

## عنوان مقاله:

Crashworthiness improvement of longitudinal rail in vehicle structure

## محل انتشار:

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## خلاصه مقاله:

Safety in collision is the important issue in automotive industry which appeals to vendees of automotives and automotive manufacturers. Therefore, automotive body and structure designers have attempted to improve safety of passengers in dangerous collisions for years. As we know safety of passengers in collision are achieved by advised designing of automotive body and structure. Automotive rails have too important role on collision energy absorption and finally access to aim of safety. This case has been studied by many researchers during past years. In this article, comparison of two rails namely an S-rail with square cross section and a straight rail with square cross section under axial loading has been studied by the explicit finite element code LSDYNA, and it is being shown that a straight rail is more efficient than an S-rail in terms of energy absorption crashworthiness and weight lightening. Therefore straight rail is being diagnosed as better design, then this case is being developed to hexagonal and octagonal cross sections .and eventually it is being shown that straight rail with octagonal cross section is the best design

## کلمات کلیدی:

S-rail, straight tubes, displacement, mean dynamic force

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/41516>

