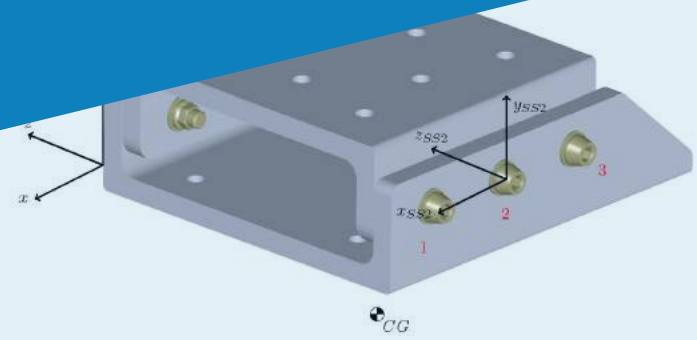
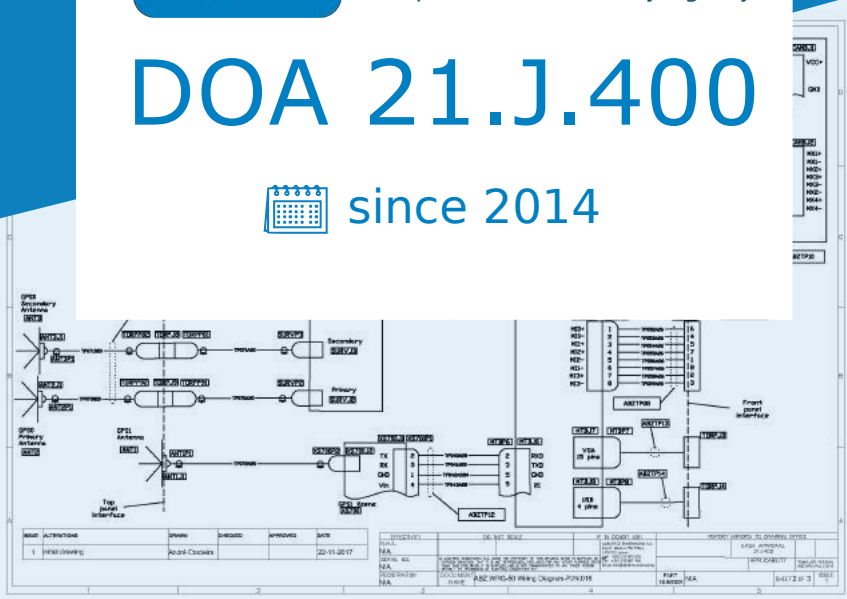
ALBATROZ ENGENHARIA

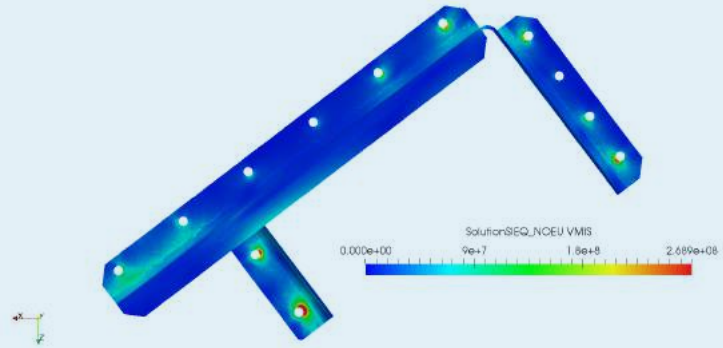
EASA
European Aviation Safety Agency

DOA 21.J.400

since 2014







$$\sigma_x^x = \frac{M_{z_{CS2}}^x}{I_{zz}} y + \frac{M_{y_{CS2}}^x}{I_{yy}} z + \frac{F_x^x}{A} = \frac{54.84}{370.67 \times 10^{-12}} y + \frac{-54.34}{810416 \times 10^{-12}} x + \frac{1000.8}{278 \times 10^{-6}} \quad (27b)$$

$$\Longrightarrow \sigma_{x_{max}}^x = \sigma_x^x(y = 0.002, z = -0.102) \approx 306.6\ MPa$$

