Improving the longevity of CAR WHEELS

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Introduction & Challenges

Wheels are one of the most critical parts of your vehicle, as they help convert the engine's power into movement and serve as the point of contact between your vehicle and the road There is no definitive answer to the average period pf time that will pass before a driver is required to replace the wheels of their car however is common knowledge that the front tires will become below driving standard faster. Instead of time, we can look at factors such as: Abnormal tire wear, Punctures, Cracks , Uneven wear

So, if we can reduce the impact/ likelihood of these occurrences, the tires will need to be replaced less often

Aims & Objectives

To make tire able to retain sufficient pressure for longer by evaluating the best latex sealant in a series of pressure tests

Optimizing rim hump by finding the most effective area of the hump

PESTLE ANALYSIS

- Political Factors: Government policies on emissions, safety standards, and fuel efficiency can significantly impact the auto industry
- Economic Factors: Economic conditions, such as the stability of the economy and consumer purchasing power, can influence the demand for car wheels
- Sociocultural Factors: Consumer preferences for vehicles with lower environmental impact can influence the demand for eco-friendly car wheels
- Technological Factors: Advances in tire technologies and the increasing focus on electric technologies can affect the development and production of car wheels
- Legal Factors: Regulations related to emissions, safety standards, and trade agreements can impact the car wheel industry
- Environmental Factors: Growing awareness about environmental issues can influence consumer preferences for more sustainable car wheels

METHDOLOGY

FINITE ELEMENT ANALYSIS 9FEA)

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OPTIMIZATION TECHNIQUES

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BENCH TESTING

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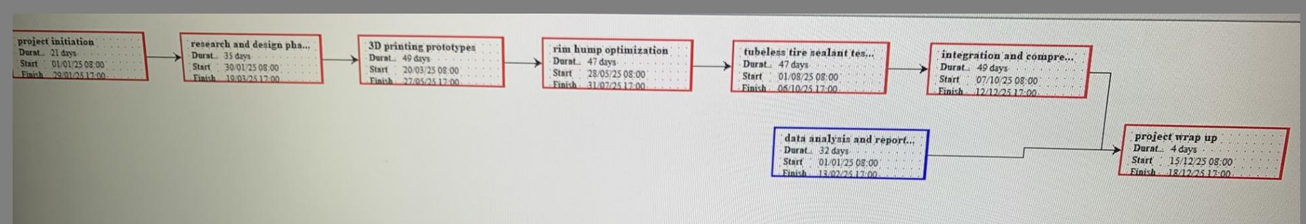
MATERIAL AND DESIGN ANALYSIS



References

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