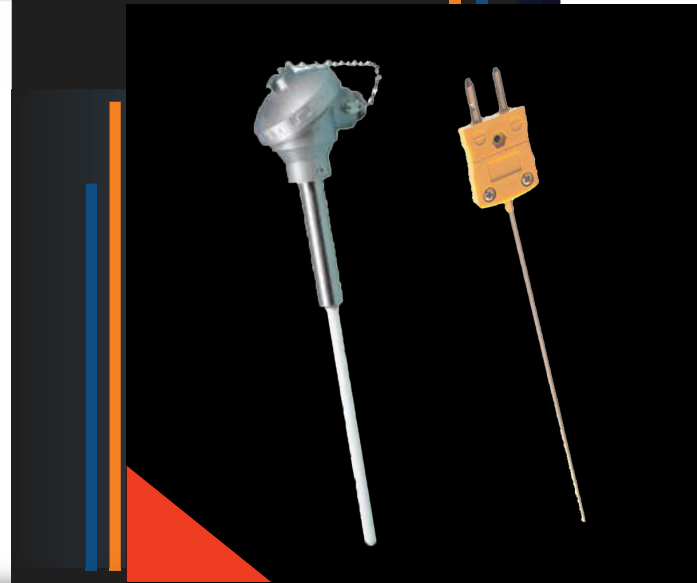


PRECISION, LOW DRIFT THERMOCOUPLES FOR HEAT TREATMENT PROCESS



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ABOUT US

Eureka Engineering Enterprises (Quality temperature sensors since 2000), is an ISO 9001-2015 certified, leading manufacturer of Temperature sensing and control systems founded by technocrats with their factory located at MIDC Bhosari, Pune. The company handles global, as well as national clientele. The factory is equipped with dynamic and autonomous machinery like Deep Hole Drilling Machine, CNC Turning Machine, Lathe Machines, TIG Welding for accurate machining. Their manufacturing program in a state-of-the-art manufacturing facility includes Thermocouples (K, N, J, N, R, S, T, E, and B types), Resistance Temperature Detectors (RTDs), Thermowells (Bar stock, Fabricated and Customized), Temperature Indicators, Controllers, and PID Controllers, etc. Eureka stands on three central pillars of – Quality, Value, and Delivery.

Leading manufacturer of Temperature sensing and control systems founded by technocrats



2000



State-of the art manufacturing factory located at MIDC Bhosari, Pune

THREE PILLARS FOR EUREKA MOMENT

Quality - Value - Delivery



We are an ISO 9001:2008 certified company specializing in manufacturing and supplying temperature measurement and control systems. We help improve productivity and provide growth opportunities to employees and suppliers while adhering to business philosophy of Total Quality Management. We have appropriate infrastructure & technical expertise supported by qualified and experienced engineers.



At Eureka, we believe in providing quality at optimum cost. Our manufacturing program includes Resistance Temperature Detectors (RTDs), Thermocouples (J, K, N, R, S, T, E, and B types), Thermowells (Bar stock, Fabricated and Customized), Temperature Indicators, Controllers, and PID Controllers etc. Our instruments have been successfully employed in various Process control Industries.



In today's world, speed is the most sought after parameters of reliability. We strive to deliver within proposed time frame and ensure that the delivery of the products are within reasonable duration so that our customers can trust us in long term. Today, we take pride in announcing us as one of the most trusted manufacturers and suppliers of Temperature measurement and control systems.

SINCE 2000

ISO 9001-2015 certified by TUV Nord



CE Marking certification by Ente Certificazione Macchine Srl, Italy



2020



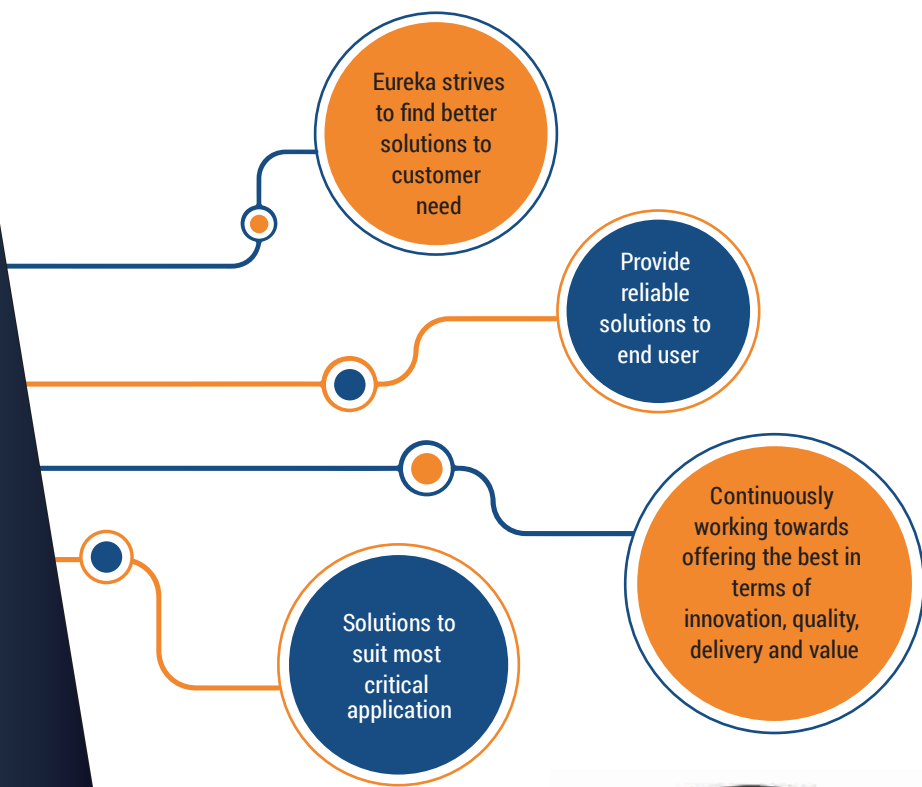
50 + number of employees working to give standard quality products