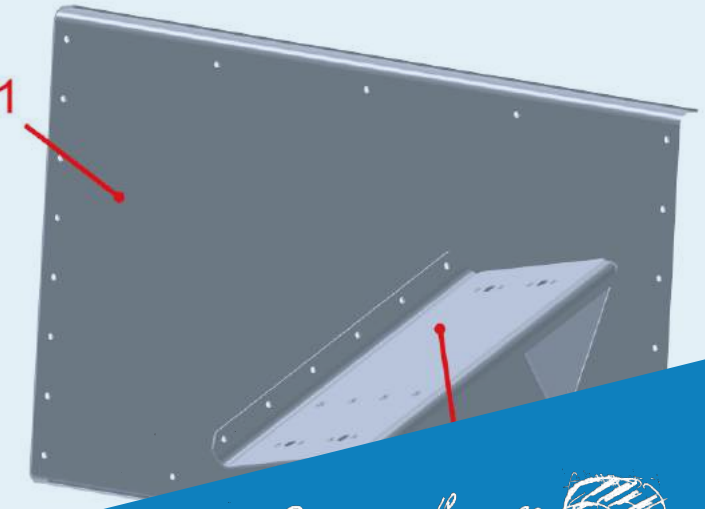
$$MS^x = \frac{F_{tu}}{\sigma_{x_{max}}^x} - 1 \approx 0.37 \quad (27c)$$

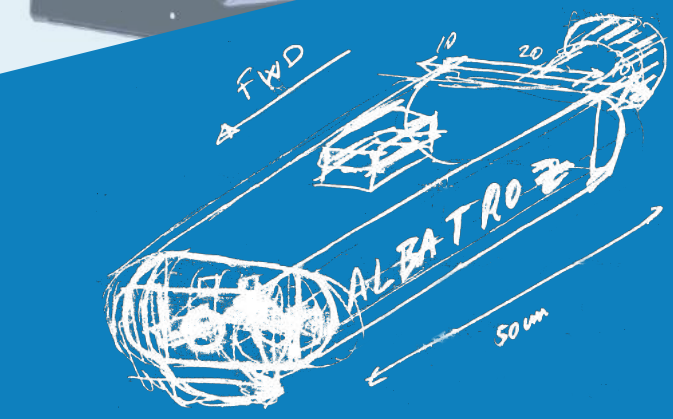
y-direction

$$\vec{M}_{CS2}^x = \vec{R}_{CS2->CG} \times \vec{F}^y =$$

$$= \begin{vmatrix} \vec{e}_x & \vec{e}_y & \vec{e}_z \\ 0.1098 & -0.0548 & -0.0543 \\ 0 & -1000.8 & \end{vmatrix}$$

$$= 0.05$$





Albatroz Engenharia is recognised by EASA as Design Organization Approval since February 2014. The company is focused in developing mission equipments for large and small rotorcraft. It has the capability to design from scratch a new mission equipment according to customer requirements. All the design and certification documents such as structural and electrical analysis are done internally in the company. Mission equipments are integrated in rotorcraft as minor changes and all the documentation such as Operation Manuals and Instructions for Continuing Airworthiness are issued. It has also the capability to perform flight test activities.

CERTIFICATION PROCESS

OPERATIONAL REQUIREMENTS & CERTIFICATION REQUIREMENTS

Definition of operational requirements by the customer and certifications requirements by the Airworthiness Department.

PRELIMINARY SKETCHES & HARDWARE DEFINITION

Hand sketching of the preliminary system configuration and hardware procurement for the mission equipment that meets customer requirements.

ENGINEERING ANALYSIS STRUCTURAL & ELECTRICAL

Critical design review based on structural analysis with classical methodology and/or finite element methods. Electrical load analysis and wire routing definition. The design may be modified at this stage.

DESIGN REVISION & ACCEPTANCE PRODUCTION DRAWINGS

Final revision of production drawings for both electrical and mechanical parts. Production process follow-up to guarantee that final product meets the design and eventual production deviations are analysed and properly documented.

AIRCRAFT INSTALLATION & CERTIFICATION TEST

Implementation of the change in the rotorcraft through specific procedures with all required instruction to install the equipment. To guarantee that the system fulfils all airworthiness requirements it is necessary perform a ground tests, and if required, flight tests.

MODIFICATION APPROVAL & DOCUMENTS

Once the change meets all airworthiness compliance tests, it can be approved as a minor change. All required documentation for continuing airworthiness of the equipment is issued and provided to the customer such, as Instructions for Continuing Airworthiness and Operational Manuals.

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