



TOP
CONSULTANCY
AND EDUCATION



TRANS
STELLAR
Journal Publishers • Research Consultancy

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Dr. K. Suresh Kumar

Associate Professor, MIST, Hyderabad

for presenting the paper titled "Comparison of 9 Element Log Periodic and Yagi-Uda Antenna" in the International Multidisciplinary E-Conference on "Recent Innovation in Science, Technology, Engineering, Management, Medicine, Nursing & Pharma Sciences" on 05 August 2023

K. Suresh Kumar

105, VIVEKANANDA



Praveer

PRINCIPAL
M. PRAVEER
DIRECTOR
TRANS STELLAR
Journal Publishers & Research Consultancy
Hyderabad, Hyd-500 005.

CERTIFICATE OF PRESENTATION

This certificate is awarded to

Dr. Karunaiyah Banigala

Associate Professor, MIST, Hyderabad

For presenting the paper titled "Comparison of μ Element Layer Periodic and Ring-Loaded Antennas" in the International Multidisciplinary E-Conference on "Recent Innovation in Science, Technology, Engineering, Management, Medicine, Nursing & Pharma Sciences" on 04 August 2022

[Signature]
Dr. Karunaiyah Banigala
Associate Professor
MIST, Hyderabad

Mech.



5-1-2
meek

N20-Numerical Modelling Simulation of Tensile Behaviour of AA5052-PVC-AA5052(Al-PVC-Al) Sandwich Sheets (Paper Id:078)

P. Praveen Kumar Reddy¹, Dr.Chinnmaya Prasad Padhy^{2*}

¹Research Scholar, Department of Mechanical Engineering, GITAM Deemed to be University, Hyderabad, India. Email: patelpraveen338@gmail.com.

²Associate Professor, Department of Mechanical Engineering, GITAM Deemed to be University, Hyderabad, India.

ABSTRACT

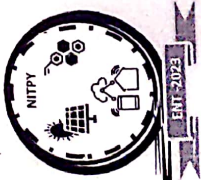
Email Id: cpadhy@gitam.edu.

Composite materials are made from two or more constituent materials with significantly different physical or chemical properties that, when combined, produce a material with characteristics different from the individual components. This synergistic combination results in new materials stronger, lighter, or less expensive when compared to traditional and conventional materials. Composites are preferred over the conventional materials in the several applications due to their superior mechanical, thermal, chemical, and electrical properties. Based on this concept, the trend in the sheet metal industry has been focused on strength to weight ratio of the industrial components. The sheet metals are exclusively applied with the single materials by various thicknesses in the industry, which is expensive and more weight. This can be overcome by introducing the new sheet metal concepts as Metal-Polymer-Metal (MPM) sandwich sheet composite. This MPM sandwich sheets are less weight and cost effective. Many researches already had been attempted on various Al alloys and steel alloys by keeping polymer in the middle for their formability studies. In general, MPM sandwich sheets after the fabrication; tensile behaviour has to be carried out for their mechanical behavior. From the obtained mechanical properties, the formability of MPM sandwich sheet can be predicted using various finite element softwares. The present work aimed the tensile behaviour of AA5052-PVC-AA5052 (Al-PVC-Al) sandwich sheets through numerical simulations using PAMSTAMP 2G software. For tensile behaviour prediction of Al-PVC-Al, the base material AA5052 alloy and PVC have been considered with 1mm and 0.5mm thickness respectively. The mechanical properties of Al-PVC-Al were evaluated through uniaxial tensile testing and obtained the properties such as yield strength (YS), ultimate tensile strength (UTS), strain hardening exponent (n), material strength coefficient (K) and Plastic strain ratio (R) in three rolling directions as shown in Table 1. These mechanical properties were used for numerical simulations by modelling the tensile test in the PAM STAMP 2G finite element software. Simulation were performed and verified with the





**First International Interdisciplinary Conference on
Energy, Nanotechnology and Internet of Things
(ENT 2023)**



CERTIFICATE OF PARTICIPATION

This certificate is awarded to
P. Praveen Kumar Reddy
for presenting the paper titled

**Numerical Modelling Simulation Of AA5052-PVC-AA5052 (AI-PVC-AI)
Sandwich Sheets**

in the First International Interdisciplinary Conference on Energy, Nanotechnology and
Internet of Things (ENT 2023) held at National Institute of Technology Puducherry, Karaikal,
India during February 2-4, 2023.

