

عنوان مقاله:

Cyclic intercritical annealing of dual phase (DP) steel

محل انتشار:

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خلاصه مقاله:

Cyclic intercritical annealing treatment was applied on the DP steel with the initial quenched and cold rolled martensitic microstructures. A rapid grain growth was observed during repetition of intercritical annealing cycle for the DP steel originated from the quenched microstructure with adverse effects on the tensile properties. Conversely, decreased size of martensite islands and formation of chain like morphology of martensite around ferrite grains was observed during thermal cycling of the DP steel originated from the cold rolled microstructure with the consequent enhanced work hardening behavior. Accordingly, the combination of cold rolling and cyclic intercritical annealing was recommended in this work to enhance the work hardening behavior and mechanical properties of DP steels.

کلمات کلیدی:

DP steels; Thermal cycling; Microstructure; Mechanical properties

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