

Aero Engine Capabilities

India | USA | Italy | Japan | UK | Germany | France | Spain



QuEST Global provides support across the entire product life cycle from design and modeling through analysis, prototyping, automation, data documentation, manufacturing support, vendor management, and in-house precision machining.

Through our Global Product Development framework leveraging our local presence and global reach, we enable companies to cut product development costs, shorten lead times, extend capacity, and maximize engineering resources.

QuEST Global is a leader in aero engine component design, modeling, stress analysis (static and dynamic including FBO analysis), aero fluid systems, heat transfer, performance analysis, technical documentation, repair engineering, manufacturing engineering, CAD customization, embedded systems, service engineering, etc. QuEST Global offers these services for both military and commercial aircraft engines. Through our near-site centers located in the US and Europe, we can work on ITAR / export-controlled work, as well as provide critical project engineering support in a real time manner in areas like:

- Hardware & test support
- Build support
- Engineering changes
- Hardware tracking & expediting
- Cost reduction
- Root cause investigation

Engine programs supported (partial list)

Commercial programs

- BR 710
- BR 715
- Trent 500
- Trent 700
- Trent 900
- Trent 1000
- Trent XWB
- V2500
- RB511/512

Defense programs

- Adour
- Pegasus
- RTM 322
- TP 400
- SPEY
- TAY
- VIPER

Certifications

- | | |
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| ■ AS 9100 | ■ ISO 9001:2000 |
| ■ EADS E2S Preferred Supplier for Engineering Services | ■ CMMI Level3 |
| ■ Airbus Supplier Certification | ■ Rolls-Royce SABRe |
| ■ ISO 27001 | ■ Rolls-Royce IT Security |
| | ■ Approved to work on NATO restricted data |



Case brief – Design optimization of aero engine structural case

Customer

Major aero engine OEM

Objectives

- Provide design solution for a commercial engine structural case, optimizing aerodynamic efficiency, cost and weight

Tasks executed

- Multi-discipline approach between QuEST Global's designers and analysts (structural, thermal) to deliver optimized design
- QuEST provided several new concept leveraging domain expertise
- Integrally coordinated with customer's discipline engineering departments, including durability and aerodynamics
- Prime concept chosen and optimized for aero, weight, stiffness, and manufacturability

- QuEST Global provided preliminary designs, drawings and 3D models, and detailed analysis reports

Value

- 50 design/analysis iterations run to optimize case design
- Work performed with mix of experienced on-shore engineers and low-cost off-shore resources

Benefits to customer

- Low-cost, high-value innovative solution
- QuEST resources seamlessly integrated into customer's team
- "Follow-the-sun" operating model leveraged US and India-based staff for rapid turnaround of design iterations

About QuEST Global

QuEST Global is a leading provider of outsourced engineering services and manufacturing. The company helps customers in the Aerospace, Consumer Electronics, Healthcare, Industrial Products, Marine, Nuclear, Oil & Gas, Power Generation and Transportation verticals, to cut product development costs, shorten lead times, extend capacity, and maximize engineering resources. We do this by providing support across the complete product life cycle from design and modeling through analysis, prototyping, automation, data documentation, instrumentation and controls, embedded systems development, manufacturing support, vendor management, and in-house precision machining.



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