Narendran

Dr. Narendran Rajagopalan
CHAIRMAN, ENT 2023

Prof. K. Sankaranarayanan
Prof. K. Sankaranarayanan
DIRECTOR, NIT PUDUCHERRY

**CONFERENCE ORGANISED BY
NATIONAL INSTITUTE OF TECHNOLOGY PUDUCHERRY, KARAİKAL, INDIA**

Mandeep

MANDEEP
INSTITUTE OF SCIENCE & TECHNOLOGY
Bandla Jada, Hyd -500 005



Forming Analysis of Metal-Polymer-Metal Sandwich Sheets

P.Praveen Kumar Reddy

P.Praveen Kumar Reddy^{1*}, Dr.Chinmaya Prasad Padhy²

¹Research Scholar, Department of Mechanical Engineering, School of Technology, GITAM Deemed to be University, Hyderabad, India-502329.


²Associate Professor, Department of Mechanical Engineering, School of Technology, GITAM Deemed to be University, Hyderabad, India-502329.

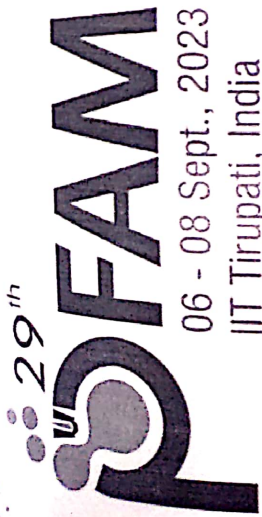
Email: patelpraveen338@gmail.com

Abstract

The sheet metals are exclusively used with the single materials in the industry, which is expensive and more weight. This can be overcome by introducing the new sheet metal concepts as Metal-Polymer-Metal (MPM) sandwich sheet composite. This MPM sandwich sheets are less weight and cost effective. Many researches already attempted on various Al alloys and Steel alloys along with polymer for their formability studies. Any MPM sandwich sheets after the fabrication, tensile behaviour has to be studied by which formability of MPM sandwich sheet can be predicted using finite element software's. The present work aimed the forming behaviour of AA5052-PVC-AA5052 (Al-PVC-Al) sandwich sheets through numerical simulations using PAMSTAMP 2G software. For forming behaviour prediction of Al-PVC-Al, along with the base material AA5052 alloy respectively. The mechanical properties of Al-PVC-Al were evaluated through uniaxial tensile testing and obtained the properties such as yield strength (YS), ultimate tensile strength (UTS), strain hardening exponent (n), material strength coefficient (K) and Plastic strain ratio (R). These mechanical properties were used for numerical simulations by modelling the limit dome height tests in the PAMSTAMP finite element software. Simulation will be performed and extracted the limit strains. From the obtained limit strains, forming limit diagram will be developed.

Keywords: MPM, sheet metal, forming, limit strains, mechanical behavior.


