

THERMOCOUPLES FOR THE GLASS INDUSTRY

Pyrosales have been producing temperature solutions for the Glass Industry for more than 20 years. Our products are constantly being updated to meet the challenging and ever-changing production techniques of glass manufacture. We specialise in custom-designed and engineered solutions.

TRI-LEVEL THERMOCOUPLES

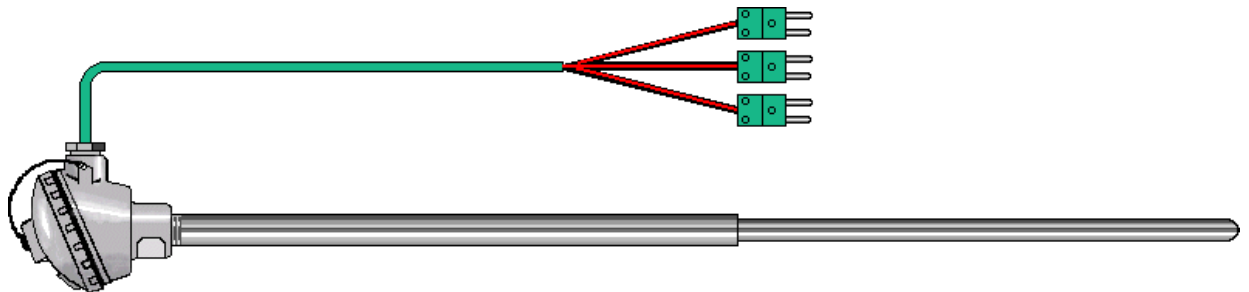
The viscosity of glass in a container forehearth has a major effect on the flow rates and gob weight. Installation of thermocouples across the forehearth allows for accurate monitoring and control of the glass temperature. As the viscosity is temperature dependent, it results in an homogenous glass flow.

For the glassmaker, there are a number of benefits to this accurate control:

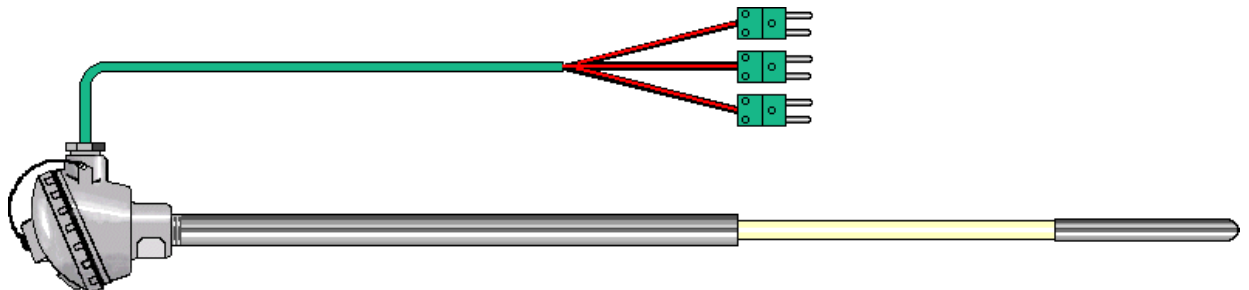
- Optimum weight of each container.
- Reduction in tank wear, which increases the tank life.
- Overall cost savings by higher yield of containers per batch.

Molten glass is a harsh environment, and any thermocouple immersed in it must be able to withstand the severe conditions. The Tri-level assembly is protected from the aggressive nature of the glass by an outer sheath of ODS[®] Platinum or a Platinum/Rhodium alloy, and has three measuring points spaced to give readings of top, middle, and bottom temperatures. This allows for accurate control of heating and cooling to give a homogeneous glass flow.

FULLY WELDED DESIGN



CERAMIC DESIGN



Pyrosales Pty Ltd

A.B.N. 32 001 378 070

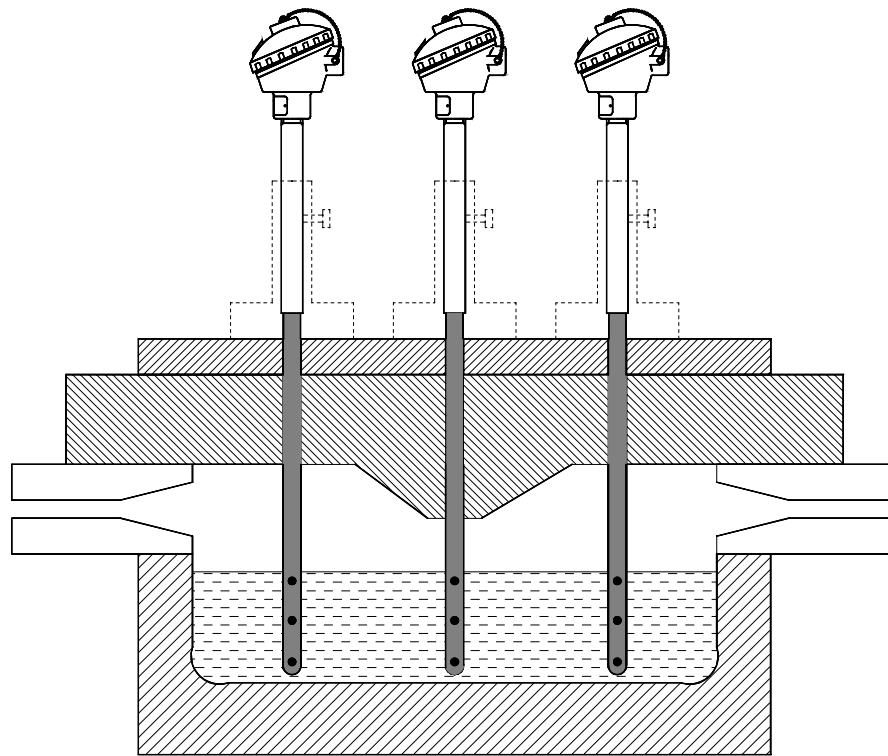
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Tri-levels are arranged along and across the forehearth to suit the complexity of the control system. Each Tri-level is designed to suit the individual forehearth. Careful attention is paid to optimising the life expectancy with the overall cost of each assembly.



TYPICAL FOREHEARTH ARRANGEMENT

Tri-levels are available with the following calibrations:-

- Type R (Pt/Pt 13%Rh)
- Type S (Pt/Pt 10%Rh)
- Type B (Pt6%Rh/Pt30%Rh)

Pyrosales uses Fibro[®] Platinum in both Type R and S Tri-levels to improve element strength, and increase overall assembly life.

SINGLE-POINT IN GLASS THERMOCOUPLES

Some applications only require single-point measurement. The same design style as a tri-level can be used but with only one thermocouple junction. This junction can either be at the bottom or at some other elevated point.