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**Numerical simulation of temperature field and prediction of microstructure in friction hydro
pillar processing**

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Abstract

This paper presented a study about the frictional interface (FI), plastic metal layer, temperature field and microstructure in the friction hydro pillar processing (FHPP). The dynamic mesh was used to simulate the continuous motion and deformation of the FI. The simulated low-viscosity-area (below 9.0×10^6 Pa s) had similar position and shape to the plastic metal layer in the actual weld and was used to

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