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A phase quantification method based on EBSD data for a continuously cooled microalloyed steel

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Abstract:

Mechanical properties of steels depend on the phase constitutions of the final microstructures which can be related to the processing parameters. Therefore, accurate quantification of different phases is necessary to investigate the relationships between processing parameters, final microstructures and mechanical properties. Point counting on micrographs observed by optical or scanning electron microscopy is widely used as a phase quantification method, and different phases are discriminated according to their morphological characteristics. However, it is difficult to differentiate some of the phase constituents with similar morphology. Differently, for EBSD based phase quantification methods, besides morphological characteristics, other parameters derived from the orientation information can also be used for discrimination. In this research, a phase quantification method based on EBSD

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