



## Space Shuttle's Final Flight Tank Spliced Together

March 2, 2010

NEW ORLEANS, LA., March 2nd, 2010 -- The Space Shuttle Program's final flight tank -- designated External Tank-138 -- has completed a critical production milestone at the NASA Michoud Assembly Facility. Lockheed Martin (NYSE: LMT) builds the External Tanks in New Orleans where its engineers and technicians mechanically spliced ET-138's liquid oxygen (LO2)/intertank to the liquid hydrogen (LH2) tank, thus producing "a whole tank" for the first time in the production process.

The work is performed in Cell A in the 20-story-tall Vertical Assembly Building, and is the only time during production that the tank is standing upright. Workers also completed foam closeouts on the LH2 to intertank flange.

An External Tank is actually three components in one. The 54.6-foot-tall bullet-shaped LO2 tank sits at the top. The 22.5-foot-long intertank separates the LO2 tank and the LH2 tank and does not hold fuel. Unpressurized, the intertank serves as the forward attachment point for the Solid Rocket Boosters. The bottom vessel is the 96.7-foot-tall LH2 tank. The LO2 tank and intertank are already spliced together when they enter Cell A.

Lockheed Martin employees loaded the tanks into the cell and completed the splicing and laydown of the tank in a record 40 days. The prior eight tanks averaged 60 days in Cell A.

ET-138 now proceeds to the Final Assembly area for more processing and is scheduled for completion June 29. When ET-138 is delivered to NASA, it will be 15 stories tall (154 feet), nearly 28 feet in diameter, and weigh 58,500 pounds empty. When filled with 534,000 gallons of propellant on the launch pad, the tank will weigh nearly 1.7 million pounds. ET-138 is scheduled to launch with Space Shuttle Discovery (STS-133) on September 16 -- the final shuttle launch of the 29-year program. ET-138 will help propel Discovery to orbit and then separate from the shuttle 8½ minutes post-launch after Main Engine Cut-off or MECO.

ET-138 will be the 134th flight tank that Lockheed Martin has constructed for the shuttle program. To see high-res and low-res photos of the tank's laydown from Cell A, go to <http://www.lockheedmartin.com/ssc/michoud/MichoudImages/ET138.html>

Besides building the ET in New Orleans, Lockheed Martin is also working on the successor to the Space Shuttle, the Orion crew exploration vehicle. Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation reported 2009 sales of \$45.2 billion.

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