

Sant Joan Despí (Barcelona), 25th January 2016

It is my pleasure to report that **Mr. Rubén Zorrilla Martínez** has completed his **Industrial Training** at **Buildair – Engineering and Architecture, S.A.** successfully. Mr. Zorrilla's performance while at Buildair has been very satisfactory, performing his duties with professionalism and earnest attitude. His work ranks high in every standard.

The outcome of his work has been a great success, and will enable a deepest understanding of the behavior of inflatable structures exposed to the wind. The level of detail and quality of his work is reflected in several reports and numerical simulations performed at Buildair.

Mr. Zorrilla has proven mastering a number of computational tools for the completion of his work, which is detailed in the **"Industrial Training Report"** attached. In summary, the tasks carried out have been the following:

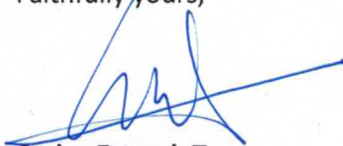
- ✓ **3D structural simulations** of inflatable hangars H20 Summit Polska and H35 Airbus Military (anchorage calculation, material dimensioning...)
- ✓ **3D CFD simulations** of inflatable hangars H20 Summit Polska and H35 Airbus Military (comparison with Eurocode, different hangar configurations...)
- ✓ **2D CFD simulations** of a generic set of inflatable hangars (H20, H35, H45 and H54)
- ✓ Elaboration of **spreadsheets** to calculate wind and snow loads according to Eurocode, as well as other spreadsheets to facilitate the design and modelling of the inflatable structures

Furthermore, Mr. Zorrilla has participated in a 12-hour training of the softwares RamSeries and Tdyn organized by Compass in Barcelona and specially designed for Buildair's needs.

I would like to emphasize once more the good quality of the work performed by Mr. Zorrilla, which has enabled the generation and processing of an immense amount of data, all encompassed with successful research results.

Finally, I would like to thank the organization of the Master's degree in Numerical Methods in Engineering for allowing the experience of having students from the master performing internships at Buildair. My valuation is very positive overall and would recommend exploring it further.

Faithfully yours,



**Carles Estruch Tena**

*Ingeniero de Caminos, Canales y Puertos (UPC)*

*Master of Science in Computational Mechanics (Swansea University & UPC)*