

## **Adequacy of the tensile/elongation test as a quality control criterion for vehicle tires**

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**Abstract:** Most tire failures in Saudi Arabia result in severe vehicle crashes. Tire failures, such as tread separation and blowouts, are the most notable events that occur on a daily basis. This paper deals with the elongation and tensile strength of the tire rubber as quality control criteria in evaluating vehicle tires. Specimens from six different tire brands were subjected to laboratory tests to investigate the tensile strength and elongation of the tire rubber. The laboratory results and the statistical field survey data were compared to determine the possibility of using the tensile strength of rubber as a quality control criterion. The thermal oxidative durability of the investigated tires during aging were also estimated through the loss in their strength. © 2006 Elsevier Ltd. All rights reserved.