



A Review on Wheel Rim Modeling and Analysis Using CAD and CAE

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Analysis of Octopus Wheel Rim | Rims on which cars move, are the most vital elements in a vehicle, they must be designed carefully. The rims manufactured by either steel or cast aluminum alloys. The primary objective of this study is to analyze the stress distribution and displacement along the rim using the commercial software s like Catia V5 R20, Hypermesh and Radioss. With reference to the journal, by maintaining known input parameters like geometry, rim type, rim material, rim specifications, loading condition and boundary condition, the model is designed using catia drawing tool and the model will be meshed by tetra elements type and hexa and penta element type and then by applying loading and boundary conditions using hypermesh and radioss simulation tool, the model is analyzed for aluminium and steel as a material using stress distribution and displacement contours. The results of stress distribution are compared with validated theoretical and experimental results and conclusion is made that steel wheel rim has more life span compared to aluminium alloy wheel rim whereas aluminium alloy wheel rim can perform better than steel wheel rim as it is light in weight. | Format:...



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Reviews

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