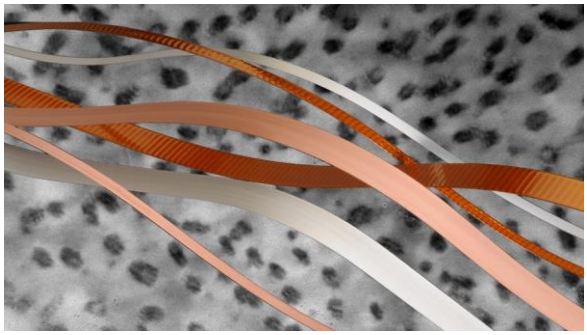
superior performance powerful technology

Our Company

SuperPower Inc. is a leading developer and manufacturer of the REBCO-based second generation high-temperature superconducting (2G-HTS) wires.



Since February 2012, SuperPower has been a wholly owned subsidiary of Furukawa Electric. Co., Ltd. (FEC). Our goal is to contribute to a safe, peaceful, and sustainable life on our planet.

Our Technologies

Our 2G-HTS wires are made using IBAD-MOCVD technologies on Hastelloy substrates. The REBCO layer is doped with Zr to form BZO nano-columns for best in-field performance.

Applications

Our 2G-HTS wires are used in a variety of applications including NMR magnets, fusion magnets, accelerators, motors and generators, high-current cables, current leads, etc.

Address: 21 Airport Road, Glenville, NY 12302 USA
Phone: +1-518-346-1414
Fax: +1-518-346-6080
Email: sales@superpower-inc.com

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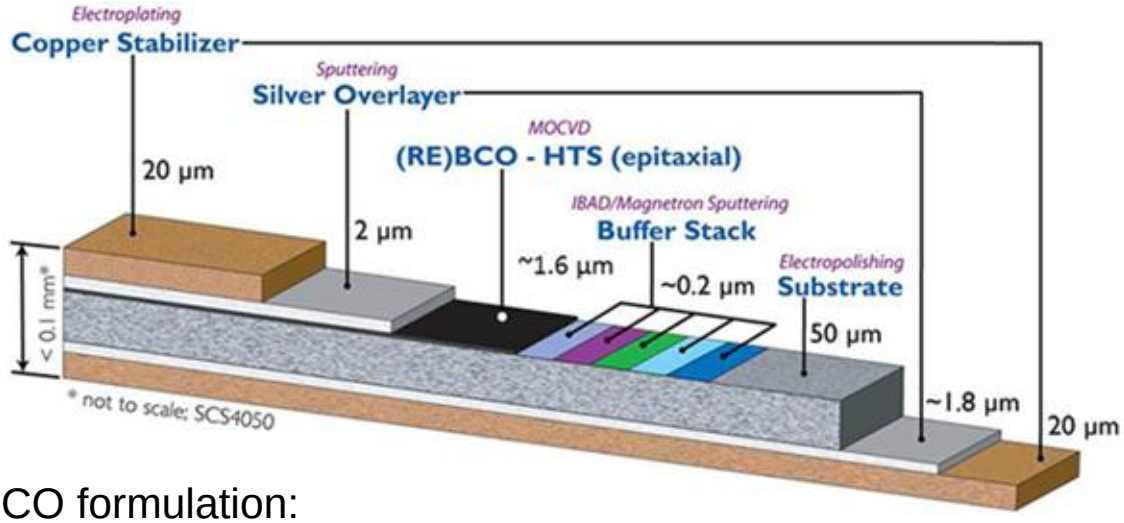

- REBCO formulation:
  – **AP,** for various applications
  – **HM,** for applications at lower temperatures and higher fields
- Width = 2, 3, 4, 6,12 mm
- Piece length = typically 250 m, and up to 900 m depending on specification
- I_c(77K, s.f.)/12mm = 400 ~ 500 A (AP tapes)
- Ic(4.2K,15T//c)/4mm = 400 ~ 500 A (HM tapes)

REBCO formula

AP and HM

- Substrate thickness = 30 or 50 µm
- Total Ag thickness = 3~5 µm
- Total Cu stabilizer thickness = 10~110 µm

- Transport and magnetization Ic(77K,s.f.) measurements along whole length
- Polyimide insulation (optional)
- Solder joints (optional)

- Solder coating (optional, typically 10 µm total)
- AgAu instead of pure Ag coating (optional for current lead applications)