



Poster 13

Development of improved formability advanced high strength steels



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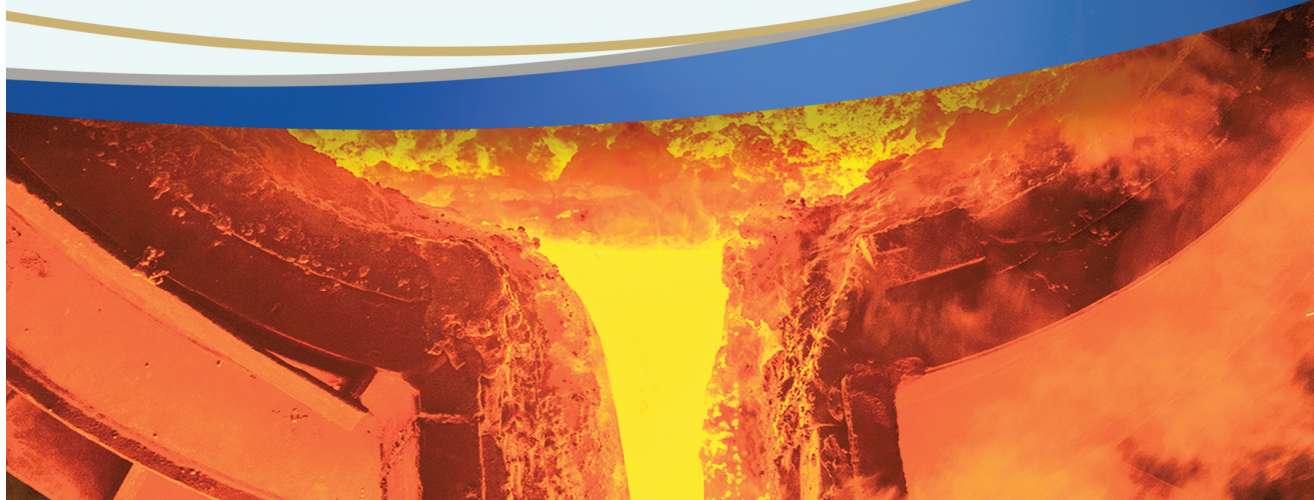
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ABSTRACT:

Improving the formability of AHSS through yielding enhanced R-values by use of miniaturised samples in the RAP route, is the premise of this research.

The development of improved mechanical properties will also be supported by building a 2D hot rolling simulation, as the rolling mill possesses the ability to influence desired microstructures complementary to the required mechanical properties. Experiments commence with the DX57, the idea is to validate and develop the suitable techniques required to not only produce data replicas from miniaturised samples, but also garner thermo-compressive material properties from the Gleeble.

The properties are to be built in to an Ansys thermo-mechanical model supported by the Hansell-Spittle equation to represent the flow stress of the material under hot rolling conditions. The blueprint of the overall process is to then be implemented on to AHSS grades, where improving its R-value for up-scale production will finalise the completion of this research.



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