Annual turnover crosses Rs.83 million

PROPELLING INNOVATIONS

Besides standard products, we have capabilities to fulfill almost any custom design requirement in temperature sensing



At Eureka we thrive to deliver quality products at competitive price and prompt delivery lead by dedicated workforce in a state of the art manufacturing facility where 'Therma' stands as a leading brand manufacturer of Temperature Sensing Instruments



MANOJ KHATAN

Managing Director

HEAT TREATMENT DETAILS

Heat treatment is the process of heating and cooling metals, to obtain desired physical properties. Heat Treatment is being done for Both ferrous as well as non-ferrous metals.

Some Heat treatment procedures make the metal soft, while others increase hardness. They may also affect the electrical and heat conductivity of these materials.

Some heat treatment methods relieve stresses induced in earlier cold working processes.

Heat treating can affect many aspects of the metal including strength, hardness, toughness, machinability, formability, ductility, and elasticity.

The different types of Heat treating are - Hardening, Case hardening, Annealing, Normalizing, Tempering..etc

THERMOCOUPLES IN THE HEAT-TREATMENT INDUSTRY

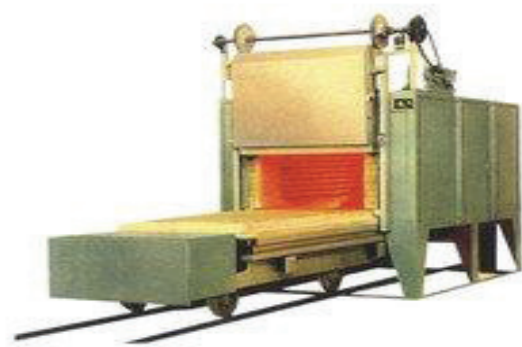
Thermocouples are essential part of Heat Treatment process. The Temperature has to be accurately measured and controlled in Furnaces & Ovens.

Eureka Engineering manufactures highly Accurate Thermocouples with very low Temperature deviation and drift with long service life.

Furnace for Annealing, Quenching, Tempering, etc

Furnaces are single zone and multiple zones heated chambers.

The Temperature ranges up to 1000°C, 1200°C, 1500°C, or 1700°C .



Thermocouples are Designed for Different Ranges of Temperatures. Type K & Type N Thermocouples, 1200 deg C - With Class 1 Tolerance, Mineral Insulated Sensor with Heavy Duty S S grade protection sheath.

Platinum Thermocouple Type S,R .for Temperature from 1200 to 1700 Deg C. with Re- Crystallized Alumina Ceramic sheath, Highly Accurate & Reliable. Calibration Certificate can be provided up on request.



HEAT TREATMENT – AUTOMOTIVE INDUSTRY

An automobile is composed of various Parts & components. Heat treatment is the key technology available today, to enhance the effective use and significantly extend the service life of these parts & Components , such as engine blocks, shafts, cylinder heads, gears, rocker Arms, Suspension, Clutch parts, Crank Shafts, bearings

The Automotive industries demand the highest temperature uniformity, reproducibility and reliability from a heat treatment facility. The primary standard is CQI-9 .

Thermocouples

Eureka Engineering Manufactures Thermocouples meeting CQI-9 qualified Furnace needs and Suitable for Temperature Uniformity Survey -TUS & System Accuracy Test - SAT.

We use Sensor Elements made in Germany , highly accurate with very low deviation and low temperature drift . Special Limit Thermocouples, Type K, N, R & S- for Oven & Furnace .

Meeting : BS -EN IEC 60584-1 . Traceable calibration Certificate is available up on request.

