COTESA USES LAP CAD-PRO LASER PROJECTORS TO ACCELERATE LAY-UP PROCESSES DURING COMPOSITE PRODUCTION OF GFRP FUSELAGE COMPONENTS
THE PROJECT
COTESA, a leading manufacturer of high-quality composite fiber components for the aviation industry, manufactures GFRP fuselage components for Airbus at its Mochau factory in Germany. The facility was expanded to around 40,000 square feet in order to accommodate a contract that saw the increase of the vertical range of manufacture at COTESA to include painting and assembling components. The factory delivers 25,000 fiber-glass reinforced plastic (GFRP) fuselage parts for the A320 family to Airbus, in Hamburg, every year. More than 30 different fuselage components will eventually now be produced in series. This also includes considerably larger, more complex components. To ensure even more effective production practices in future, COTESA has implemented LAP’s laser projection system, including CAD-PRO laser projectors and the PRO-SOFT control software, at all laminating workstations.

THE APPLICATION
Manual measuring, physical templates and layer schemes are now a thing of the past thanks to the laser positioning system. The lay-up process is completely based on laser projection, and every step is managed by LAP’s PRO-SOFT control software. Laser projectors precisely display every shape, layer by layer, while text projections lend additional visual assistance to the operators, for example by indicating intermediate steps or the orientation of elements to be placed. The easy-to-use system makes work much easier because it is so intuitive. New projection steps can be started comfortably by means of remote control so that the operators hardly need to look at the monitor. Moreover, the PRO-SOFT software documents projection steps and saves order-related data by generating log files.

In total, seven workstations are set up for laser projection. COTESA decided in favor of the diode-based LAP CAD-PRO laser projectors with green laser sources. These lasers feature a service life of more than 30,000 hours, are focussable and provide clearly visible laser lines. All of these benefits help ensure highly reliable processes. The laser projection system also features the flexibility needed to handle different component sizes, ranging from 10 to 20 square feet. To process larger tools, some stations are equipped with up to four projectors. With the laser projection system in place at each station, COTESA is well prepared to produce even faster and more efficiently in the future.

THE BENEFITS
INCREASE IN EFFICIENCY
Acceleration of lay-up processes by omission of mechanical templates and layer schemes

PROCESS RELIABILITY
Thanks to software-based workflows and digital laser technology

CONSISTENT COMPONENT QUALITY
Compliance with the high requirements of the aerospace industry
ABOUT COTESA

COTESA is a leading manufacturer of high-quality composite fiber components for aviation and automotive engineering. With three locations and more than 700 employees, we develop and manufacture customized solutions for components and assemblies. Our focus is on complex CFRP components such as frames, profiles and stiffeners, multi-dimensional GFRP sandwich structures and hybrid components such as drive shafts.

www.cotesa.de

ABOUT LAP

LAP is a worldwide leader in the field of laser-based systems for projection and non contact measurement. For more than 30 years, LAP has developed, manufactured and distributed laser measuring systems, line lasers and laser projectors for industry and medicine. Numerous international industrial corporations rely on the precision technology Made in Germany for improvement of the quality of their products and the effectiveness of their production processes.

www.lap-laser.com