Sustainable Analysis in the Product Development of Al-Metal Matrix Composites Automotive Component

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ABSTRACT
In this paper sustainable analysis is performed due to the increasing demand for fuel efficiency. Current research focuses on high strength-light weight components in automobile which lead to the development of advance material parts with improved performance. A specific class of advanced material which has gained a lot of attention due for its potential is aluminium based metal matrix composites (Al-MMCs). Al-MMCs have some prospects for several applications in automobile parts. The analysis in this paper is a part of product development which plays a crucial role in determining a product's environmental impact. The objective was accomplished and thus to identify the potential of Al-MMCs rake disc for replacement of the conventional cast iron brake disc. The result indicated that the Al-MMCs have the potential to substitute the cast iron brake disc.

KEYWORDS: Sustainable analysis, Al-metal matrix composites, Automotive component, Brake disc