ANALYSIS THE INFLUENCE OF THICKNESS AND GEOMETRY OF SQUARE SPOKE ON AIRLESS TIRE AGAINST RADIAL AND LATERAL STIFFNESS

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ABSTRACT
Changed of time is always followed by changes in technology, one of them in the part of automotive technology. In addition, emerging technology is demanding ease of maintenance. In the last decade, developed airless tire where this tire anti leak and easier to maintain than regular tires.

This research uses finite element analysis method. Hex dominant method of meshing is used by airless tire which is given radial and lateral force.

Influence of thick accretion square spoke causes the radial and lateral stiffness increased about 40% and 20% at each increment of 2 mm original thickness of spoke. the changed of geometry length of square spoke will increase radial and radial stiffness about 10% and 5% on any increase in length of 10 mm square geometry originally spoke.

Keywords : Airless Tire, Geometry, Square Spoke, Stiffness
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