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Sharp {111} texture in the industrial Ti-bearing interstitial free steel sheet

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The high r-value and strengthening n-coefficient is an important index to evaluate the formability of the steel sheet. However, further improvement of r-value and n-value of IF steel sheet is still needed.

Interstitial free Ti-only steel produced at JSC "Severstal" was considerably improved by the new technology, including slab reheating temperature and duration, coil weight and coiling temperature, amount of cold reduction and bath annealing process conditions.

The effect of processing parameters on the very strong {111} recrystallization texture (until 80%), quantity of special grain boundaries, Lankford coefficient ($\bar{r}$ until 3.1) and plane plastic coefficient Δr= 0.85), strengthening coefficient (n until 2.6) and mechanical properties of IF-steel is discussed. New method of CSL investigation is also presented.

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