



CONSTOR®

The CONSTOR® casks are designed for the safe transport and storage of all kinds of spent fuel assemblies. The cask consists of a thick-walled cylindrical “sandwich” cask body, including an inner and an outer liner fabricated from fine-grained steel. Both liners are welded to the massive fine-grained steel head ring to form a double barrier containment.

For additional shielding the cavity between the liners is filled with CONSTORIT, a heavy concrete with special shielding characteristics, developed by GNS.

The lid system consists of three lids:

- bolted primary lid, in order to optimize dispatching of the cask
- welded seal plate and a welded secondary lid for permanent sealing

No need for active monitoring during the storage period (passive system).

The basket for accommodation of the spent fuel assemblies serves for criticality safety as well as for heat dissipation.

At the lid end of the cask body, one pair of trunnions is bolted for attachment of handling equipment.

Licenses

The CONSTOR® casks are intended for the interim storage of spent fuel. In combination with shock absorbers and an overpack, the CONSTOR® casks design comply with the international regulations of the IAEA for type B(U) package designs.

Cask Design

- Usage of state-of-the-art methods for design and safety analyses
- Customer specific cask design, outer and inner dimensions appropriate for spent fuel assemblies and spatial conditions
- Lid system can be adjusted to customer's requirements
- Cooling fins welded to outer liner if necessary

Advantages

- Manufacturing possible in any industrially developed country of the world
- Cost advantages through manufacturing and delivery based on real need
- Increase of safety due to sandwich design and multi-layer weld (100% leak-tight in the long term, no other sealing components)
- No leak-tightness monitoring necessary during storage period due to welded lids
- Easy handling and flexibility for transport and storage

- Maintenance-free storage operation
- Minimized radiation exposure to operational staff
- Optimal conditions for interim storage of spent fuel assemblies due to the dry atmosphere inside the cask
- Off-site transport without re-loading - “load-and-go”
- Easy retrievability of the fuel for final disposal

References

More than 300 casks were manufactured for Bulgaria (CONSTOR® 440/84) and Lithuania (CONSTOR® RBMK-1500, CONSTOR® RBMK1500/M2). Thereof more than 250 casks have already been loaded.