



Wania Jibrán, Tecnar Automation

Developing Process Control for Suspension Plasma Spraying

Abstract:

The Accuraspray has established itself as a standard process monitoring instrument across thermal spray production environments in the automotive and aerospace industries, where in-flight particle diagnostics have demonstrated clear links between process stability and coating quality. As suspension plasma spray (SPS) has grown in industrial relevance, understanding how these same diagnostic principles apply to SPS has become an important area of development. The presentation will focus on examples drawn from both research and industrial settings, illustrating how in-flight diagnostics are being used today to characterize the SPS process, extract insights about particle dynamics and ultimately improve coating outcomes. These examples will highlight the practical value that systematic process monitoring brings to those developing and scaling SPS processes. The presentation will also cover how the Accuraspray 4.0 has been adapted for SPS process monitoring, driven by close collaboration with customers actively developing and scaling SPS processes.

Biography:

Wania Jibrán holds a master's degree in mechanical engineering from the University of Alberta, where her thesis research focused on the use of cold sprayed coatings for structural repair of mechanical components. With several published research articles and conference presentations, Wania has built years of experience at the intersection of robotics, automation, and thermal spray. Previously at Ocado Technology, she led product development bringing large-scale robotic systems to industrial environments and successfully deploying over 2,000 robots worldwide. Having worked hands-on with thermal spray technology herself, Wania brings deep appreciation for the challenges faced by users in the field. This is a passion that now drives her work as the Director of Strategic Partnerships at Tecnar, where she leads business development for the company's spray sensor product line, working closely with customers to improve thermal spray processes and scale them for modern industrial demands.