing, Turbine, Combustion Chamber.

With modern production, testing and calibration facilities and experience of 3 decades, we are one of the largest supplier for power plant temperature

sensor and supply custom built sensors and cater them with routine requirement of spares and consumables.



15, 20 & 30 Mtrs long Mineral Insulated Thermocouple "K" type for super heater and drum metal temperature. Imported from ISOMIL Germany with special tolerance.

Heavy Duty Thermocouple with thermowell with special tungsten carbide coating for high abrasive application at Flue gas & Mills. We also supply solid sintered tungsten carbide thermowells for above application.



Projects Executed

S. NO.	PROJECT	CONSULTANT / OEM
1.	P.S.E.B. ROPAR	DESIGN/ESPL
2.	K.T.P.S., KOTA UNIT-5	DCU/IL
3.	I.B. VALLEY T.P.S.	DESIGN/BKT
4.	G.A.I.L	ELU/BKT
5.	M.S.E.B. CHANDRAPUR UNIT-7	B.H.E.L.
6.	G.E.B., GANDHINAGAR	B.H.E.L.
7.	G.E.B. WANKSORE	B.H.E.L.
8.	E.T.P.S., CHENNAI	B.H.E.L.
9.	S.T.P.S., SURATGARH UNIT-1&2	DCU/IL
10.	NEELANCHAL ISPAT, RAIPUR	MECON/IL
11.	S.T.P.S., SURATGARH UNIT-3&4	DCU/B.H.E.L.
12.	JINDAL POWER, RAJGARH	MECON/ABB
13.	S.T.P.S., SURATGARH UNIT-5	DCU/IL
14.	K.T.P.S., KOTA UNIT-6	DESIGN/IL
15.	T.D.T.P.S., PANIPAT UNIT-2	B.H.E.L.
16.	HAJIA T.P.S., WEST BENGAL	B.H.E.L.
17.	AHMEDABAD ELECT. CO., GUJRAT	N.A.S.L.



Dry Block Calibration Bath



Tempens Portable Dry Block Calibration Bath CALSys 650/1150 is designed to provide Stable and Accurate Temperature to enable professionals to calibrate temperature sensing devices by comparison method. CALSys 650/1150 is used to calibrate Thermocouples, RTDs, Glass thermometer, temperature switches etc.

SPECIFICATIONS

Temp.	50 to 650°C	1150°C
Resolution	1°C	
Heating Time	30 min.	60 min.
Method of Control	Digital self tuned PID Controller	
Setting	By Front Feather touch switch	
Power	1KW, 230 V, 50 Hz	
Calibration Volume	φ 32mm x 80mm long	
Insert Dimension	2 x φ 4.5 + 2 x φ 6.4	
Insert Option	As per Customer Requirement	
Weight	7.8 Kg.	10 Kg
Dimensions	300 (H) 290 (L) 220 (W)	376 (H) 268 (L) 220 (W)

New Website Launched

www.tempsensindia.com

Check our new website which contains all details of the instruments being offered by us. It covers most of the range of the Thermocouples, RTDs, Noncontact Pyrometers, Thermal Imager. We look forward to your feedback regarding this. Also find useful downloadable software and charts for Thermocouples, RTDs, and non contact pyrometers. Also download "TEMPERATURE CALCULATOR" on free of charge.

Expanding the Horizon

To meet our customer demand in time, we are expanding our production facility by incorporating new building, machinery and man power in the vicinity of our existing facility.



Proposed expansion of Tempsens



Portable, Black Body pyrometer Calibration Source 350 to 1200°C

The TempCal 1150 Black Body calibration source is a small furnace for calibrating radiation pyrometers. The temperature of the furnace is set on a PID controller. This unit features emissivity of 0.99, thus offering the closest approximation of a target surface that is a perfect emitter of infrared energy. The calibration furnace is available in three versions, standard, portable, 2 part detachable.

SPECIFICATIONS

Temperature Range	: 350 to 1150°C
Accuracy	: 0.3% of reading +/- 1°C
Temperature resolution	: 1°C
Stability	: 1°C per 8 hours period
Heated Cavity	: Silicon Carbide with cylinder 120 Deg Conical end
Aperture Diameter	: 30mm
Temperature Sensor	: Precision Platinum Thermocouple
Method of Control	: Digital self tuned PID Controller
Heating rate	: 15 °C / Minute
Cooling	: Fan Cooled
Warm up time	: 60 Minutes from ambient to 1200 Deg C
Operating Temperature	: 0 to 50°C
Power Requirement	: 220 VAC, 2 KW
Dimensions	: 390 (H) x 250 (W) x 250 (D) mm
Weight	: 18.5 Kg
Software	: Data logging and remote set point (Optional)



Special Solution

On-site calibration of Radiation non-contact pyrometers

We offer on-site calibration of radiation non-contact pyrometers by using highly accurate master pyrometers and portable black body source at very economic price. This facility helps our customer to reduce idle time due to non-availability of sensors, reduction in stock level, reduction in damage of instrument in transit.

Thermography Service-predictive preventive maintenance

We just not doing the thermography as others, but also help you to reach to the root cause of the problem to prevent reoccurrence of the problem. The method of problem analysis by our principal consultant is appreciated throughout the country and abroad. We help you to set up your own trained team with expertise and required instrument at economic price for predictive preventive maintenance.



SELECTING AN INFRARED CAMERA



IRISYS



- Identify your application
- On site field demonstration
- Fit for purpose
- Ease of use
- Software and report making
- Experience and service
- Training and support
- Buy from a reputed company



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