

## A350XWB BELLY FAIRING SYSTEMS STRESS ANALYSIS

### INTRODUCTION

ICEMM has participated in the stress analysis and justification of A350XWB Belly Fairing Systems for series 900 and 1000. In this project, it has been carried out all static and fatigue calculations for the certification of the systems of the Belly Fairing, Maturity C of S1000 and Batch 3 of S900. Metallic and composite secondary structures.

### COMPLETED PROJECT

Client: Alestis Aerospace

Date: 2014

- Static and Fatigue analysis of A350XWB Belly Fairing Systems. Maturity C of S000 and Batch 3 of S900

### COMPLETED ACTIVITIES

- Loads from FEM model (Nastran).
- Load compilation (GFEM loads + pressure loads).
- Static Calculations of skin and ducts. Composite Structure.
- Static Calculations of fittings. Metallic Structure.
- Joints between different parts.
- Fatigue Analyses of metallic elements.
- Documentation.

### TECHNOLOGY

The entire project has been analyzed using Alestis-Airbus methodology. The software used in this project is:

- ISAMI v8.1.0.
- Excel + VBA.
- Alestis Software.
- Nastran/Patran.
- Abaqus/CAE.

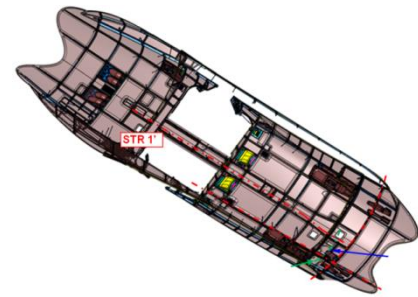


Figure 1. General sketch of A350 Belly Fairing

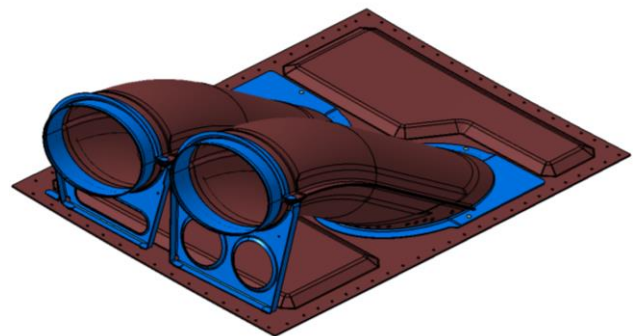


Figure 2. General sketch of Belly Fairing System

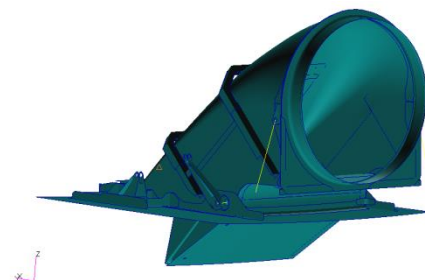


Figure 3. General sketch of Belly Fairing System