

HOLTEC HIGHLIGHTS

A Summary Report to Our Clients, Suppliers, and Company Personnel

U.S. Army's Missile Launcher Strikes HI- STAR 180 with Pinpoint Accuracy: A Red Letter Day for Holtec's Transport Cask Program

August 29, 2013, U.S. Army's Aberdeen Proving Grounds: As engineers from Axpo Power AG (Holtec's client), the Swiss Federal Nuclear Safety Inspectorate (ENSI), the Swiss Association for Technical Inspections (SVTI) and Holtec watched, the U.S. Army's missile launcher delivered a picture perfect strike to a scaled model of the HI-STAR 180 transport cask, sending it tumbling into a catch box just as intended by our test engineers. In accordance with the Swiss regulator's storage certification requirement, this missile test was designed to simulate the impact of a crashing aircraft on the HI-STAR 180 transport cask while in use as a spent fuel storage device. The missile was designed by Holtec's engineers to deliver the "design basis impulse" using LS-DYNA. Calibration of the missile's kinetic performance was calibrated over a year ago at the Aberdeen facility by hurling the missile against a "rigid" wall serving as the target. The data collected from the cask test showed that the missile struck the cask at a velocity exceeding 600 miles per hour which was over 17% greater than the target value and the location of impact was precisely that determined to impart the maximum stress levels on the containment boundary and to conservatively challenge the cask containment (to induce leakage of the cask's contents) by parametric simulations on LS-DYNA.

The post-impact inspection of the cask showed that it weathered the impact with large performance margins confirming our dynamicists' predictions; the measured post-impact helium leak rate from the cask's containment boundary, as confirmed by SVTI, was 1000 times smaller than the established acceptance criteria. Additionally, all of the body bolts in the containment boundary of the cask remained elastic and there was no breach of the containment boundary.



Scaled HI-STAR Test Model In Front of Catch Box Prior To Test



Holtec Engineered Test Missile Designed to Impart the Specified Impact Force vs. Time to the HI-STAR Cask Model



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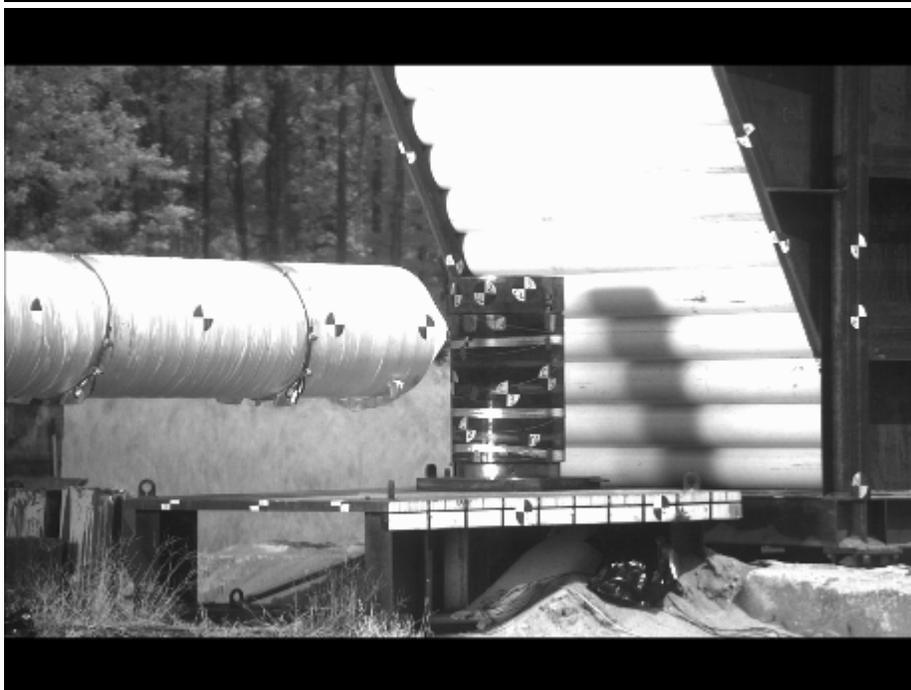


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HI-STAR 180 has been designed as a dual-purpose cask for storage in accordance with Swiss regulations and in alignment with IAEA requirements for a type B(U)F cask. HI-STAR 180 was licensed by the U.S. NRC in 2009 under 10CFR 71 to transport high burn-up PWR fuel and MOX fuel (Docket Number 9325). Upon the Swiss regulator's formal release, the first batch of 14 HI-STARs will be built at the Holtec Manufacturing Division (HMD) in Pittsburgh, PA.



High Speed Photographs of Missile Approaching the Cask at 888 Ft/Sec Just Prior to Impact



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Video clips of the test will be placed on the Holtec website (www.holtecinternational.com) within a few days.

After witnessing the test, Dr. Bill Woodward, Senior Vice President of International Projects stated, *“This test is a landmark achievement for our spent fuel management program. The superb structural performance of HI-STAR 180 should be reassuring to our client and the regulators tasked with ensuring public health and safety. We are proud of our engineers and scientists who have demonstrated the prowess of Holtec’s cask technology to the world”*.



The Holtec Test Team Accompanied By Test Witnesses From Axpo, ENSI and SVTI with the Post-Test HI-STAR 180 Lying In The Catch Bin



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