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Webinar Invite

Education and
Training Working Group

Join us on June 5, 2024, 8:30 a.m. EST (UTC-4)

Directed Energy Deposition Process of Corrosion Resistant Coating for Lead-Bismuth Eutectic Environment

This webinar describes a methodology for surface coating technology using the DED technique. Also, optimization of the coating layer manufacturing process of LBE corrosion-resistant materials has been performed. Various property evaluations of the DED coated layer, such as microstructure evaluations, and mechanical properties, including high-temperature tensile test, general corrosion, and high-temperature LBE exposure test, have been performed. Finally, by confirming the applicability of the DED coating process, which has a coating thickness within 10% of the base material thickness in the final dimension, a plan to solve the existing problems of Code registration and post-process of newly developed materials was proposed.

Based on this study, the time required for the actual application of LBE corrosion-resistant materials will be greatly reduced. In addition, reliable and fast material development could be possible by applying the methodology presented in this research not only in the LBE environment but also in the field of material development that requires corrosion resistance or hard-facing in other industries.

Free webcast!

June 5, 2024
8:30 am EST (UTC-4)

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Who should attend:
policymakers, managers, regulators, students, general public

Dr. Gidong Kim is a Senior researcher at the Korea Institute of Materials Science (KIMS). He earned his MSc in Materials Science and Engineering from Pusan National University (Republic of Korea) and PhD in Nuclear Engineering from Ulsan National Institute of Science and Technology (Republic of Korea). His research interests include additive manufacturing, brazing, and the development of welding procedures (WPS/PQR) for industrial applications. Also, he is working as an Authorized Nuclear Inspector (ANI) to ensure the safety of nuclear power plants in Republic of Korea. Recently, he has been conducting research on advanced manufacturing technologies (AMT) applicable to small modular reactor (SMR), including Laser Directed Energy Deposition (DED) and Powder Metallurgy Hot Isostatic Pressing (PM-HIP).

Dr. Kim is the popular Vote winner of the 2023 Pitch your research competition.

Upcoming Webinars

31 July 2024, On-line Monitoring Ddevelopment in Support of the Nuclear Fuel Cycle, Samantha Lines and Sam Bryan, PNNL, USA

28 August 2024, International Molten Salt Research in Support of MSR Development, Panel Discussion