USING ARTIFICIAL MICROSTRUCTURES FOR RAPID HOT ROLLING RECRYSTALLISATION MODELLING

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Digital twins are becoming ever more important in a world where energy prices results in taking less and less risks in production. The development of digital twins allows what would be expensive scenarios and optimisation to take place, supporting development. However, these models also typically need to work fast, taking time or near live data to allow optimisation based on process changes. The work here shows how the recrystallization of multipass hot rolling is being developed using artificial microstructures to take advantage of some aspects of CA modelling but in shorter time frames.