

## عنوان مقاله:

The Ballistic Behavior of High Strength, Low Alloy-100 Steel at Sub-zero Temperatures

## محل انتشار:

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## نویسندگان:

G Majzoobi - Mechanical Engineering Department, Bu-Ali Sina University, Hamedan, Iran

S Moradi - Mechanical Engineering Department, Bu-Ali Sina University, Hamedan, Iran

## خلاصه مقاله:

The ballistic response of the high strength, low alloy (HSLA-100) steel at ambient and temperatures of -400, -800 and -1960°C is investigated in this work. Lambert-jonas equation is used to fit the experimental results into a curve. The effect of quenching on ballistic behavior of HSLA-100 is also studied. The experiments are conducted on 3mm thick rectangular specimens impacted by blunt tip projectiles. The results indicate that for the as-received material, the ballistic limit is nearly the same for ambient and -400°C temperatures, but increases significantly by 30% and 40% for -800 and -1960°C temperatures, respectively. The same trend is observed for the quenched specimens. However, the increase of ballistic limit is lower for the quenched specimens and is 16% and 30% for -800 and -1960°C temperatures, respectively. The ballistic test was also simulated using Ls-dyna hydrocode to examine the effect of parameters such as the specimen's thickness, the projectile's tip shape and mass on the ballistic limit of the materials

## کلمات کلیدی:

High Strength, Low Alloy -100, Ballistic Limit, Sub-zero Temperature, Lambert-Jonas, Residual Velocity

## لینک ثابت مقاله در پایگاه سیویلیکا:

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