

## REBCO Coated Conductor Development in the ARIES Program for HTS Accelerator Magnets

L. Rossi<sup>1</sup>, A. Ballarino<sup>1</sup>, U. Betz<sup>2</sup>, L. Bottura<sup>1</sup>, C. Senatore<sup>3</sup>, A. Usoskin<sup>2</sup>

<sup>1</sup> CERN, Geneva, CH

<sup>2</sup> Bruker HTS, Alzenau, DE

<sup>3</sup> University of Geneva, CH

E-mail: [lucio.rossi@cern.ch](mailto:lucio.rossi@cern.ch)

**Abstract** – In the frame of the European program H2020-ARIES, a task is dedicated to the development of coated conductor for next generation HTS accelerator magnets. The aim is to double the performance obtained in the frame of the FP7-EuCARD2 collaboration, i.e. we want to reach  $J_{eng} = 800-1000 \text{ A/mm}^2$ , in a 12 mm wide REBCO tape, at 4.2 K and 20 T applied perpendicular field. Here we will present the first results, already near  $1000 \text{ A/mm}^2$  for short lengths, with characterization of the first samples in a vast range of parameters. Various issues, like mechanical stability of the tape, whose substrate is a 50  $\mu\text{m}$  stainless steel, have been faced and are under investigation. The next step is to solve the mechanical stability problems, which give a bow to the tape, and to be able to scale up production in long (>30 m) lengths, with homogeneous properties.

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