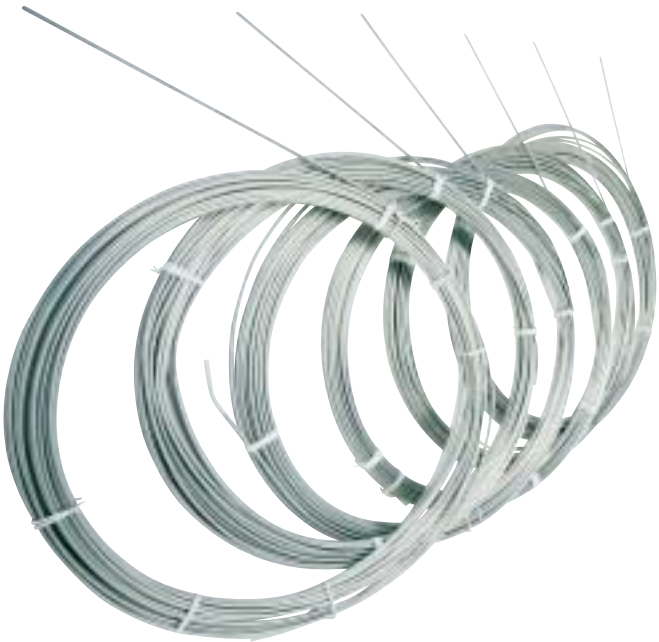
THERMIC M.I. THERMOCOUPLES

THERMIC is a trade name (trade mark registered) of various metal sheathed thermocouples manufactured by us which embody many of the latest improvements over BICC products and have enjoyed a high reputation among users since they were first placed on the market in 1962.

THERMIC cable is an integrated thermocouple material comprised of a metal sheath in which the thermoelectric elements are embeded in highly compacted magnesium oxide (MgO) insulation. The construction guarantees a superb insulating quality and a high resistance to pressure and has, in addition, an excellent flexibility which has been given to it by annealing in a proper method.



SUPERFINE THERMIC M.I. THERMOCOUPLES

Sheath O.D. : 0.25 to 0.50 mm

Features: Rapid response to very small changes in temperature; and is highly flexible.

Because of the small heat mass and high thermal conductivity, it is possible to measure temperatures of even very small objects at high accuracy with the least heat disturbance.

Various types of Thermocouple Assemblies

HT-THERMIC FOR SUPERHIGH TEMPERATURES

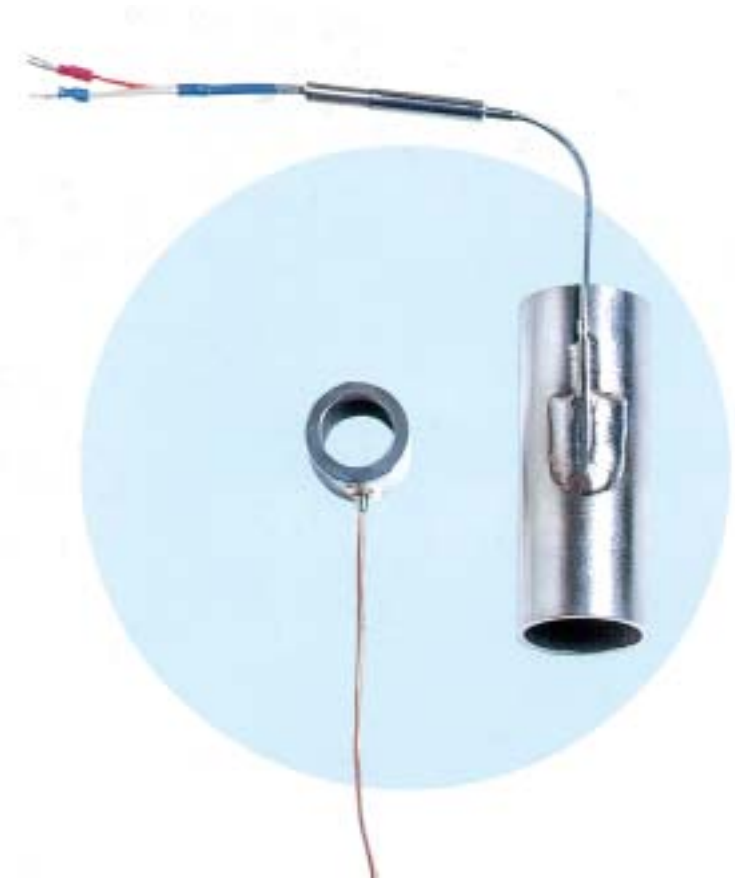
Recently there has been remarkable advance in the technology of heat treatment, surface treatment and sintering at very high temperatures, and the necessity of sensors for measurement of highly elevated temperatures is now widely recognized.

In view of this, we have been deeply involved in the research and delvelopment of the sensors for high temperature applications in appreciation of their importance for precision control technology.

Now based on a unique patented process, we have succeeded in introducing a new Argon sealed-in high temperature thermocouple, Model HT-THERMIC for use under vacuum, inert and H_2 reducing atmospheres, where all the Platinum-Rhodium type thermocouples are severely corroded.

Use of these HT-THERMIC series of thermocouples will enable you to carry out measurement of high temperatures up to 2000℃ over a long period of time in a stable condition.

