Case Study - Biotech

REOTEMP INSTRUMENTS

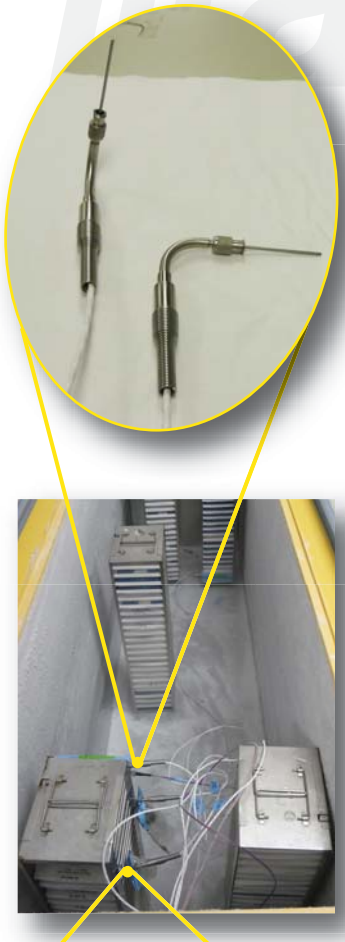
Ultra-Thin Sanitary Temperature Sensor

Customer:

A Biotech company located in the Western U.S..

Background:

This company develops and commercializes living cell therapies that repair damaged human tissue. In order for this dermal substitute to be cultured successfully, the "biobag" in which they're grown must remain within strict temperature limits during the production and storage processes. As part of their quality control procedure, a certain percentage of the biobags must be continuously monitored with a temperature sensor. If the temperature reading was to fall outside the temperature limits, even for a short period of time, the cell therapies would have to be discarded: wasting time, resources, and money.



Sensor Requirements/Application Challenges

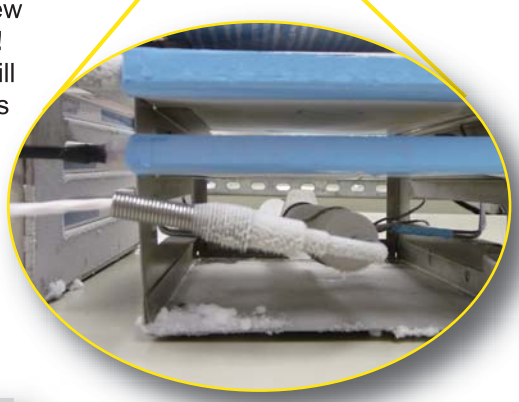
- **Extremely small diameter (.050")**
- **Nearly instant response time**
- **Flexible**
- Cryogenic environment down to -80˚C.
- Custom sanitary fitting (must rotate and seal to the biobag)
- High Accuracy
- Must follow a custom temperature profile oscilating between 30˚C & -80˚C

Problem:

A competitor's sensor was not meeting the strict requirements mentioned above. Their sensor was not able to flex into the biobag without damaging the temperature element. It was also unable to meet the accuracy and response time requirements needed throughout the entire process temperature range.

Solution:

REO*TEMP* was called upon by the customer to develop a sensor that would meet all of their requirements. REO*TEMP*'s sales and engineering teams designed a new probe and **within 3 weeks a prototype was built with a .050" diameter stem!** The stem was able to flex into the biobag without damaging the sensor, while still maintaining the high accuracy and **nearly instant response time** needed in this application.



Results:

Less than a month after the prototype was sent out, an order for 10 pieces was placed and plans to replace every sensor in the facility were underway. The customer was blown away with REO*TEMP*'s design. Their expectations for response-time, accuracy, and flexibility were all greatly exceeded.

> "*The probes were outstanding!! I had excellent results the first run with your newly designed probe! Thank you again for your quick work! It's awesome!!!*"
>
> -Manufacturing Support Engineer

Distributed by:

REO*TEMP* Instruments
Ph (800)648-7737
Fx (858)784-0720

San Diego, CA U.S.A.
sales@reotemp.com
www.reotemp.com