

Cryogenics of the ESS target

The European Spallation Source (ESS) project is a neutron spallation source research facility under construction in Sweden. A 5 MW, 2.0 GeV, 62.5 mA proton beam generates fast neutrons at the spallation target. Cold neutrons are moderated by para liquid hydrogen circulating through four uniquely designed moderators at the target. The hydrogen is in turn cooled from a helium cryogenic plant operating at 15-20 K. The cryogenic hydrogen circuit is a dynamic system, subject to significant changes in heat load. The integrated moderator/hydrogen/helium system is currently being realized through a cooperative agreement between ESS and the Forschungszentrum Jülich GmbH.

Summary

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