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Construction of Plates of the Toroidal Field Magnet of Ignitor and Relevant Advances¹ G. CELENTANO, A. CUCCHIARO, C. CRESCENZI, P. FROSI, G. MAZZONE, ENEA, Italy, F. BOERT, H.G. WOBKER, KM Europa Metal, Germany, B. COPPI, M.I.T. — A new material, OFHC copper, has been adopted for the Toroidal Field Coils plates, in place of ETP copper. The new material is consistent with a machined and welded cooling channel on each individual turn (each coil consists of 10 turns and the toroidal magnet is composed of 24 coils). Two full size TFC turns have been manufactured by Kabel Metal to identify the technical difficulties concerning the fabrication and the hardening of the OFHC material. Several samples of the cooling channel are machined and ready for validation of the Electron Beam (EB)welding process.

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