DENIM 2025 - Design and Engineering of Neutron Instruments Meeting



Contribution ID: 61 Type: Poster

Setting up heavy shielding elements outside the overhead crane area by means of a rail system and the associated challenges

Wednesday, 22 October 2025 14:18 (1 minute)

When heavy shielding elements need to be placed outside the area accessible to cranes, installing a rail system can provide an effective solution. This poster outlines our practical experience with such a setup, highlighting the main challenges encountered and valuable lessons learned to help others avoid common pitfalls.

A brief overview of our rail system is presented, along with discussions of several common technical challenges encountered during installation and operation. These include alignment difficulties due to uneven ground and inconsistent rail heights, as well as complications arising from repurposing neighbouring shielding elements, such as issues with positioning accuracy, existing weld seams and an oil filling that must not be heated during welding.

Additionally, the ceiling bar transport trolley is presented, highlighting issues such as weld seams on the rolling surface, missing crane hooks, non-removable fall protection, compromised height adjustment mechanisms and absent braking systems.

Finally, issues with the roller units of the ceiling bars, such as corroded threads, unauthorised design modifications by contractors, collisions with adjacent shielding elements and the importance of careful tool usage are addressed.

By sharing these insights, we aim to support the more efficient and safer implementation of rail-based shielding systems in constrained environments.

Primary authors: LEHMANN, Kathrin; FRIEDMANN, Ralf (FRM II)

Presenters: LEHMANN, Kathrin; FRIEDMANN, Ralf (FRM II)

Session Classification: POSTER SESSION