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SONACA and BRM win the JEC 2016 world Innovation award - Space category

After 4 years of intensive collaboration in developing an innovative cryogenic upper interstage composite ring demonstrator for new space launchers, SONACA (Belgium) and BRM (USA) win the JEC 2016 world innovation award in the space category.

The development optimized the cross section of a circular 4.3 meter diameter ring. This resulted in an important weight saving at an affordable price.

The innovation consisted of making the best choice of composite materials and manufacturing processes (Weaving, Injection), validated by suitable simulations and tests, while ensuring the challenging industrial requirements were met (Net shape part, logistics, final assembly). The most advanced 3D orthogonal weaving process was used to produce a demonstrator ring with 90° segments based of carbon fiber dry preforms. Each segment was injected using Resin Transfer Molding process (RTM). The four segments were then assembled together by splicing.

SONACA and BRM signed a partnership agreement to consolidate the progress already achieved in the field of advanced structural composite parts, in order to offer high quality and competitive advanced composite structures to their customers.

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About BRM

BRM designs, develops and manufactures specialized woven webbing, narrow fabrics, specialty 2D and 3D woven engineered textiles and 3D complex woven structures. Since 1923 BRM has a long history of providing textiles to the world. Its group of 300 talented product designers, technicians, and engineers provide unrivaled experience to solve customer design challenges.

www.ballyribbon.com

About SONACA Group

SONACA Group is a global Belgian company active in the development, manufacturing, and assembly of advanced structures for civil, military, and space markets. The group is especially known for its wing movables expertise where it is regarded the world leader serving most of the primes with a market share of over 50%. It has production facilities in China, Europe, North-America, and South-America and employs over 2500 people including 350 engineers. In response to strong demand from its customers, SONACA Group today also supplies engineering services, large sheet metal elements, wing plank, composite structures, and machined components.

www.sonaca.com



“The need of such a cost effective and lightweight structural component is clearly expressed by the aerospace OEMs; it is definitely a value adding innovation, now ready for our customers.”

*Hugues Langer,
SONACA Development & Innovation director*

“3D orthogonal woven preforms with carbon fiber combined with RTM process confirms its promises for the manufacturing of CFRP composite parts. This technology can also be used with other advanced fiber, opening innovative applications.”

*Bernard Poulaert,
SONACA Space projects Manufacturing manager*

“Our Engineering, Prototype and Test teams contributed strongly to this ESA R&D project. They are everyday also offering their agile skills and expertise to companies that are targeting to consolidate their advance in their respective markets through SONACA Engineering & Test Services. Their combined expertise and agility can be used by worldwide organizations.”

*Jean-Louis Magerman,
SONACA Prototype and Test Services manager*