

A Vacuum Pressure Impregnation Procedure for Fabrication of an MgB₂ Superconducting Coil

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The most important technical procedure to make a superconducting magnet is a vacuum pressure impregnation(VPI). This procedure prevents superconducting magnets from so called stick-slip. In high magnetic field superconducting magnet, the superconducting wire is forced by magnetic field and this force could press the wire to move. In cryogenic state, very small movement leads to full quench. With a winding and reaction wire, a wet impregnation is impossible so we have developed a vacuum pressure impregnation. The used resin system is stycast 2850 with catalyst 24.

Keywords : MgB₂, vacuum pressure impregnation, resin