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ASSESSMENT OF MECHANICAL PROPERTIES OF ALUMINIUM WITH FLY ASHREINFORCMENT

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Abstract
There is always a demand for lighter but with high strength materials in many industrial applications including automobile and aerospace industries. Reinforced aluminium Aluminium has been used for these applications for many years. Researchers worked out with a variety of reinforcements. In the present paper, use of fly ash is investigated by using powder metallurgy technique. Fly ash composition can raise up to hardness, and density, corrosion & wear rate can also be reduced. According to the findings of this study, fly ash from industrial waste can be converted into industrial wealth through the creation of lightweight composites with increased strength that can be utilized in the aviation and automobile industries.

Keywords: Mechanical properties, Powder metallurgy, Aluminium compaction, Reinforced compaction

1.INTRODUCTION

Stair casting and powdered metallurgy this two techniques are mostly used for reinforcement. The highly developed process of powder metallurgy involves mixing materials or pre-alloyed powders, compacting this mixture in a die, and then sintering the resulting mixture in a controlled furnace environment to bind the particles [5 - 8]. In a ceramic mortar and pestle, the powders of aluminum and fly ash were mixed uniformly. On a standard testing machine, the blend was compressed using dies. The samples are taken to the furnace for making sintered at high temperature and then allow the samples inside the furnace for cooling.Testing for hardness, wear, density, and corrosion was done on the specimens, and the findings from

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This is to certify that Mr. **TRINANJAN BHADRA, Dr. B.C. Roy Engineering College, Durgapur, West Bengal, India** has presented a paper titled **EVALUATION OF MECHANICAL PROPERTIES OF ALUMINIUM REINFORCED WITH FLY ASH** with paper Id **AIIMS 2.0 - M - 011** at 2nd International Conference on **"Advanced Intelligence and Innovations in Mechanical Sciences (AIIMS - 2.0)"** organized by the Department of Mechanical Engineering, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-89,held during 20th & 21st April 2023.

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Akshoy Kumar Saha <akshoyaks@gmail.com> Mon, Apr 10, 2023 at 10:42 PM
To: "chandan.chattoraj@bcrec.ac.in" <chandan.chattoraj@bcrec.ac.in>, trinanjan8697bhadra@gmail.com

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