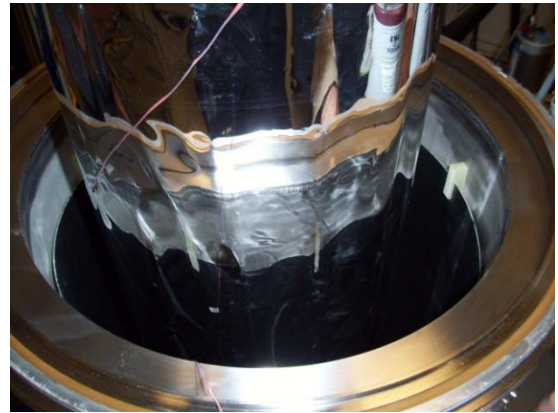


01/2010- Quest's IMLI Performance is 27% Better Per Layer Than Current High-Performance MLI

Quest's new Integrated MultiLayer Insulation (IMLI), being developed by Quest teaming with Ball Aerospace, has had prototypes built and tested by NASA's Cryogenics Test Laboratory located at Kennedy Space Center and directed by James Fesmire, a leading NASA cryogenics expert. Quest's innovative IMLI had a measured thermal performance 27% better per layer than state-of-the-art low density netting MLI, with a heat leak of 0.41 W/m^2 (for a 20 layer blanket, 1.4" thick, 77K cold and 295K hot). This thermal performance matches results by Quest and Ball Aerospace using custom calorimeters that model cryogenic propellant tanks for spacecraft.

Quest IMLI was successfully tested to NASA vibration specifications, and been tested to launch profile rapid depressurization, and is currently at NASA Technology Readiness Level 6.



Improved cryo propulsion thermal insulation technology is needed for new NASA vehicles with long-lived missions. IMLI is a next generation MLI with better thermal insulation performance than conventional MLI, has a robust bonded structure with controlled layer spacing, and lower installed cost than conventional MLI. IMLI provides faster venting and less heat gain during launch and during on-orbit operation.

Quest is on track to create a commercially viable multilayer insulation product for aerospace and commercial applications. NASA applications include thermal insulation for cryopropellant tanks, launch vehicle external tanks, space cryogenic instruments and orbiting fuel depots. Non-NASA applications for this new technology include liquid hydrogen powered aircraft and vehicles, cryogenic dewars for research, medical and industrial uses, insulating superconducting devices such as MRI machines, and refrigerator/freezer appliance insulation.