Unique Multi-Filar cabling solution enables new horizons for active catheters at the 25th MD&M Minneapolis event

MD&M Minneapolis chosen for major launch of Junkosha's newest innovation for catheter manufacturers

MD&M Minneapolis: Stand Number 1115.

23rd October 2019: Junkosha has chosen the 25th anniversary year of MD&M Minneapolis, being held between 23rd to 24th October, for the launch of its unique Multi-Filar active catheter solution. Visitors to the event will be able to witness a major step toward smaller, more flexible and higher data capacity catheters, with an innovation that is set to challenge industry standards. The new cables have a capacity of up to 60 power lines depending on AWG size or pitch, and are designed to provide not only increased functionality, but also more signals into formerly inaccessible areas of the body.

Using Junkosha's precision engineered PTFE lamination technology, this new fine wire and cable solution provides multiple signals through an ultra-small shaft, enabling a new generation of small, flexible and intelligent catheters to effectively push back the boundaries of current medical procedures. Single strand configurations are joined into a multi-filar assembly that can be utilised in electrophysiology catheters for applying pacing and recording protocols from inside the heart, ablation and balloon ablation catheters for atrial fibrillation as well as cardiac mapping. In addition, the multi-filar technique allows for easier assembly of the signal or power wires into the final medical device, making the manufacturing process simpler and more cost-effective.

"This is a significant breakthrough on the journey to the next generation of active catheters and the transmission of multiple signals to once inaccesible areas of the body," explains Yohei Washiyama, Leader of Junkosha's Medical Products Group. "Being able to introduce up to 60 power lines in one cable solution not only requires a leap in innovative manufacturing, it needs precision engineered materials that leverage Junkosha's core competencies."

The process of manufacturing multi-filar wires is a complicated one, which Junkosha has perfected by being able to accommodate the specific requirements for the final product design. For example,

each individual strand can be colour coded in the material, in accordance with specific industry standards or to make connection operations more simplified in downstream operations. The bond strength between the individual strands can be adjusted to maximise strength for challenging assembly conditions or optimised for difficult separation processes. Multi-Filar configurations allow for joining dissimilar single strand alloys together in one package. This flexibility in alloy selection is perfectly suited for applications like thermocouples, micro cables that need a high strength member for load bearing or assembly operations and electrochemical process cells."

"As the requirement for catheter-based procedures such as ablation and balloon ablation for atrial fibrillation and cardiac mapping increases, so the need for innovations such as our Multi-Filar solution become paramount to enable them," states Washiyama. "We are continually pushing the boundaries of what is possible in this journey to miniaturisation, whilst unlocking opportunities for catheter manufacturers to deliver improved solutions."

For more information about Junkosha's range of medical and cabling solutions, click on http://www.junkosha.co.jp/english/.

For more information around MD&M Minneapolis, click on https://mdmminn.mddionline.com/.

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About Junkosha

Junkosha is a pioneer of sophisticated fluoropolymer application technologies across many sectors including microwave interconnect and medical devices. Operating from three centres in Japan, including its headquarters, the company also has sites in the US, UK and China. Junkosha has built a formidable reputation and it is one of the best kept advanced technology secrets outside of Japan. The company provides wire and cable products, featuring microwave interconnects, robot cables, high data rate cables, camera link cable assemblies, ultrafine coaxial cables and assemblies, cables for clean environments, and general wires and cables. It also provides tube and fitting products, including generic resin tubes, fluoropolymer tubes, high-barrier tubes, flexible multi-layered tubes, industrial hoses, degassing modules, heat-shrinkable tubes, and the market leading peelable heat shrink tubes.