NASA Selects Boeing For Cryogenic Propellant Tanks

WASHINGTON, PRNewswire-USNewswire -- NASA has selected The Boeing Company of Huntington Beach, Calif., for the Composite Cryotank Technologies Demonstration effort. Under the contract, Boeing will design, manufacture and test two lightweight composite cryogenic propellant tanks. The demonstration effort will use advanced composite materials to develop new technologies that could be applied to multiple future NASA missions, including human space exploration beyond low Earth orbit.

Boeing will receive approximately $24 million over the project lifecycle from NASA's Space Technology Program for the work which starts this month. The tanks will be manufactured at a Boeing facility in Seattle. Testing will start in late 2013 at NASA's Marshall Space Flight Center in Huntsville, Ala.

"The goal of this particular technology demonstration effort is to achieve a 30 percent weight savings and a 25 percent cost savings from traditional metallic tanks," said the Director of NASA's Space Technology Program, Michael Gazarik at NASA Headquarters in Washington. "Weight savings alone would allow us to increase our upmass capability, which is important when considering payload size and cost. This state-of-the-art technology has applications for multiple stakeholders in the rocket propulsion community."

By investing in high payoff, disruptive technology that industry does not have today, NASA matures the technologies required for future missions, while proving the capabilities and lowering the cost of government and commercial space activities.

Continuing the advancement of technologies required for NASA's missions in deep space exploration, science and space operations, the composite cryotank demonstration effort will advance the areas of materials, manufacturing and structures.

The tanks incorporate design features and new manufacturing processes applicable to designs up to 10 meters in diameter. Tanks could be used on future heavy-lift vehicles, in-space propellant depots and other Earth-departure exploration architectures.

"This technology demonstration effort is different in the fact that we're focused on affordability concurrently with performance," said John Vickers, NASA project manager for the Composite Cryotank Technologies Demonstration effort at Marshall. "This technology has excellent transition potential for NASA and commercial product lines.

Critical technology advances such as out-of autoclave composites are being matured, and when demonstrated in an operational environment will let us go well beyond the state-of-the-art."

Marshall will lead the project with support from NASA's Glenn Research Center in Cleveland; NASA's Langley Research Center in Hampton, Va.; and NASA's Kennedy Space Center in Florida. The composite cryogenic tank effort is part of the Space Technology Game Changing Development Program, managed by the Office of the Chief Technologist.

For more information about NASA's Marshall Space Flight Center, visit http://www.nasa.gov/marshall [1].

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