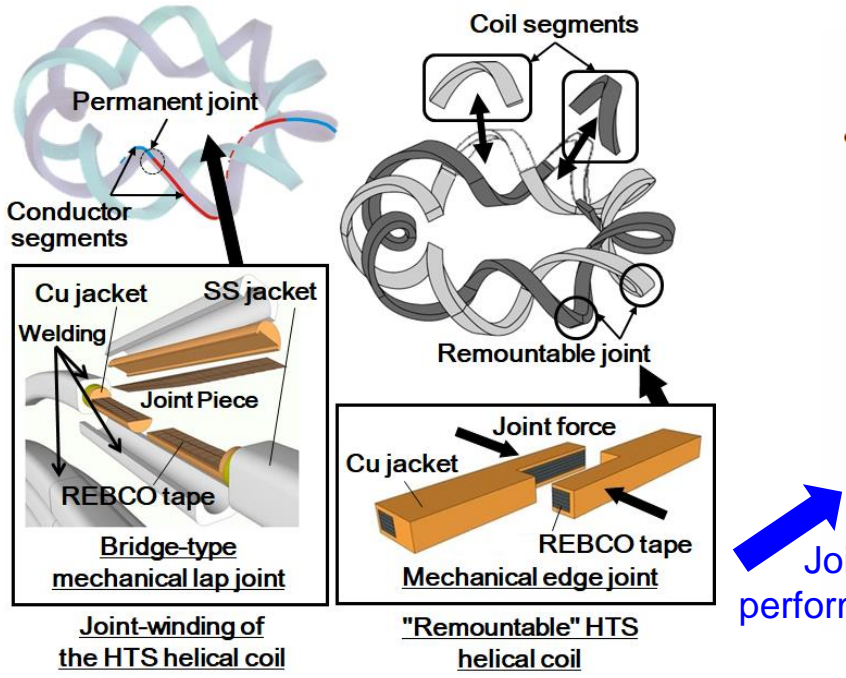
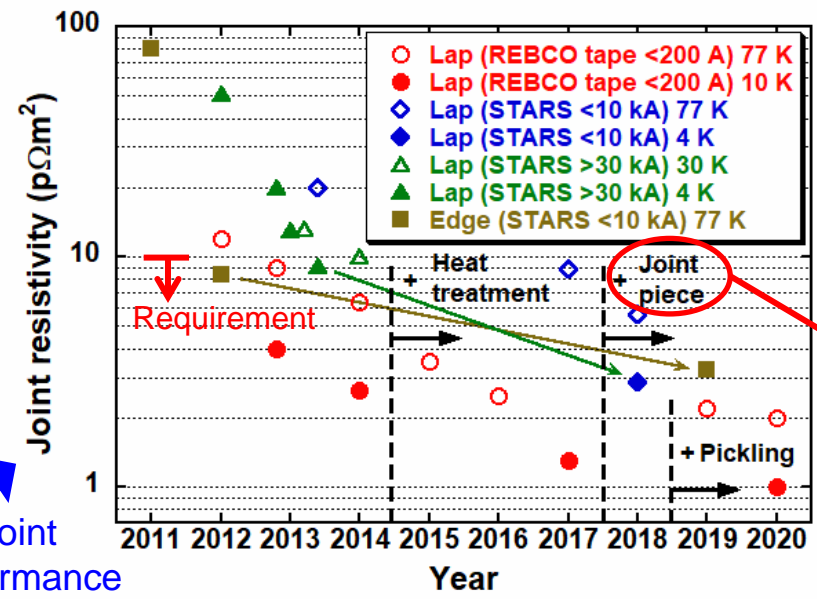


Low-resistance Joint Development for Segment-fabrication of High-temperature Superconducting Fusion Magnets

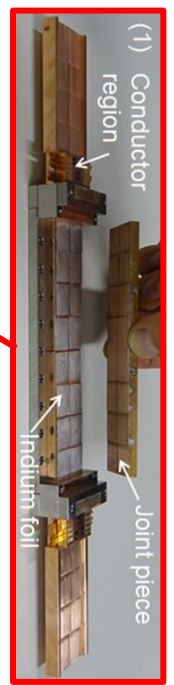
S. Ito¹, H. Tamura², N. Yanagi², H. Hashizume¹ (1Tohoku Univ., 2NIFS)



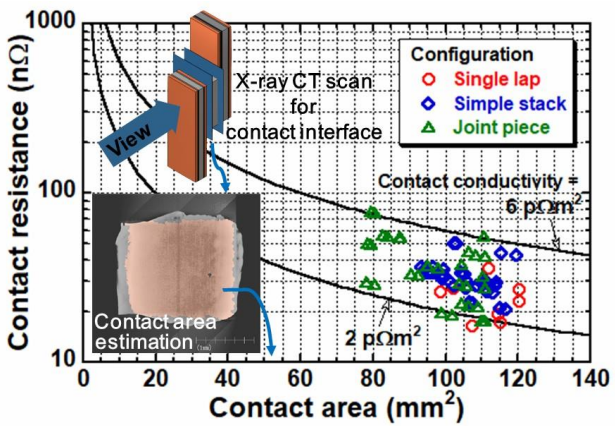
Segment-fabrication of HTS helical coils



Progress in development of joint for the last decade based on joint resistivity



Quality assessment



Relationship between contact area and contact resistance based on X-ray CT scan for three joint configurations

Integrated joint piece + low-temp. heat treatment
<3 hours for joining process, ~3 pΩm²
 → Satisfy the required performance.

Range of contact resistance can be predicted from contact area using X-ray CT scan
 → Perform quality control of the joints during fabrication process at room temperature