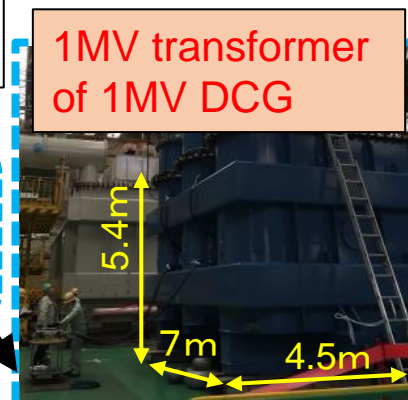
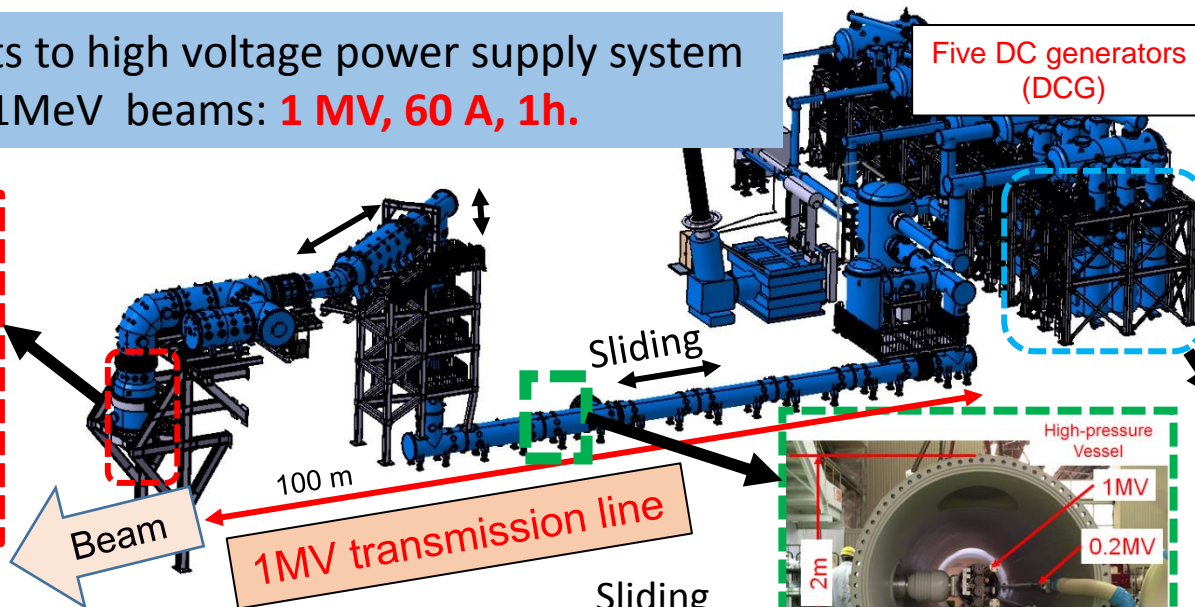
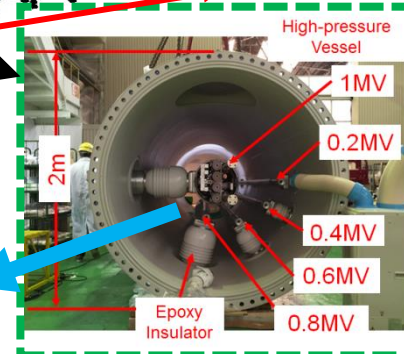


Development of ultra-high voltage insulation technology for the power supply components in neutral beam system on ITER

Requirements to high voltage power supply system to generate 1MeV beams: **1 MV, 60 A, 1h.**



Development of 1MV oil insulation structure inside the 1MV transformer : **1.2 MV for 1 h was achieved.**



Clarification of **vacuum insulation** in large multi-screens : **0.24 MV in one stage for 20 min was achieved.**

Development of compact 1MV transmission line by using **SF6 gas insulation** with absorption mechanism of seismic and thermal displacement : **1.2 MV for 1 h was achieved.**

- Ultra-high voltage insulation techniques covering oil, gas and vacuum have been successfully developed for the power supply components for the ITER NB system.
- The voltage holding tests in the factory have fulfilled the ITER requirements.
- All DCGs and 80 % of transmission lines were delivered to the site of the NB test facility, Italy. **The installation has been started since Dec/2015 on schedule.**