Serge Selezneff, Safran Group

Title: “Decarbonization of aviation: focus on coatings and surface treatments”
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Abstract
Safran road map for decarbonization addresses specific actions to tackle emissions regarding the 3 scopes of the Green House Gas protocol. When applied to coatings, the decarbonization objectives are mainly focus on scope 2, how to produce coating with low environmental impacts, and scope 3 where coating can participate improving engine efficiency for example. In this second case, coatings can help on the following requirements:

-An extend time on wing with coating solutions to limit detrimental effect of environment (high temperature, corrosion, erosion, impact…)
-coatings, or materials, compatibles with low carbon fuels (SAF, H2)
-Repair solutions for complex parts such as bonded parts

For each of these objectives, results from current studies will be shared with development around the help of process modeling (mainly thermal spray and PVD) to accelerated development and optimize fabrication.

Biography

Following a PhD on high temperature oxidation of thermal barrier coating, Serge Selezneff joins Safran Aircraft Engines Material and Processes department in 2012. Initially, in charge of mechanical aspects of coatings, especially abradables coating, Serge evolves to a position more focus on M&P support to industrial division and development of new coatings and surface treatments for aeronautical applications.
Since 2020, Serge joins the Safran research center, Safran tech, to lead a research team on the development of new coatings for the different business units of Safran group.