INTELLIGENT TOOL FOR ESTIMATION OF PERFORMANCE PARAMETER ON TITANIUM GRADE 5 ALLOY USING ANN ON EDM

A PROJECT REPORT Submitted by

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In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING



VELAMMAL ENGINEERING COLLEGE, CHENNAI-66.

(An Autonomous Institution, Affiliated to Anna University, Chennai)

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VELAMMAL ENGINEERING COLLEGE, CHENNAI - 66



BONAFIDE CERTIFICATE

Certified that this project report "OPTIMIZING THE PROCESS PARAMETERS OF DIRECT METAL LASER SINTERING FOR AI SI 10Mg ALUMINIUM ALLOY" is the bonafide work of LAKSHMANAN M, LOKESH S, KEVIN MATHEW M and NAVEED AHMED G R who carried out at the project under my supervision.

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CERTIFICATE OF EVALUATION

COLLEGE NAME : VELAMMAL ENGINEERING COLLEGE

BRANCH : MECHANICAL ENGINEERING

SEMESTER : VII

Sl. No	Name of the students who has done the project	Title of the Project	Name of supervisor with designation
1			
2			
3			
4			

This report of project work submitted by the above students in partial fulfillment for the award of Bachelor of Mechanical Engineering Degree in Anna University was evaluated and confirmed to be reports of the work done by the above students and then assessed.

Submitted for Internal	Evaluation	held	on
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REFERENCES

- 1. Arockia Jaswin M. and Mohan Lal D. (2011) 'Effect of Cryogenic treatment on the tensile behaviour of En 52 and 21-4N valve steels at room and elevated temperatures', Materials & Design, Vol. 32, Issue 4, pp. 2429-2437.
- 2. Alok Nayar, "The steel handbook", Tata McGraw-Hill, New Delhi India, pp.751-775, 2007.
- 3. ASTM International, "Standard test method for elevated temperature tension tests of metallic materials", E21-03a, pp.150-157, 2004.
- 4. Bensely, A., Prabhakaran, A., Mohan Lal, D. and Nagarajan, G., "Enhancing the wear resistance of case carburized steel (En 353), by cryogenic treatment", Cryogenics, Vol.45, pp.747-754, 2006.