

Press release

Alcan showcases innovative aluminium solutions for the worldwide aerospace industry at Paris Air Show

15 June 2009

Alcan Global Aerospace Transportation and Industry (Global ATI), part of Alcan Engineered Products, a business unit of Rio Tinto Alcan, is showcasing a broad range of aluminium alloy and manufacturing innovations at the Paris Air Show (Hall 2B, Stand B19), from June 15 to 21 2009, further demonstrating its unique ability to deliver long term benefits to civil, commercial and defence aerospace and space customers worldwide.

"Alcan Global ATI plays a leading role in developing advanced materials that shape the current and next generation aircraft," said Christophe Villemin, President of Alcan Global ATI. "As the Paris Air Show celebrates its 100th anniversary, we look forward to presenting a wide selection of our most significant innovations., Our products are designed in close cooperation with the major aerospace industry players to help them build environmentally friendly, reliable and always more cost-effective aircraft".

Alcan Global ATI also has a proven track record in space programmes, through its partnerships with ESA and NASA , and their subcontractors. The Space Shuttle and Ariane 5 both have Alcan materials on board, and future manned flights and launcher programs such as Constellation and Vega will as well.

The Alcan Global ATI stand features numerous examples of how its innovation capabilities are applied to the aerospace and space industry, from advanced alloy development to local tailoring of properties for monolithic aluminium parts to innovative assembly technologies. Alcan Global ATI exhibits include:

- A single, monolithic casting of a passenger door frame, replacing a sub-assembly made of 93 separate components and 1600 rivets for the Dassault Falcon 900/2000/7X series
- An innovative concept to join Carbon Fibre Reinforced Plastic (CFRP) and aluminium-lithium alloy for use into hybrid aerospace structures
- A pre-machined Airbus A330 landing gear element produced using 77% of recycled aluminium scraps recovered from production
- Stretch-formed, heat treated, stretched and machined extrusions for fuselage frames for Airbus A380 and Embraer ERJ145 to illustrate downstream aluminium activity as well as the full potential of aluminium recycling
- Forward fuselage bulkhead machined from high-performance aluminium-lithium plate for all three variants of the F-35 Joint Strike Fighter programme
- A test piece of Friction Stir Welding (FSW) ¹ joint in a hydrogen Turbopump for Ariane 5, delivering improved properties of the joint (static, fatigue damage tolerance and corrosion) and optimized production process
- A precision cast aluminium alloy impeller for the 3rd cryogenic stage hydrogen Turbopump used on the Ariane 5 launcher.

¹ Alcan Global ATI is a pioneer in ground breaking industrial processes, specifically in Friction Stir Welding, a solid-state welding technique adapted to all aerospace alloys and thick products without loss of mechanical properties.

Alcan Global ATI will also showcase its unique aluminium recycling capabilities, which provide critical benefits to help the aerospace industry meet its economic and environmental challenges. The recycling of aluminium requires only 5% of the energy needed to produce the primary metal. These distinctive properties place aluminium alloys ahead of any other materials used in manufacturing an aircraft.

The Alcan Global ATI closed-alloy-loop recycling process allows recycling 100% of the aluminium produced during the manufacturing process, from mill scraps to customers' machining scraps, as well as aluminium and alloys found in commercial aircraft when they reach the end of their service lives. These capabilities further reinforce aluminium's position as the material of choice for aerospace customers by maximising its value and reducing their environmental footprint.

"Our commitment is to help the aerospace industry to meet their environmental challenges by offering them eco-friendly, energy-efficient and sustainable products. As we have developed unmatched end-to-end recycling capabilities, all our customers can fully benefit from the unique, infinitely recyclable properties of aluminium", said Christophe Villemain.

About Alcan Global ATI

Alcan Global ATI employs over 4.000 people and has manufacturing plants in Europe and North America. A world leader in the production of aerospace plates, Alcan Global ATI provides its customers with its entire portfolio of advanced lightweight aluminium solutions. Thanks to its global R&D, manufacturing and commercial reach, Alcan Global ATI is able to build long-term supply and innovative technology partnerships with major aerospace leaders.

About Alcan Engineered Products

Alcan Engineered Products is a global sector-leading business strongly committed to developing innovative, value added products for a broad range of markets and applications. The portfolio consists of seven downstream businesses: aerospace, non commodity aluminium rolled products, aluminium extrusions, cable, composite products, automotive components and international trade.

With 15.000 employees located in 34 countries and a commercial presence in 65 markets across Europe, the Middle East, Africa, the Americas and the Asia-Pacific region, Alcan Engineered Products is organised around seven businesses dedicated to performance materials in the areas of aluminium rolled products, aluminium extrusions, aluminium cable, composite products, automotive components and international trade. Alcan Engineered Products is headquartered in Paris, France.

About Rio Tinto

Rio Tinto is a leading international mining group headquartered in the UK, combining Rio Tinto plc, a London and NYSE listed company, and Rio Tinto Limited, which is listed on the Australian Securities Exchange.

Rio Tinto's business is finding, mining, and processing mineral resources. Major products are aluminium, copper, diamonds, energy (coal and uranium), gold, industrial minerals (borax, titanium dioxide, salt, talc) and iron ore. Activities span the world but are strongly represented in Australia and North America with significant businesses in South America, Asia, Europe and southern Africa.

For further information, please contact:

Rio Tinto Alcan Media Relations, Paris

Chrystele Ivins
Tel.: +33 1 57 00 24 18
chrystele.ivins@riotinto.com

Rio Tinto Alcan Media Relations, Canada

Stefano Bertolli
Tel.: +1 514 848 8151
stefano.bertolli@riotinto.com

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Website: www.riotintoalcan.com