Aviation manufacturing towards industry 4.0: A review

Gustavo Franco Barbosa
Federal University of Sao Carlos, Brazil

This paper reviews the applications of Industry 4.0 concepts within the aerospace manufacturing processes. A contextual overview of robotics, additive manufacturing and augmented reality, internet of things, simulation and aircraft industry is provided. Some applications of Robotics integrated with other Industry 4.0 principles are showed in order to present the trend of Industry 4.0 principles in different areas of manufacturing. This paper presents some innovations in aerospace industry related to Industry 4.0 and how its benefits and advantages can be reached day by day. Finally, it has been concluded that Industry 4.0 brings gains productivity, quality, costs reduction and increase the competitiveness of any business.

Biography
Gustavo Franco Barbosa has completed his PhD from Engineering School of Sao Carlos USP. He is the Professor of Mechanical Engineering at UFSCar focused on Manufacturing and Automation processes. He has a good background on product integrated development, processes planning, start-up of industrial plants, shop floor assistance, training of engineers and implementation of automated solutions on production processes. His current responsibilities are focused on prospection, development and innovation of technologies for manufacturing regarding automated solutions. He has published more than 10 papers in reputed journals and has been serving as a reviewer of some important journals.

gustavofb1974@hotmail.com