

# *Demand Moore Reliability*

## The WORM<sup>®</sup> for Skin-Tight Measurements

A refinery was tired of dealing with shutdowns of four to five days to replace failed skin measurement thermocouples that were welded to the furnace tables inside of the furnaces. The process involved moving an old sensor and welding a new thermocouple in its place. They wanted a solution that was easier and less time-consuming.

Using the WORM<sup>®</sup> Flexible Sensors and our protection tubes provided a more efficient and cost-effective solution. The 3/8" protection tubes with a welded pad attached at the hot end of the tube replaced the failed thermocouple sensors. The WORM sensors slide inside the tube from outside the process area. A threaded cap at the cold end of the tube holds the WORM at the hot end with a spring. The cold end can be fitted with an enclosure, terminal block or transmitter, meaning the WORM can be replaced online – while the furnace is running – without shutting it down.

