

Press release

marketing communication

TenCate composite materials replace titanium for Orion space capsule heatshield and backshell structure

TenCate Advanced Composites North America, a leading global composite materials company for space and aerospace applications, has developed and provided heat resistant composites for the heat shield and backshell structure of the Lockheed Martin Orion multi-purpose crew vehicle, successfully launched this week. The suite of advanced materials of TenCate in this space capsule replaces the traditional titanium solution for re-entry and splashdown requirements, while saving weight and cost. The composite heat shield design allows very large composite structures to be fabricated out of autoclave.

Lockheed Martin Space Systems Orion thermal protection group worked closely with TenCate Advanced Composites to develop a special heat resistant composite resin for the 16.5 foot (5 meter) diameter heat shield and the crew vehicle backshell structure of the Orion space capsule.

The successful launch this week of the NASA's Orion multi-purpose crew vehicle represents the efforts, innovation and teamwork of many individuals and companies involved. Steve Mead, Vice President of Marketing & Sales at TenCate Advanced Composites in Morgan Hill, USA, states: "This week's flight represents the culmination of a five year development and qualification effort for a suite of materials used in this extreme application. Further, as a result of the heat shield's large size and thickness, the advanced composites used had to achieve high consolidation using only a low pressure vacuum bag only process. TenCate is honoured to be one of Lockheed's partners on this important space program."

**TenCate Advanced Composites North America
Morgan Hill (California), United States of America, Friday 5 December 2014**

For further information:

Digital pictures are available upon request via media@tencate.com

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TenCate Advanced Composites is a leader in the development and production of thermoplastic and thermoset prepreg composites. Its product portfolio is incorporated in automotive products, aerospace applications, medical equipment and numerous other industrial applications. TenCate Advanced Composites has production facilities and operations in Europe and North America and distributors in Asia.

Royal Ten Cate (TenCate) is a multinational company that combines textile technology with chemical processes and material technology in the development and production of functional materials with distinctive characteristics. TenCate products are sold throughout the world.

Systems and materials from TenCate come under four areas of application: safety and protection; space and aerospace; infrastructure and the environment; sport and recreation. TenCate occupies leading positions in protective fabrics, composites for space and aerospace, antiballistics, geosynthetics and synthetic turf. TenCate is listed on NYSE Euronext (AMX).