

Specialist knowledge saves cost, time and scrap for medical manufacturer.

Problem

A specialist OEM was finding it difficult and expensive to source a particularly fine thermocouple wire (1 x 0.005mm nickel chrome and nickel aluminium, both legs insulated in PTFE). The customer was sourcing separate wires and twisting them together to produce a twisted pair but found great difficulty in controlling lay length - an important element in the design. The overall diameter was crucial as the twisted pair had to be inserted down a fine tube/needle. Ultimately, the process was expensive, time-consuming, labour-intensive and couldn't guarantee accuracy. A new answer was needed.

Solution

Discussing the problem with the manufacturer, the Heatsense design team agreed to manufacture both legs of the thermocouple wire and lay-up the pair on an automated miniature laying machine. This is a delicate exercise as the fine wires and lay-up tolerances must be accurately controlled.

After testing and production, the customer was left with a more precise product that produced less scrap and, in addition, removed an entire labour-intensive process from the manufacturing operation. The net result was lower cost, greater throughput and additional business for both parties.

