عنوان مقاله:
A study of restitution coefficient in low velocity impact: size and material type effects

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خلاصه مقاله:
In this article, restitution coefficient and energy loss percentage of one dimensional impact are determined experimentally for different ball sizes and types of material. Ball diameters range from 6 to 12 mm, made of steel, bronze and aluminum. Collision surfaces are sheets of steel, aluminum, copper and Teflon. Restitution coefficient is a coefficient that indicates collision type. This coefficient is between zero and one. The more this coefficient closer to one the more the impact is closer to an elastic impact and vice versa. Numerical study is also done on impact of steel balls on steel sheets. The numerical results are validated by present experimental results. Moreover, the results show .that restitution coefficient decreases as balls' diameters increase but it decreases with decrease in sheet's hardness

کلمات کلیدی:
Drop Test,Low Velocity Impact, RestitutionCoefficient