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P4.086 HTS CroCo – Demonstration of long length fabrication

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High-temperature superconductor (HTS) CrossConductors (HTS CroCo) are twisted stacked strands built from HTS tapes, optimized for high engineering current density and easy long length production [1,2].
The production for a 35 kA DC cable demonstrator required increased amounts of HTS CroCos for which the production of HTS CroCos was extended to 8 m length. This milestone shows clearly that an extension to even longer lengths is feasible, assuming that tapes of corresponding length (e.g. > 100 m) are easily available. This achievement demonstrates, that the HTS CroCo is a basic strand, that allows an easy production of high current HTS strands, that can be used for high current power transfer or for large magnets which are based on high current conductors.
The contribution will highlight the long length production of HTS CroCo strands, pointing to future application in power transfer and high field magnet application.

[1] M. J. Wolf et al., IEEE TAS 26 (2) (2016), 6400106
[2] W. H. Fietz, et al., IEEE TAS 26 (4) (2016) 4800705

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