NUHOMS® 32PTH/32PTH
Type 1 Dry Shielded Canister

The NUHOMS® HD 32PTH Dry Shielded Canister (DSC) is a state-of-the-art high-heat canister that TN Americas has developed for storage and transport of high burnup short cooled fuel.

The 32PTH DSC incorporates a 3-inch larger canister diameter than the standard NUHOMS® canisters. The larger diameter allows for increased payload and optimized use of heat conducting materials to increase the thermal heat rejection capacity of the system.

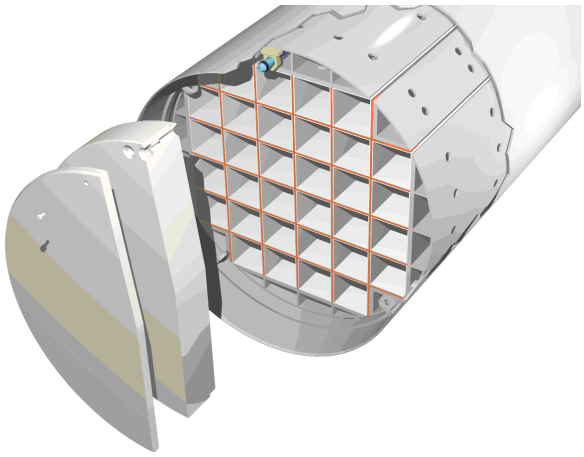
The 32PTH benefits from the use of an advanced egg crate basket geometry used in the NUHOMS® 24PTH. It consists of uninterrupted aluminum heat conductive pathways and utilizes crisscrossed slotted plates to construct the egg crate shape. The slotted plates minimize gaps to improve heat conduction while minimizing welding and simplifying construction.

Construction of this basket is simple and efficient. The slotted plates are assembled into a simple "egg crate" segment. To span the full axial length of the canister, the short egg crate segments are stacked axially with stainless steel bands between each two stacks. Stainless steel fuel compartments are inserted through the egg crate segments and fuse-welded to each of the steel bands to achieve high structural rigidity. The fusion welds minimize distortion. The basket uses "transition rails" to bridge the gap to the outside shell to provide a wide contact surface that improves thermal conduction while providing a larger footprint on the shell for load transfer under some of the severe drop accidents.

This canister incorporates the same closure weld design as the many other safely loaded NUHOMS® canister systems in use today.

The 32PTH offers the most advanced fuel parameters of any system in the industry. Parameters of this design simplify used fuel management for our customers.

The 32PTH system does not sacrifice shielding in the transfer cask, allowing the system to store high neutron and gamma source terms without a dose penalty.



About TN Americas

TN Americas is a leader in the American nuclear market offering innovative total systems solutions for used fuel and radioactive waste management and transportation. More than 50 percent of American nuclear plant operators use TN's used fuel storage or transport solutions, irradiated waste removal and processing, and pool to pad services.

TN Americas' track record of providing safe storage and transportation of used fuel is driven by state-of-the-art products and services, innovative engineering solutions, and integrity in meeting customer expectations for low-dose and error-free campaigns. TN Americas customers include utilities, reactor operators, research reactors and the U.S. government.

TN Americas' products are marked by the highest standard of safety, uncompromising commitment to quality and operational dependability, and "as promised" service integrity.

AREVA
forward-looking energy

Technical Features

Payload:

32 Intact including Reconstituted PWR Fuel Assemblies

16 Damaged Fuel Assemblies

Control Components – BPRAs, TPAs, CRAs, RCCAs, APSRAs, ORAs, VSIs, NSAs, Neutron Sources, BLEU Fuel Material and Instrument Tube Tie Rods

Materials of Construction:

Stainless Steel Shell and Cover Plates

Coated Carbon Steel Shield Plugs

Stainless Steel Basket Assembly

Borated Aluminum, Boral & MMC Poison

Physical Data:

Outside Diameter – 69.75 inches

Outside Length – 193 inches

Cavity Length – 171.63 inches

Weight, Empty – 58,000 lbs

Weight, Loaded – 108,850 lbs

Intact Fuel

Zircaloy Based Cladding Material

Maximum Initial Enrichment – 5 wt% U235

Minimum Initial Enrichment – 0.2 wt% U235

Minimum Cooling Time – 5 years

Maximum Burnup – 60 GWd/MTU

Maximum Heat Load – 34.8 kW

Maximum Decay Heat – 1.5 kW/Assembly

Maximum Uranium Content – 476 kg

Maximum Assembly Weight – 1610 lbs

Reconstituted Fuel

4 Assemblies per DSC with up to 10 Stainless Steel Rods per Assembly

Unlimited number of Lower Enriched Rods/Assembly

Damaged Fuel

Assemblies containing missing or partial fuel rods or fuel rods with known or suspected cladding defects greater than hairline cracks or pinhole leaks that are able to be handled by normal means. Damaged fuel assemblies are stored in a fuel compartment with top and bottom end caps.

TN Americas

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3/17 **ANP:U-353-V5-17-ENG**