

Backgrounder

September 2018

GKN Aerospace on the A400M

GKN Aerospace is responsible for complex metal and carbon fibre composite structures for the versatile Airbus A400M military airlifter.

Contribution to this airframe includes:

- Design and manufacture of the 20 meter-long, carbon fibre wing spars for the Airbus A400M. This contract represents the first application of an all-composite primary flight structure for a large transport aeroplane. Design, development - including of innovative automated manufacturing processes - and initial production was undertaken by the company's Cowes, Isle of Wight, site with production manufacture now situated at the Filton and Western Approach facilities, near Bristol UK.
- Integration of the complete wing leading & trailing edges. The eight structures that make up the leading and trailing edges vary in length from 5 meters to 14 meters and have a total weight in excess of 1.4 tonnes. This work involves drilling and assembling over 140 aluminium and titanium components onto the company's all-composite wing spars. This complex work package positions GKN Aerospace as the prime source of wing trailing edge packages for long range, heavy lift aircraft and is undertaken at the company's Filton and Western Approach facilities in Bristol, UK.
- Design, development and supply of the welded aluminium air inlet with its integral regulated bleed air anti-icing system for the engine of the A400M. This work is undertaken at the company's Cowes facility on the Isle of Wight, UK
- Design, development and supply of the lightweight air-to-air refuelling pylon for the wing dispense equipment (WDE) for the aircraft. The pylon is manufactured using a combination of composite and metallic components to achieve the stringent weight and performance targets essential for effective air-to-air refuelling. This work is also undertaken at the company's Cowes facility on the Isle of Wight, UK
- The design and supply of the complete electrical wiring interconnection system (EWIS) for the wings - provided by GKN Fokker through GKN Fokker Elmo. The wiring is manufactured in the GKN Fokker Elmo plant in Izmir, Turkey
- Thermoplastic Composite ice protection plate, manufactured in the Hoogeveen (NL) facility of GKN Fokker Aerostructures. Complex component with high-level requirements. Has to provide ice protection and noise reduction