

SUCCESS STORY

STATIC BEARING FOR BUILDING

European Spallation Source (ESS), Lund, Sweden

PROJECT DATA

Brief description

In the science district of Lund, southern Sweden, a major European project is emerging in the field of material research. This multi-disciplinary research centre, based on the world's most powerful neutron source, is being built as part of a project involving 13 countries. The plant due to contain the strongest linear proton accelerator ever built will mark another milestone in material science. It will be used to look at and understand basic atomic structures and forces in a wide range of materials/substances.

Requirement

Bearings for walls and ceilings to protect against shocks and displacement.

City, year

Lund, 2014–2023

PROJECT DESCRIPTION

When neutrons are generated in the ESS system for research purposes, ionising radiation occurs. To enable the activated substances to be stored safely, a fully automated warehouse is being built with a solid structure and walls that are approx. 1 m thick. The handling process for the activated material will be based completely on robotic technology. In order to guarantee safe storage, even in the event of a highly unlikely catastrophe like an earthquake or plane crash, etc., the warehouse's ceilings and walls have to be able to withstand damage like cracks in the event of shocks and horizontal movements.

SOLUTION

To prevent damage, the walls, ceilings and building components must be able to shift together. This is achieved using Calenberg Perforated™ bearings type 205, Ciparall® sliding bearings and Civalit® sliding bearings. These bearings are used in a variety of locations as the extreme load of the concrete places maximum strain on the bearing's stability and sliding capacity, making them suitable for our warehouse.



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