
Description: Superconductivity—the absence of electrical resistance in certain materials at very low temperatures—continues to be of great scientific, technological and commercial interest. The purpose of Superconductors is to generate high magnetic fields. And in terms of magnetic fields, Superconductors rule.

It has been 104 years since the initial discovery of superconductivity in 1911. Since then, only one, major commercial application has developed: Magnetic Resonance Imaging (MRI) in the 1980s. Even so, MRI along with other superconductor applications has developed into a global market worth billions.

A renaissance of superconductivity applications could appear in the next 3-7 years (2018-2023) and will be based not on incremental progress in the existing technologies but rather on a radical breakthrough in a different, highly attractive and rapidly growing industries, including clean energy and electric power equipment.

The primary focus of this report is Superconductor Wire—both Low Temperature and High Temperature. Superconductor Wire is what makes Superconductivity applications possible.

The secondary focus of this report is on applications for Superconductor Wire. The major application for Superconductor Wire to date is magnetic resonance imaging (MRI) scanners. MRI technologies and markets are thus examined in detail in this report.

The question is: what will be the next generation commercial applications for Superconductor Wire? At present, the new applications are thought to be electrical equipment and nuclear fusion power. So, both these technologies and potential markets are discussed in detail in this report.

Included in the report are detailed analyses of:

- Global Market For Superconductivity: Existing vs. Emerging Applications by Type and Low Temperature vs. High Temperature Superconductors.
- Global Market for Low Temperature and High Temperature Superconductor Wire.
- Global Superconductor Wire Market by Application.
- Producers of Low Temperature and High Temperature Superconductor Wire.
- Low Temperature and High Temperature Superconductor Wire Sales and Market Shares by Producer.
- Global MRI Market, Metrics and Producers.
- Global Market for Utility Equipment Including Cables, Medium and High Voltage Transformers, Medium and High Voltage Switchgear and Motors.

The report also includes comprehensive evaluations of:

- The Seven Eras in Superconductor Technology.
- Existing and Emerging Superconductor Applications.
- Low Temperature Superconductor vs. High Temperature Superconductor Applications
- Opportunities Beyond MRI.
- Utilities Markets for High Temperature Superconductors.
- Future World Electric Energy Requirements.
- Nuclear Fusion and Superconducting Tokamaks.
- ITER Project: Conductor Procurement Companies, Procurement Costs by Product, Conductor Costs, LHC Conductor Costs.
- Fusion Entrepreneurs: Private Sector Companies Doing Fusion Power R&D and Capital Investments in These Companies.
Additionally, profiles of 24 leading foreign and U.S. Superconductor wire manufacturers are given, along with 30 tables and 115 figures.

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