

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JNANA SANGAMA", MACHHE, BELAGAVI - 590018, KARNATAKA



2021-2022

A Mini-Project Report

On

"EVALUATION OF SURFACE ROUGHNESS OF
ALUMINIUM (AL8011) AND NANO ZIRCONIUM OXIDE"

Submitted in partial fulfillment of the requirement for the award of degree

BACHELOR OF ENGINEERING
IN
MECHANICAL ENGINEERING

Submitted by

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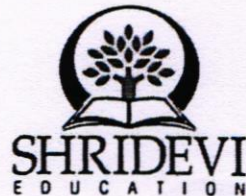
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CERTIFICATE

Certified that a Mini- project report on entitled " EVALUATION OF SURFACE ROUGHNESS OF ALUMINIUM (AL8011) AND NANO ZIRCONIUM OXIDE" has been successfully carried out by S PAVAN KUMAR (ISV18ME010), VIVEK R J (ISV18ME013) students of Shridevi Institute of Engineering and Technology, Tumkuru -572106, in partial fulfillment of Mini-project for the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Jnana Sangama, Belagavi - 590018 during the academic year 2021-2022. It is certified that all corrections and suggestions indicated for internal assessment have been incorporated in the report deposited in the Department library. The report has been approved as it satisfies the academic requirement in respect of Mini-project on current topic prescribed for B.E Degree.

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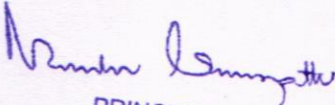
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ABSTRACT

Composites of nano metal matrix produced by stir casting technology have major attractive properties like high ductility, highly conductivity, light weight, and high strength to weight ratio compared to some other approaches. Nano ZrO_2 particulates with varying weight percentages (0, 2 and 4%) are reinforced with aluminum 8011 using the process of stir casting. Mechanical property such as surface roughness behavior has been investigated. In the current analysis, CNC turning is made on the produced composites. Surface roughness tester is used in order to evaluate the surface roughness.


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