

Comments from M. Dhalle (27/1/14)

1) As an update on CORC, you find attached an extract of Danko van der Laan's presentation last Thursday at the HTS4Fusion workshop in Villigen. In my view, he's made important progress since our last Videocon in December.

a) bending radius vs. I_c : he's demonstrated degradation-free bending with radius 30mm and only 2.5% I_c reduction at 20mm bending radius (slides 2-4);

b) transverse pressure vs. I_c : depending on gap size between tapes and tape Cu thickness, he's demonstrated irreversibility loads of 300-600 N/mm length (estimated to correspond to 600-1200 MPa peak stresses on the tapes) (slides 5-9). With respect to transverse pressure, we've looked at CORC AC loss vs. transverse pressure here in Twente and found no measurable increase in the coupling loss for pressures up to 80MPa. (Note that this is not too surprising, the loss is strongly dominated by hysteresis loss in the non-striated tapes).

2) Concerning the EUCARD-related activities here in Twente:

a) we're continuing to build up further our comparative database between the mechanical properties of coated conductors from different manufacturers. We didn't have any news yet from Bruker since our last Videocon;

b) there's an ongoing collaboration with KIT on the transverse pressure dependence of impregnated Roebel. Wilfried can tell you more, but essentially one of our students is over there to learn how to impregnate properly. Once he comes back, we'll test one of Wilfried's cables in our transformer/press set-up. Results expected this spring.

c) ... comment on BSCCO