PRINCIPAL
MAHVEER
INSTITUTE OF SCIENCE & TECHNOLOGY
Hyd-500



29th International Conference on

Processing and Fabrication of Advanced Materials

Smart NextGen PFAM: Technology & Innovation Landscape

06 - 08 Sept., 2023
IIT Tirupati, India



Certificate of Participation

This is to certify that

P. PRAVEEN KUMAR REDDY

Participated as a Delegate & presented Oral Presentation

Title

Forming Analysis of Metal-Polymer-Metal Sandwich Sheets

Organised by



NATIONAL DESIGN AND RESEARCH FORUM



PRINCIPAL
MAHAVEER

INSTITUTE OF SCIENCE & TECHNOLOGY
Bandalapuzada, Hyd-500 005

M. Ramo Ramani

Dr. Mamilla Ravi Sankar
Conference Chair

A. Jayaram

Dr. Ajay Kumar
Conference Co-Chair
Org. Sec. & Convener

S. Seetharamu

Dr. S. Seetharamu
NDRF
Bangalore





भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

6th National Conference on Multidisciplinary Design, Analysis and Optimization

Certificate of Participation

This is to certify that

KNV Chandrasekhar

from University College of Engineering, Osmania University has presented the paper
titled Basis splines to perform isogeometric topology optimisation to design the outline of a
bridge pier and evaluate the compliance based Performance Index in the
6th National Conference on Multidisciplinary Design, Analysis and Optimization jointly
organized by Department of Mechanical Engineering, IIT Guwahati, Assam & Design Division,
Aeronautical Society of India (AeSI) during December 6 - 8, 2023 held at IIT Guwahati.

Co-Organizing Secretary
NCMDAO 2023
(Dr. Sachin Singh Gautam)



Organizing Secretary
NCMDAO 2023
(Dr. Deepak Sharma)



भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

6th National Conference on Multidisciplinary Design, Analysis and Optimization

Certificate of Participation

This is to certify that

KNV Chandrasekhar

from University College of Engineering has presented the paper

titled Topology Optimisation of Reinforced Concrete

Structures having openings using bsplines in the

6th National Conference on Multidisciplinary Design, Analysis and Optimization jointly organized by Department of Mechanical Engineering, IIT Guwahati, Assam & Design Division, Aeronautical Society of India (AeSI) during December 6 - 8, 2023 held at IIT Guwahati.

Co-Organizing Secretary
NCMDAO 2023
(Dr. Sachin Singh Gautam)



Organizing Secretary
NCMDAO 2023
(Dr. Deepak Sharma)

AS
AERO



MESIICON
2022



**INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON
MATHEMATICS, ENGINEERING & SCIENCE (MESIICON)**

11TH-12TH NOVEMBER , 2022

Organized By

Dr. B. C. Roy Engineering College, Durgapur

Certificate of Presentation



Paper Name: Multiple Criteria Decision Analysis Method for Unmanned Aerial Vehicle Airfoil Selection.

Authors: Sudarsan Gajula, Nilotpala Bej, Atal Bihari Harichandan.

This is to certify that the above paper has been presented by
Sudarsan Gajula from KIIT Deemed To Be University Bhubaneswar, India
in the INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON
MATHEMATICS, ENGINEERING & SCIENCE (MESIICON 2022)

held during 11th - 12th November 2022, organized by Dr. B. C. Roy Engineering College, Durgapur.

Technical Co-Sponsors:



Prof. (Dr.) Sanjay S. Pawar

Chairman, IEEE MESIICON 2022

Dr. B. C. Roy Engineering College, Durgapur

Cloud Computing is Potentially establishes in its own way in IT Infrastructure. Cloud Computing brings a glassy of productivity and Economy in fulfilling the IT enabled resources. On Demand. Focusing on concepts and principles, rather than commercial offerings by cloud providers and vendors, Understanding Cloud Computing Book gives readers a complete basics, advantages and growth of cloud computing, cloud infrastructure, virtualization, automation and orchestration, and cloud-native software design. This text book is suitable for a one-semester course for B.Tech CSE and IT students who want to understand cloud, and for IT managers moving an organization's computing to the cloud.

Dr. A. Nanda Gopal Reddy



Dr. A. Nanda Gopal Reddy received his BE in Computer Science and Engineering from the Madras University. He has done his MS in CSE/Image Processing from the Manipal University in 2005. He received his PhD (CSE) in Cloud Computing from Manipal University, Jaipur in 2019.

He has 17 years of varied experience in the software industries and academics. He had worked in multinationals like GE Healthcare and PIONEER Technologies Pune. He joined in the Department of CSE at the MIST in the year 2008 as an Associate Professor. His areas of specializations are image processing, cloud computing, machine learning and artificial intelligence. He published various papers on Image Processing and Cloud Computing in various Top rated international journals and he is the life membership of the ISTE.

Understanding CLOUD COMPUTING

₹202

ISBN 978-939152230-8



9 789391 522308

 **walnutpublication**
.com

INDIA • UK • USA

Dr. A. Nanda Gopal Reddy