

§ 1. Research Collaboration on the Database of Superconducting Magnets for Fusion Devices

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related to the plasma interactions.

The database is available in WWW (World Wide Web) on the Internet as shown in Fig.2. A table of contents of the website provides a link to individual data. A user may also find a data using a search function embedded in the website.

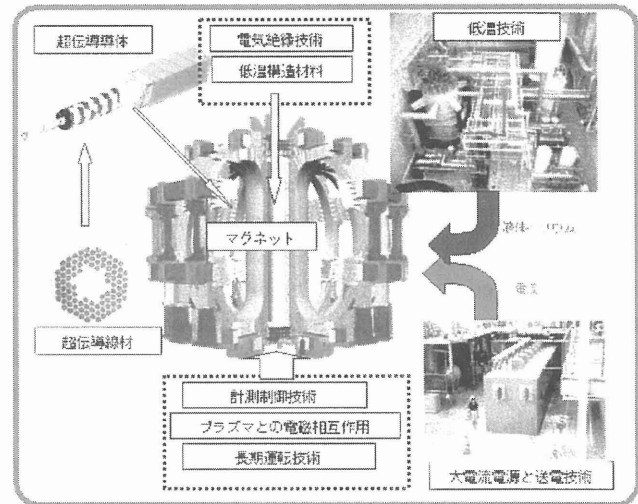


Fig.1 Superconducting technologies included in the database.



Fig. 2. Search page of the database on the web site. User can find desired data using this search function.

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Collaboration on the database of superconducting magnets for fusion devices was initiated in FY1999 with the contributors from the universities and research institutes in Japan. The major purpose of this project is to establish a database that will be essential and useful for the design and construction of superconducting magnets for next fusion devices in near future. 949 items in total were collected in the database covering superconducting technologies for the design, fabrication and operation of the superconducting coils. The database includes as shown in Fig.1, 1) superconducting strands of NbTi, Nb₃Sn, Nb₃Al, 2) large-current conductors with the forced cooling and pool cooling type, 3) electrical insulation and cryogenic structural materials, 4) large scale helium refrigerators and operation experiences, 5) large-capacity power supply system (>50kA), and 6) instrumentations and phenomenon

Reference

- [1] Chikaraishi, H. et.al, 2003 National Convention Record IEEJ, Vol.5 Electric applications, 5-191, p268 (2003) (in Japanese).
- [2] Sugimoto, M. et.al, 68th Meeting on Cryogenics and Superconductivity, 2B-a03, p146 (2003) (in Japanese).