

عنوان مقاله:

Effect of Quenching and Partitioning Parameters on Mechanical Properties of a Medium Carbon Low Alloy Steel

محل انتشار:

دومین کنفرانس بین المللی کاربرد مواد و ساخت پیشرفته در صنایع (سال: 1401)

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خلاصه مقاله:

In automotive industry, economic, environment and particularly safety parameters, are leading to the development of advanced high strength steels (AHSS) with improved mechanical properties. One of the most promising heat treatments for the production of AHSS is quenching and partitioning (Q&P) process. The application of this process in various times and temperatures leads to interesting combinations of mechanical properties containing of high strength and good ductility. In this investigation, changes of mechanical properties influenced by change of partitioning time and temperature on ۱.۵۱۴۲ steel was studied. The results showed that application of Q&P process on the steel causes severe increasing of hardness. Increasing of partitioning temperature and also time, leads to decreasing of hardness and increasing of elongation. With increasing of partitioning time, tensile strength initially increases and then decreases .and increasing of partitioning temperature leads to decreasing of strength and increasing of elongation and ductility

کلمات کلیدی:

.Quenching, Partitioning, Strength, Elongation, Q&P

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