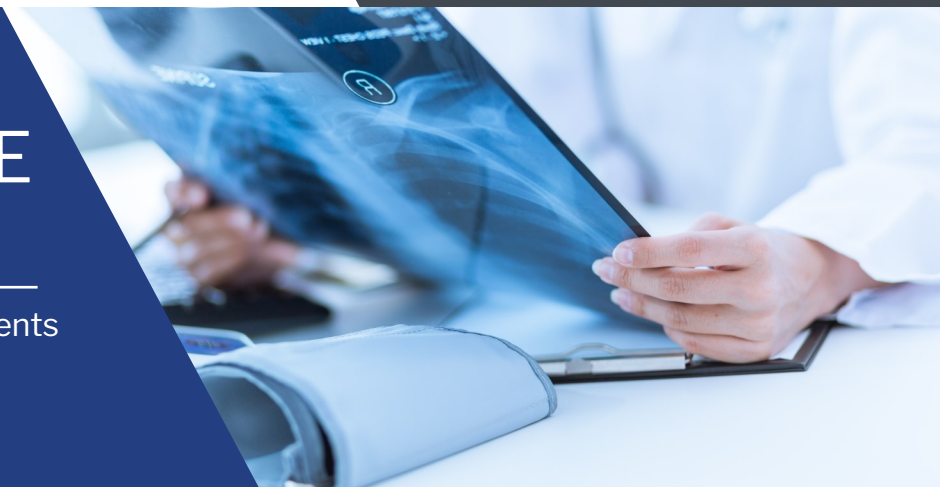
DICRONITE®

Dicronite® is available throughout the world
www.dicronite.com

BIOMEDICAL WIRE CONNECTIONS

Dicronite® was proven to meet requirements for use in implanted electrical devices



BACKGROUND

Medically implanted electrical devices improve and often extend lives. Engineers at Alfred E Mann Foundation for Scientific Research created a method of connecting biomedical wires that does not activate the body's natural defense system. These wires attach to implanted devices like sensors and stimulators.

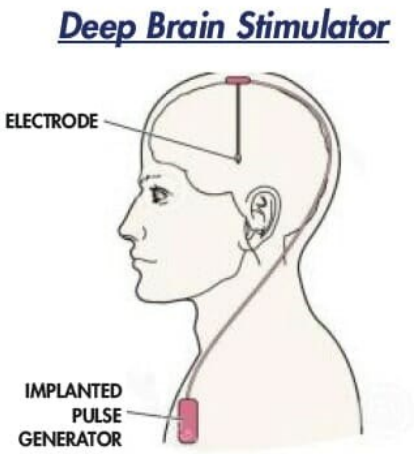
DESIGN

The method developed uses a sliding mechanism of two stainless steel parts. Because stainless steel is notorious for galling when sliding against itself, the design required a way to prevent galling between mating connectors. Design engineers searched for a surface treatment that could prevent galling and meet the following requirements:

- Not compromise tolerances within a 1 mm electrode
- Allow for precision control of sliding components
- Provide long-term compatibility with the host such that tissue inflammation, cellular alteration, and other adverse reactions are avoided or minimized
- Not be susceptible to damage or deterioration due to chemicals, electrolytes, or other substances present in the human body

RESULTS

Because Dicronite® is biocompatible and meets the design requirements, it was added to the design to ensure there would be no galling between connectors. Testing confirmed that Dicronite® resisted hydrolysis, tolerated exposure to high temperatures, and withstood autoclaving. This method for connecting wires compatible with human implants was successfully patented by Alfred E Mann Foundation for Scientific Research.



Dicronite® was proven to be an effective lubricant for wire connections within the human body.

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