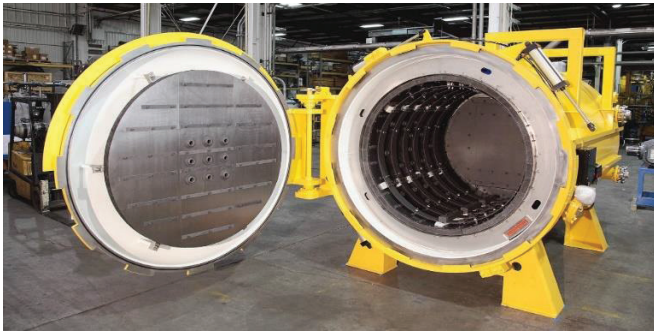


VACUUM FURNACE HEAT TREATMENT

In Vacuum Furnace -Air and other Gases are not present. Therefore, it prevents the metal from Contaminations and Oxidation. Temperature measurement is critical in Vacuum Atmosphere.

Eureka engineering offers exceptional design , Leak Proof Thermocouples to work in Vacuum . Stainless Steel Seal Assembly prevents the atmosphere leaking in to the Furnace.

VACUUM FURNACE



Type N Thermocouple, Mineral Insulated Sensor, up to 1200 Deg C, Class 1 Accuracy, with High Temperature SS protection sheath.
Type R / S Thermocouple up to 1700 Deg C Leak Proof Design with S S Seal Assembly.



Post Weld Heat Treatment (PWHT)

Post weld heat treatment (PWHT) is a controlled Re Heating process of Pipes and other material that have been welded. The welding process can leave a large residual stresses in a material, which can lead to stress corrosion and hydrogen induced cracking.

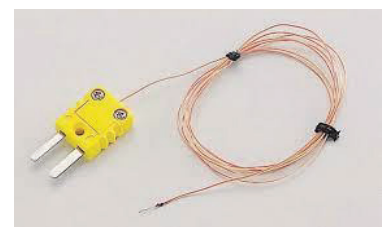
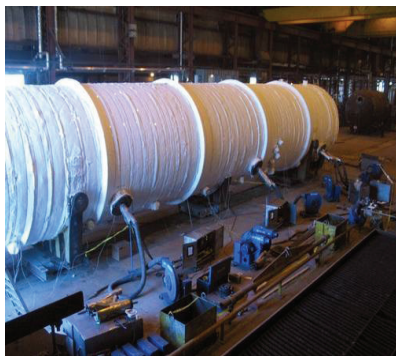
PWHT ensures the reduction of residual stresses, controlling material hardness, and enhancement of mechanical strength.

Post weld heat treatment are done in a furnace or by using an electric resistance or induction-heating equipment.

Thermocouples

Eureka Engineering offers Thin wire Thermocouples, Type K & N , Class 1 Accuracy, ASTM E585 / E 585 M – 01a BS EN 60584-1. Several Thermocouples are attached to the Pipe, based on the size of the pipe. A Recorder is used to record the temperature.

Thermocouple wires are supplied with insulations- Teflon, Fibre Glass, ceramic Fibre and S S Over braid , based on the Temperature requirement.



HEAT TREATMENT IN GLASS INDUSTRIES

Annealing - Lehr Thermocouple:

Since the glass float is continuously cooled over tin bath, significant amount of stress is developed in the glass. The stress is removed to protect it from breaking by Annealing process, in a Furnace called Lehr at 500 deg C.



Temperature sensors for different zones in Annealing Lehr are designed by **Therma Instruments**.

Type K or N, Mineral Insulated, Class 1, Special Limit accuracy Thermocouples. Calibration certificate Traceable to NIST can be supplied up on request.

TEMPERATURE GAUGES

Bi-Metal Gauges: SS Body, Dial 3', 5" & above... 0 to 600 deg c All Angle Type.

Capillary Gages: Gas Filled 3 meter Capillary length with Bulbs of different lengths. Surface & Panel Mount. With Thermowells & Adaptors.



CABLES

INSULATION TYPES

- ▶ **PVC:** Flame Retardant PVC insulation Provides good chemical resistance and suitable up to 105 deg c
- ▶ **FEP / PFA / TFE :** Teflon insulation has excellent resistance to Abrasion, solvent, Chemical and Moisture, Suitable up to 260 deg c
- ▶ **Fiber Glass:** Individual conductors and overall insulated with glass fiber, used in very high temperature, up to 700 deg C. Ceramic Fiber: Extreme high Temperature applications up to 1000 deg C.

THE TYPE OF CABLES

- ▶ Thermocouple Extension Cables & Compensating Cables
- ▶ RTD Cables
- ▶ Control Cables
- ▶ Instrumentation Cables
- ▶ Multi Pair, Multi Core, Twisted, Shielded, Braided & Armored





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