



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ - ಬೆಳಗಾವಿ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY - Belgaum



BLDEA'S V.P. Dr. P.G.HALAKATTI COLLEGE OF
ENGINEERING AND TECHNOLOGY
BIJAPUR – 586 103



A PROJECT REPORT ON

**"STUDY OF MECHANICAL PROPERTY OF AL-6061 BY
REPETITIVE CORRUGATION AND STRAIGHTENING
SYSTEM"**

Submitted in partial fulfillment of the requirement for

The award of degree of

BACHELOR OF ENGINEERING

In

MECHANICAL ENGINEERING



By

VRASHABH VIDYADHAR SANGAVE	2BL09ME086
SANTOSH D KUMBAR	2BL09 ME064
SIDDRAJ S SAMBARGI	2BL09ME075
SANKET MAHINDRAKAR	2BL09 ME063

UNDER THE GUIDANCE OF

Prof: SUSHEELKUMAR M. VIJAPUR

2012-13

Chapter	Figures	Page No
1	Introduction	1
	1.1 General	1
	1.2 SPD technique	2
	1.3 CRCS continuous repetitive corrugation and straightening, Aluminium 6061.	3
2	Literature review	4
3	Objectives	6
4	Methodology	7
	4.1 Literature collection	7
	4.2 To design the continuous repetitive corrugation and straightening [CRCS] system	7
	4.3 To fabricate the CRCS system	8
	4.4 Experimental study of the CRCS system	8
	4.5 To study the mechanical properties of Al6061 specimen, such as micro –structure, hardness.	9
	4.6 To Investigate the behaviour of the produced materials and the parameters of these processes	9

5	Design of CRCS system	10
	5.1 Design of gears	10
	5.2 Dear design parameter	12
	5.3 Design of roller	13
	5.4 Roller design parameter	15
	5.5 Fabrication of CRCS system	16
6	Experimental studies	17
	6.1 Microstructure study of Al6061	17
	6.2 Vicker's hardness test	17
	6.3 Rockwell hardness test	18
	6.4 Brinell hardness test	18
7	Result and discussion	18
	7.1 Microstructure	19
	7.2 Vicker's hardness test	20
	7.3 Rockwell hardness test	22
	7.4 Brinell hardness test	23
8	Conclusion and future scopes	25
	Reference	26