Proceedings of the 4th Annual World Conference Of the Society for Industrial and Systems Engineering, Fort Lauderdale, Florida, USA October 19-21, 2015

Design and Analysis of Aerodynamic Turbines in CAD Software for Analysis Computational Fluid Dynamics (CFD)

S. Dominguez, K. Escamilla, and I. Escamilla

Facultad de Ingeniería Mecánica y Eléctrica Universidad Autónoma de Nuevo León Nuevo León, México

Corresponding author's Email: silveriorueda@outlook.com

Author Note: This work paper has been prepared with great effort and with the firm intention of the generation of new knowledge in the field of CFD, personally this is a critical area and extremely interesting. In this paper they are reflected efforts by me and my two counselors, they are a great example for me and I have consistently supported the entry into the field of research, at an early stage of my training in my 2nd year of university.

Abstract: The propeller blades are profiles aerodynamics as the wings of an airplane, the design and manufacture of these is a work of engineering, which seeks maximum performance in every rotation of a propeller (Jeong et al., 2012). Recently, with the advancement of software simulation, some of the events of this class. They can be displayed and explained, using CAD software packages, as a research tool to estimate the flow fields and Turbine performance of new configurations.

In the analysis of previous research concludes, that could make much better the energy of a propeller-motor system if the angle varies with the blades impact on the air, getting maximum performance during cruise flight (Caboni et al., 2014). Analyze different models of propellers taking as a variable angle of inclination and other factors, to find a final prototype that works optimally and present a remarkable innovation.

Keywords: Turbines, Aerodynamic, CAD Software, Computational Fluid Dynamics, CFD