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Preliminary galling data on Fe-based Co-free hard facings using Imperial testing rig



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ABSTRACT:

Four ASTM standard galling tests were performed on novel Fe-based Co-free hard facings at Imperial College London in the HIP condition. Galling occurred at both tests done at high temperature (300°C) at 50 and 100 MPa. As well as at room temperature at 200 MPa. Galling did not occur at room temperature at 100 MPa. White light interferometry was used to evaluate the galled surface. Microscopy was done on the cross section of a galled sample and showed signs of mechanical mixing, twinning / martensite transformation and grain size reduction, all due to deformation, compared to the bulk material.



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