

### Report On Guest Lecture on

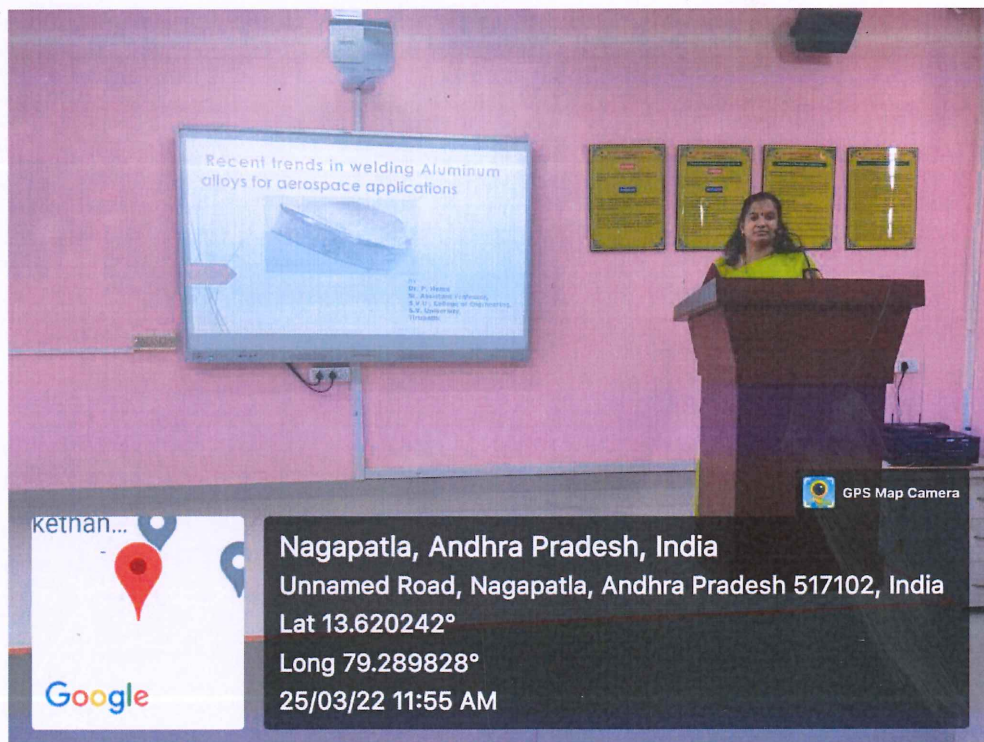
### ***"Recent trends in welding aluminium alloys for aerospace applications" on 25<sup>th</sup> March, 2022***

**Organized by**

***Indian Welding Society- Student's Forum***

"Welding is a vital component of several industries such as automotive, aerospace, robotics, and construction. Without welding, these industries utilize aluminum alloys for the manufacturing of many components or systems. However, welding of aluminum alloys is challenging due to several factors, including the presence of non-heat-treatable alloys, porosity, solidification, and liquation of cracks". To boost manufacturing growth, it is essential to introduce high productivity joining processes. In this connection, introduction to types of welding of light metal gives insight about the materials behavior at low temperature and the mechanical as well as the metallurgical characteristics of Aluminium alloys. The objectives are as listed below.

- To describe about the concepts of physical metallurgy of materials and joining processes which will make the students to understand the science behind the process and nature behavior of the material.
- To intimate the need of analyzing the phases present in the weld metal.
- To gain knowledge on Aluminium alloys for aerospace applications.



***Guest lecture delivered by Dr.P. Hema, Sr. Assistant Professor, S.V.U.College of Engineering, Tirupati.***






With this objective, a guest lecture on "Recent trends in welding aluminium alloys for aerospace applications" was organized in the department of mechanical engineering on 25<sup>th</sup> March, 2022. Dr.P. Hema, Sr. Assistant Professor, S.V.U.College of Engineering, Tirupati, was the resource person. The program started with the felicitation to the speaker.

During the inaugural session, Dr. R. Satya Mehar, Head, Department of Mechanical Engineering enlightened the students with the current technology being used in joining thin materials applications. After the inaugural session, Dr.P. Hema presented a lecture on "Recent trends in welding aluminium alloys for aerospace applications" in which Dr.P. Hema explained the concepts on welding process used in aerospace applications, Aluminium alloys, metallurgical concepts and phase transformation occurring during joining operations as well as the current importance of welding of Aluminium alloys in various application sectors. Finally, Dr. P. Hema concluded with exploring the applications and future scope in FSW techniques employable to various industries.

In the next session, Dr.P. Hema discussed on the Weldability issues in Aluminium alloys/light metals to insist the importance. Dr. P.Hema made awareness in the students with real life applications in the areas of light metals in welding technology. Finally, she hallowed the students and recommended to shape their career in the right path for long term sustainment in the modest competitive world.

Co-coordinator: **Mr. S. Praveen kumar, Asst. Professor.**

Coordinator of the Program: **Dr. S. Ragu Nathan, Associate Professor.**

  
**Dr. R. SATYA MEHAR**  
HOD, ME  
Professor & Head  
Dept. of Mechanical Engineering  
Sree Vidyanikethan Engineering College  
TIRUPATI-517 102.