

## WIRE ROPE THERMOCOUPLE

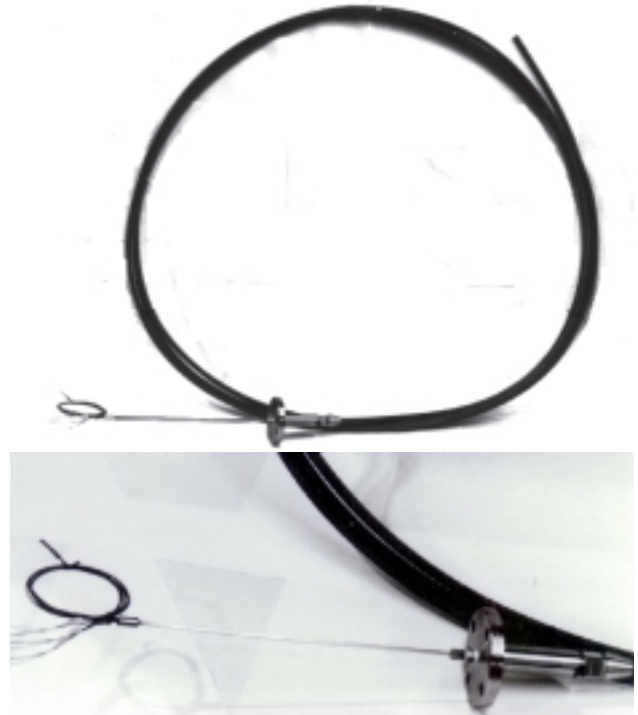
### THE CHALLENGE:

Develop a sensor assembly to sense the temperature of direct reduction iron ore.  
Designed for:

- Multilevel sensors (50+ feet)
- Extend service life
- Reduce replacement costs
- Reduce down time
- Operate with greater degree of safety

### THE PARAMETERS:

- Oxidizing environment
- High vibration
- High load stresses upon the sensor
- Multilevel process monitoring over 50+ feet



### EXISTING PROBLEM:

Large diameter protection tube assembly was suspended with a flange connection from the top of the silo. Constant stresses of ore weight and movement caused the tube to fracture and compromise sensor integrity.

### THE TEMP-PRO SOLUTION:

- Comprehensive engineering research resulted in the development of a flexible stranded wire rope thermocouple assembly (.800" diameter) made of multi-strand high temperature alloys.
- The core of the structure houses a multipoint thermocouple assembly capable of providing up to eight independent temperature signals.
- Flange mounting can be customized for specific installation requirements.
- Flexibility and relatively light weight of the unit eliminated need of a crane for installation of the sensor.
- Significant extension of service life and increased accuracy in temperature monitoring of this process has resulted in greater productivity at lower cost.

***Look to TEMP-PRO Inc. for all your temperature sensing solutions.***

