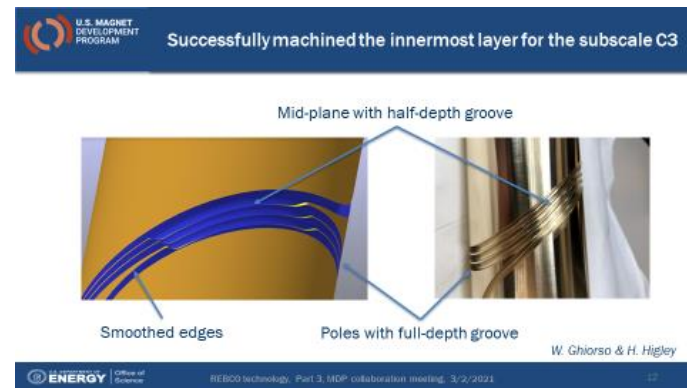


c3 conductor: now expect to start receiving CORC[®] wires in September 2021

- In March, ACT received 5.8 km long tapes, ~ 73% of the total tape order
- ASC/FSU performed critical tests on sample tapes from each batch at 4.2 K and different background fields
 - Test results show some of the tapes do not meet the specifications. ACT now has 50% of tapes for the c3 order
 - Provided important feedback to SPI to fine tune the fabrication process
- We expect to start receiving CORC[®] conductors for c3 in September 2021
- Still need to secure \$85 k to order CORC[®] conductors to make the subscale c3

Addressing open issues to make c3 – machine mandrels with full-depth radial grooves

- A 3-turn mandrel was successfully made, as reported at the MDP CM in March
- Need to try a 40-turn mandrel
- Develop a new concept to assemble six layers and aluminum shell



Addressing open issues to make c3: wind coils in a conductor-friendly way

- Since March, successfully test wound on the 3-turn mandrel with dummy wires
- Develop a new concept to provide wire tension during winding
- Try the actual conductor with the 3-turn c3 coils

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Develop a winding concept for mandrels with full-depth radial grooves

Goals:

- Help wind brittle conductors into a radial groove with minimal and reproducible handling
- Preliminary test winding with dummy wires seems promising



Potential challenges and delays:

- Issues from real tests with actual wires – first try with the subscale C3 can help
- May need to iterate on winding concept and mandrel design

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REBCO technology, Part 3, MDP collaboration meeting, 3/2/2021

W. Ghiorsio & H. Higley

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Addressing open issues to make c3: mechanically couple all layers

- The main focus now. Considering two options
 - Fill the limited annular space with epoxy
 - Use smart shims
- Planning experiments to test if Option #1 is feasible
- Continue impregnation tests with room-temperature cured epoxy

