

ESS Installs First Hardware in the Accelerator Tunnel

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First Installation. The first component has been successfully installed in the Accelerator tunnel at the ESS Construction site this month. The occasion marks an important step toward ESS' project goals and ultimate delivery to its European partners and the scientific community.

LUND — The month of March marks the first successful ESS installation. A cryogenic venting pipe in the Accelerator tunnel is in place as part of ongoing design work at the Construction site. The achievement was a collaborative effort by the cryo team of the ESS Accelerator Division's Specialised Technical Services group and Safety group, Design & Engineering group, Supply & Logistics group, the Procurement and Conventional Facilities Divisions, ESS Construction partner Skanska, and Swedish manufacturer RFR Solutions.



Cryo vent pipe is installed at the ESS Construction site. PHOTO: ESS / Wolfgang Hees

"The cryo vent line installation is important because it represents not only the first installation in the Accelerator tunnel but the first hardware installed at the ESS site," said Wolfgang Hees, ESS Work Package Leader in the Accelerator project, and senior cryogenics engineer. "The ESS cryo team will start its full scale site installation in autumn 2016, and this installation today



helps us to prepare for the coming challenges, ranging from manufacturing and logistics to commissioning and testing.”

At almost 12 meters long and more than half a ton in weight, the stainless-steel cryo vent pipe, or line, will help ensure proper ventilation of cooled helium gas in the unlikely event of an emergency in the Accelerator tunnel. The new pipe—which is designed for the Accelerator’s very low operating temperature of 2 Kelvin (-271 °C)—is a safety feature of the tunnel. Other measures include such emergency exits and specialised fire sprinkler systems.

“It is with great pleasure that RFR Solutions in Landskrona has provided the first component to the ESS Accelerator,” said Mats Orup, Managing Director for RFR Solutions AB. “The component was delivered on schedule and according to ESS quality requirements with RFR Solutions’ competency within stainless steel construction contributing to the quality.”

The cryo vent pipe was custom-designed for the Accelerator tunnel and ISO certified for quality assurance. The installation itself involved a combination of meticulous planning and technical expertise by ESS and all involved parties.

“The installation went smoothly and according to plan,” said Kieran Deasy, Section Manager for the ESS Accelerator Tunnel at Skanska AB. “There was good cooperation, for example, with work procedures as well as positive sharing of experience between the ESS Accelerator Division and Skanska.”

With the completion of the Accelerator tunnel planned for April, early installation of the pipe will enable ESS and its partners to maintain both the construction timetable and installation planning.

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