In 1992, a heavy duty version of HT-THERMIC, “HT-270” has been developed for petro-chemical and other critical high temperature applications. “HT-270” can be used both in moisture free oxidizing and reducing atmospheres up to 1500℃ without need of “Gas Purge” system .



THERMIC M. I. THERMOCOUPLE FOR TUBE SKIN TEMPERATURES

This is a metal sheathed thermocouple specially designed for attachment to the boiler tube surface for true “Tube Skin” temperature.

This improves the durability and accuracy of skin temperature measurement.

This thermocouple offers a great advantage at thermal power stations, and heat exchangers, etc., for accurate measurement of the surface temperature of various types of furnance tubes. It is quite useful from the viewpoint of energy saving and improvement in monitoring deposit of scale inside the tubes.

SPRING-LOADED M. I. THERMOCOUPLE

This is used in cases where a protection tube, for example a thermowell, is employed, to ensure a close contact between the thermocouple and the bottom of the protection tude, and as well as preventing damage to the thermocouple from vibrations.

Our Spring-Loaded THERMIC is of such a construction that allows to simply and easily replace only the thermocouple.

THERMOWELLS AND WELDED PROTECTION TUBES

Equipped with a new efficient Dual-shaft Gun Drilling Machine, we furnish high reliability, solid bar stock type thermowells in various designs.

We are one of the few sources in the world for long thermowells and can produce up to a maximum length of 3000mm at our factory. Rigid inspections are conducted throughout the process including X-ray photograph, dye penetration and hydrostatic tests to ensure the integrity of our thermowells.

Our weld-closed protection tubes are processed by a special hot spinning device developed at our factory. With this technology, perfect uniformity in metal structure and wall thickness of the end closure are ensured to give an optimum service life in the field. Available in every grade of stainless steel, non-ferrous and a variety of high temperature super alloys.

THERMOCOUPLE WIRES OF VARIOUS TYPES

In addition to the standardized thermocouple wires in accordance with the JIS (Japanese Industrial Standards) , IEC, ANSI, ASTM, BS and DIN, such as K, J, E, T, N, R, S, B, and W5 types, we also furnish various types of special thermocouple wires including Nickel-Molybdenum, platinel and cryogenic Chromel-AuFe combinations, etc.

RESIMIC M.I RESISTANCE THERMOMETER

RESIMIC M.I. Resistance Thermometer (trade mark registered) is an integrated unit consisting of a resistance element and an MI extension lead cable.

Compared with resistance thermometers previously in the market, it features quicker response and a longer service life under very severe operating conditions.

Other features of the RESIMIC include :

Good Resistance to Vibration

As RESIMIC is of one-piece construction comprised of the heat-resistant metal sheath, tightly compacted with insulating powder and high purity conductors offers excellent resistance to vibration.

Excellent Flexibility

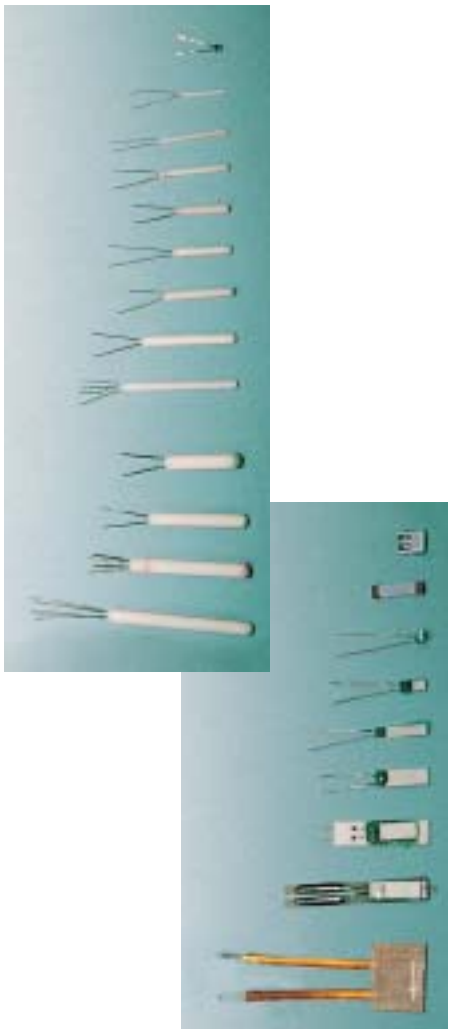
With the exception of its sensor tip,100mm from the hot end, it can be freely bent up to two times the radius of the sheath O.D., without impairing its function.

Wide Measureing Range

It permits measurement of temperatures in the range of −200 to +550℃. Thus, it can be used as well, for middle high temperature range at which a thermocouple has previously been used.

Quick Response

Since its overall diameter is very small as ranged from 1.0 to 8mm O.D., and is made of a pure insulating material with high thermal conductivity, it provides quick response to even very small changes in temperature.



RESISTANCE THERMOMETERS OF VARIOUS TYPES

Resistance thermometers are, in general, superior in resolution and accuracy to other means of measuring temperature and are in wide use for a temperature range of up to 500℃.

We design and manufacture a wide range of resistance thermometers, as well as supply of resistance detector elements of the types of mica-wound, glass sealed and ceramic body precision RESICERAM, in diameters from 0.75 to 4.5mm, which can be custom designed to suit for the user's specific application.