

عنوان مقاله:

The investigation of mechanical and microstructural behavior of A537 Cl2 sheet after cold forming by press

محل انتشار:

هشتمین کنفرانس و نمایشگاه بین‌المللی مهندسی مواد و متالورژی و سیزدهمین همایش ملی مشترک انجمن مهندسی متالورژی و مواد ایران و انجمن ریخته‌گری ایران (سال: 1398)

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خلاصه مقاله:

The present study is used for the sheet forming of pressure vessel under pressure of cold forming in the open -die process. The radius of the die was 2500 mm and a sheet of A537 CL2 was used with 55 mm thickness. This process was carried out by a hydraulic press of 1000 tons. The number of stages for the forming process, in this study, are 3 stages and at each stage of the process, the sheet was under the force of 600 tons. The process was performed in one, two and three stages, in order to pinpoint the sheet forming and getting to the desired radius and to investigate the effect of repetition of the forming on mechanical and microstructural properties of the sheet. The results of the experiments showed that by forming process, tensile strength and yield stress were decreased in the first step and by repeating the process of mechanical properties, they increased, so that in the third stage of the process, mechanical properties of the initial sheets were improved and by increasing the number of process steps, the orientation of the grains is in line with the compressive strength that leads to improving mechanical properties

کلمات کلیدی:

.Cold forming, Press, Pressure vessel, Steel

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