

Press release

First Step into Space: Liebherr-Aerospace to Develop Thermal Management Capabilities for Satellites

Gaining a partnership with European space manufacturer Thales Alenia Space and Centre National d'Etudes Spatiales (CNES), Liebherr is entering a new market: Liebherr-Aerospace, who has been active in the aviation industry for decades, is developing thermal management capabilities for a Mechanically Pumped Loop (MPL) cooling system for satellites.

Toulouse (France), October 2020 – Liebherr-Aerospace Toulouse SAS, based in Toulouse (France), together with Thales Alenia Space, Joint Venture between Thales (67 %) and Leonardo (33 %) and CNES, is developing industrial production and co-design capabilities for evaporators and condensers. These are key components of the next-generation telecommunication satellite's technology payload and platform cooling system, which actively manages the electronic heat dissipation.

Manufacturing evaporators and condensers for future MPL cooling systems will be a demanding assignment: As part of an innovative MPL, they will be in space for at least 15 years without maintenance. This means that the evaporators and condensers have to be completely free from leakage as well as extremely reliable and robust to operate flawlessly during this period at high heat-exchange performances. The telecommunication satellites fast-moving market is more and more demanding in terms of responsiveness, high quality control and cost competitiveness. To be able to produce evaporators and condensers reaching new standards, Liebherr-Aerospace's French-based center of excellence is developing industrial welding and manufacturing processes, which are both innovative and highly repeatable for both space and serial production levels of requirements.

Telecommunication satellites payload cooling: adapting to a fast-moving market

Thales Alenia Space has been building up its product range differentiation through technology advance. Cooling electronics to be mounted on-board powerful digital telecom payloads has become a challenge due to increasing density needed to meet such

expectations. Thales Alenia Space is continuously developing innovations as well as building relevant partnerships to face that fast-moving market.

About Liebherr-Aerospace & Transportation

Liebherr-Aerospace & Transportation SAS, Toulouse (France), is one of eleven divisional control companies within the Liebherr Group and coordinates all activities in the aerospace and transportation systems sectors. Liebherr-Aerospace is a leading supplier of systems for the aviation industry and has more than six decades of experience in this field. The range of aviation equipment produced by Liebherr for the civil and military sectors includes flight control and actuation systems, gears and gearboxes, landing gear and air management systems as well as electronics. These systems are deployed in wide-bodied aircraft, single aisle and regional aircraft, business jets, combat aircraft, military transporters, military training aircraft, civil helicopters and combat helicopters.

Liebherr's aerospace and transportation systems division employs around 6,200 people. It has four aviation equipment production plants at Lindenberg (Germany), Toulouse (France), Guaratinguetá (Brazil) and Nizhny Novgorod (Russia). These production sites offer a worldwide service with additional customer service centers in Saline (Michigan/USA), Seattle (Washington/USA), Montreal (Canada), Hamburg (Germany), Moscow (Russia), Dubai (UAE), Bangalore (India), Singapore and Shanghai (People's Republic of China).

About the Liebherr Group

The Liebherr Group is a family-run technology company with a highly diversified product portfolio. The company is not only one of the largest construction equipment manufacturers in the world, but also provides high-quality and user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 140 companies across all continents, employs more than 48,000 staff and in 2019 achieved combined revenues of over 11.7 billion euros. Since its foundation in 1949 in Kirchdorf an der Iller in Southern Germany, Liebherr has been pursuing the goal of achieving continuous technological innovation, and bringing industry-leading solutions to its customers.

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