Leoni medical cable with better gliding properties

Special extrusion method achieves lasting improvement in the stick-slip behaviour of silicone cables

Nuremberg/Halver, 2 December 2013 – Leoni, the leading provider of cables and cable systems to the automotive sector and other industries, has developed an innovative process for refining silicone cables. Leoni’s patent-pending extrusion method makes silicone surfaces even smoother without compromising the material’s other beneficial properties for near-patient applications in medical technology. The cable is optimised in a single operation that results in permanently improved stick-slip behaviour without wear or deterioration.

With a new kind of extrusion, Leoni has succeeded in giving silicone cable an optimised surface with a pleasant feel and in eliminating the often unwanted stick-slip effect. In a single operation, a non-crosslinked cable jacket is first refined in a formulation and thereafter crosslinked. This creates a cable surface that maintains all the properties of the material silicone and simultaneously improves its feel. Optional markings can be applied in an additional operation and will withstand more than 500 sterilisation cycles in an autoclave. The production method was already registered for patent in February 2013.

**Silicone has always been unbeatable near patients**

Thanks to its unique range of properties, silicone has always been the ideal material for medical-technology applications in near-patient use. Be it ultrasound, ECG or instrument cables for invasive or minimally invasive diagnostic investigations and therapeutic treatments or cables used for patient-monitoring systems – no other plastic as a cable jacket offers comparable advantages for medical users and patients: extreme flexibility in all directions, skin tolerance, biocompatibility and autoclavability with temperature resistance of up to 143°C.

The proverbial ‘white coat’ of the silicone as an ideal material for patient cables has hitherto been undermined by just one minor aspect: its stick-slip effect leads to unwanted adhesion, for instance on patients’ skin or operating tables. This adhesion, which is typical for silicone surfaces, is even aggravated by sterilisation cycles in the autoclave. That calls for special production methods to minimise this effect.

**Leoni process provides a better feel and more**

Leoni has, with its innovative process, succeeded in eliminating the unwanted stick-slip effect of silicone cables. The stronger surface of these Leoni cables improves their resistance to tearing and maintains lasting, extreme flexibility. The silicone jacket is halogen free and complies with all the usual medical technology standards for patient cables (SVHS (REACH), Latex, BSE/TSE, Phtalates, Bisphenol A). The improved stick-slip effect also makes further processing easier. Prior treatment, with talc for example, is therefore not required. The refined silicone jacket is also resistant to various media, including disinfectants, chemicals and oils, and it is lastingly resilient even against such sterilisation methods as steam or radiation sterilisation.

Upon request these optimised silicone cables can also be enhanced with antimicrobial effect. To achieve this Leoni uses an innovative, acid-based technology that gives the cable a germ-killing effect, which makes it resistant to perspiration and protein, and does not add any silver or copper to the cable jacket. This produces a long-term hygiene benefit.

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☞ *Related illustration material and further information is available upon request from the below mentioned contact persons*

About the Leoni Group

LEONI operates worldwide, providing wires, optical fibers, cables and cable systems as well as related services for the automotive sector and other industries. Leoni develops and makes technically sophisticated products ranging from the single-core automotive cable through to the complete wiring system. In addition, the line-up comprises wire products, standardised cables, special cables and assembled systems for a variety of industrial markets. The group of companies market-listed in the German MDAX index employs about 60,000 people in 32 countries and generated consolidated sales of EUR 3.81 billion in 2012.



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