IEEE-CSC, ESAS and CSSJ SUPERCONDUCTIVITY NEWS FORUM (global edition), Issue No. 55, January 2024

HTS Fusion Magnet Development and Irradiation Considerations

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***Abstract*—Tokamak Energy is developing spherical tokamaks based on high temperature superconducting (HTS) magnets as a source of a clean, secure and abundant fusion energy.**

This talk will present Tokamak Energy's approach to fusion magnet development, HTS conductor utilisation, and a cross section of projects conducted on HTS irradiation and shielding. This will include the GAMMA project in which cold, energised HTS coils are subjected to a lifetime-dose of gamma irradiation. This project is currently under way at Sandia National Laboratories, New Mexico.

***Keywords (Index Terms)*—Tokamak Energy, fusion, HTS magnets, irradiation, shielding**

IEEE-CSC, ESAS and CSSJ SUPERCONDUCTIVITY NEWS FORUM (global edition), Issue No. 55, January, 2024. Invited presentation given at IREF 23, November 15, 2023, Arona, Italy