

200 kW Cryogenic Propulsion Unit Development Progress

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Abstract — The Applied Superconductivity Laboratory at University of Strathclyde is developing a 200 kW cryogenic propulsion unit in collaboration with Airbus ASCEND program. This talk summarizes the development and results we obtained so far. The cryogenic propulsion unit consists of an axial-flux superconducting machine, in connection with a cryogenic rectifier. The talk covers our progress in insulation material selection, AC loss reduction technology and brushless HTS rotor technology.

Keywords (Index Terms) — Superconducting machines, cryogenic propulsion and HTS

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