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Main part of TRAPSE test facility (a, b) and principle of the test (c). Superconducting cables located in effective magnetic field of 50 mm in diameter, are tested under a comparative condition to DEMO, i.e. 15 T in magnetic field, 10 kA in current (500 kA in ITER conductor corresponding value), and 40 MPa in maximum compressive stress. Cables were reinforced by ice (d), whose thermal conductivity is as high as diamond at cryogenic temperature, and the effectiveness was proven in this study, demonstrating no degradation under 40 MPa in stress. (Kazutaka SEO *et al.*, Plasma and Fusion Research Vol.3, 042 (2008). <http://www.jspf.or.jp/PFR/>)



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