

Hubungan Tegangan Deformasi dan Presipitasi Kinetik Nb(CN) pada Baja HSLA pada temperatur 900°C

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20303766&lokasi=lokal>

Abstrak

Micro alloying in High Strength Low Alloy (HSLA) steel is very important role to improve the quality of those steel formation of precipitation of carbonitride such as Nb(CN) in those niobium containing steel has a significant influenced on strength. Mechanism of strength improvement due to the existing of micro alloy the precipitated in hot finishing deformation not fully studied The previous investigated use relationship between deformation and density of dislocation. HSLA steel containing 0.037% Nb was used in this research and deformation was performed using compressive plane stress, the relationship between 5 % fraction precipitate, $t @ \phi$, and maximum stress achieved at a temperature of 900°C under strain rate of 1 sec⁻¹ were evaluated. Analysis data results shows that the relationship between 5% fraction and density of dislocation can be described as, $t @ \phi \propto \sigma^5$.