**DETERMINATION OF EFFECT OF WELD REGION ON SPRINGBACK OF TWB’S IN V-BENDING OPERATION AND IT’S FEA ANALYSIS**

**USING ABAQUS**

A Major Dissertation Submitted in partial fulfillment of the

Requirements for the award of the degree of

**Master of Engineering**

In

**Production Engineering**

By

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**STUDENTS’ DECLERATION**

 I, hereby declare that the dissertation entitled **“**DETERMINATION OF EFFECT OF WELD REGION ON SPRINGBACK OF TWB’S IN V-BENDING OPERATION AND IT’S FEA ANALYSIS USING ABAQUS**”,** being presented here in the partial fulfillment for the award of the Degree of Master of Engineering (Production Engineering), is an authentic record of my own work carried out by me under the guidance and supervision of Mr.Vijay Gowtham,Asst Professor , Department of Mechanical Engineering, Delhi College of Engineering, Delhi.

I, further declare that the dissertation has not been submitted to any other Institute/University for the award of any degree or diploma or any other purpose whatsoever.

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**CERTIFICATE**

This is to certify that the dissertation entitled **“**DETERMINATION OF EFFECT OF WELD REGION ON SPRINGBACK OF TWB’S IN V-BENDING OPERATION AND IT’S FEA ANALYSIS USING ABAQUS**”,** submitted by **Mr.K.V.R.S.PRASANTH**, 03/pro/09, **(University Roll. No.9057)** in partial fulfillment of the requirements for the award of the Degree of Master of Engineering in Production Engineering, is an authentic record of student’s own work carried out by him under our guidance and supervision.

This is also certified that this dissertation has not been submitted to any other Institute/University for the award of any degree or diploma.

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**ACKNOWLEDGEMENT**

It is distinct pleasure to express my deep sense of gratitude and indebtedness to my learned supervisor Mr.Vijay Gowtham**,** and Mr. Girish kumar, for his invaluable guidance, encouragement and patient review. His continuous inspiration only has made me complete this major dissertation.

I would like to thank Mr.Gupta, Mr. Pradeep & Mr.Ajay kumar for extending their kind support and sharing their valuable time for the completion of the project.

I am thankful to my all teachers, classmates and friends for their unconditional support and motivation during this project. It is a great opportunity for me to extend my heartiest felt gratitude to everybody who helped me throughout the course of this dissertation in anyway.

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 **Nomenclature**

**E** Youngs modulus of elasticity

Ks Springback ratio

n Strain hardening coeff

e eng strain

t1 thick of thinner sheet

t2 thick of thicker sheet

α1 Initial angle before springback

 α2 angle after springback

r Initial radius before springback

r1 Final radius after unloading

HV Hardness by vickers

d mean of 2 diagonals of indentation

HT Heat treated

LW Laser welding

GTAW gas tungsten arc welding

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