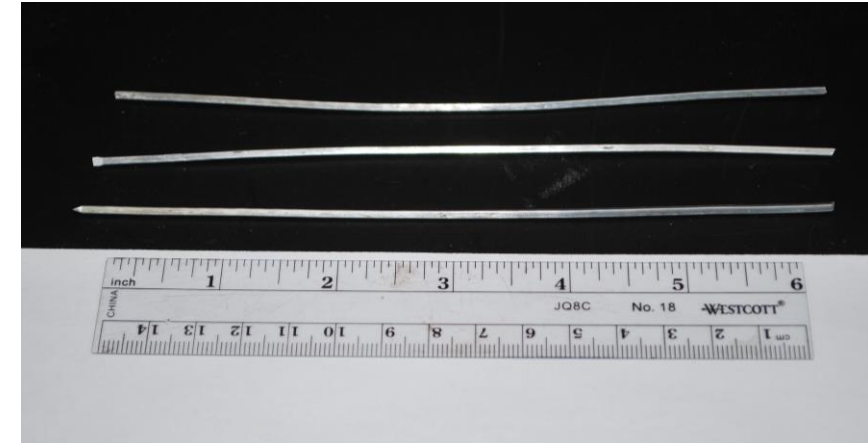


CABLE Conductor Manufacturing Prize



Team Name:	<i>QuesTek Innovations</i>
Primary Submitter Name:	Thomas Kozmel
City and State:	Evanston, IL
Member Names (including partners and affiliates):	Peter Jacobson, Qiaofu Zhang, Wei Zhong, Keith Fritz (QuesTek)
Submission Title:	HSHC conductor for high temperature stability



Description of Material

- *Aluminum alloy conductor with thermally stable strengthening precipitates*
- *Rapid growth of the Electrical Cable Industry market is being fueled by the decarbonization goals of the DOE, and is projected to reach ~\$55B in 2026*
- *QuesTek's entry seeks to "Beat a Conductor System Market!" by maintaining a high conductivity while reducing dependence on steel strands*

Fabrication Approach

- Cast to 0.5" diameter cylinder
- Pre-heated to ~350 °C and incrementally rod rolled to final diameter



Potential Impact

- Greater life cycle value of cable
- Reduced installation/replacement costs
- Reduced sag due to creep
- Enable more robust grid
- Further integration of renewable energy
- Withstand elevated operating or environmental conditions such as wildfires