

Overview of HTS Large Scale Application in Japan

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Abstract—

1. Introduction

Japan Science and Technology Agency (JST) and New Energy and Industrial Technology Development Organization (NEDO) are two major funding organizations for science and technology area in Japan. They funded and have been funding for HTS large scale application developments such as AC/DC cables, motors, NMR, MRI, and high field magnets.

2. Typical HTS application projects

Table 1 shows typical HTS application projects. In this presentation, some achievements will be introduced.

Table 1 Typical HTS application projects.

Ministry	Funding Agency	Superconductivity Project
MEXT	JST (Total FY2015 Budget: 1,207 M\$) (100¥/\$)	SENTAN (1.03 GHz NMR, 3T/MRI) S-Innovation ALCA
	Science Council of Japan	High Magnetic Field Collaboratory
METI	NEDO (Total FY2015 Budget: 1,298 M\$) (100¥/\$)	Promotion of Commercialization of HTS Cable and Magnet (2016-) Yokohama HTS Cable / Safety & Reliability of HTS Cable Ishikari HTS/DC Cable CC Magnet (METI - AMED) 300kW Flywheel M-PACC 3MW Ship Propulsion Motor 100kW Motor for Bus

Keywords (Index Terms)— HTS, AC cable, DC cable, motor, NMR, MRI, flywheel, high field magnet, quench protection, cryocooler, Bi-2223, coated conductor.

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