



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi,

Accredited by NAAC, An ISO 9001:2015 Certified Institution

L.B.Reddy Nagar, Mylavaram - 521 230, Krishna District, Andhra Pradesh, INDIA

## Department of Aerospace Engineering

Website: <http://lbrce.ac.in>

Email: [hodaero@lbrce.ac.in](mailto:hodaero@lbrce.ac.in)

Phone: 08659-222933 Ext: 513/515

### REPORT

<b>Title:</b>	Webinar on Structural Inspection of Aircraft Rudder using NDT Techniques
<b>Number of Participants:</b>	128 Students of I, II, III, IV-Year students and Faculty
<b>Event Type:</b>	Webinar
<b>Name of the organization:</b>	Department of Aerospace Engineering, LBRCE
<b>Number of Days and Date:</b>	01 Day (11 <sup>th</sup> June 2021)
<b>Speakers</b>	<b><i>Mr. V. VEERA AJESHWAR, NDT Engineer-GMR Aero Technic, Hyderabad</i></b>
<b>Summary of the Event:</b>	One day program was delivered on the area of NDT Techniques usage to enhance the knowledge of students.
<b>Outcome from the Event:</b>	<ul style="list-style-type: none"> <li>• Knowledge of NDT</li> <li>• The student shall be able to find the internal flaws in the material by NDT and take measures to eliminate them.</li> <li>• The student shall be able to solve various problems encountered like leakage, cracks, blowholes etc..... with the manufacturing process by analyzing the data.</li> </ul>
<b>Feedback Taken from Participants:</b>	<p>Participants given the following feedback:</p> <ul style="list-style-type: none"> <li>• Program is well organized.</li> <li>• Speaker chosen for the lecture is knowledgeable and the way of presentation is excellent.</li> <li>• Content design is good.</li> </ul>
<b>Action Plan:</b>	Department is planning for many training programs to build the bridge between industry and academia.

# Brochure of the Certification Program



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L.B. REDDY NAGAR, MYLAVARAM, KRISHNA Dist. AP, India, 521230

## DEPARTMENT OF AEROSPACE ENGINEERING



**SPEAKER:**

**V. VEERA AJESHWAR**

NDT Engineer - GMR Aero Technic,  
Hyderabad

Webinar on

### STRUCTURAL INSPECTION OF AIRCRAFT RUDDER USING NDT TECHNIQUES

On 11<sup>th</sup> June, 2021 At 4 PM IST

#### **CONVENER**

**Dr. P. Lovaraju**  
Head and Professor

#### **CO-ORDINATOR**

**Mr. S. Indrasena Reddy**  
Asst. Professor

**Mr. G. V. Surya Narayana**  
Asst. Professor

#### **STUDENT CO-ORDINATOR**

**D. Jobin** 3<sup>rd</sup> B.Tech

Registration Form link:

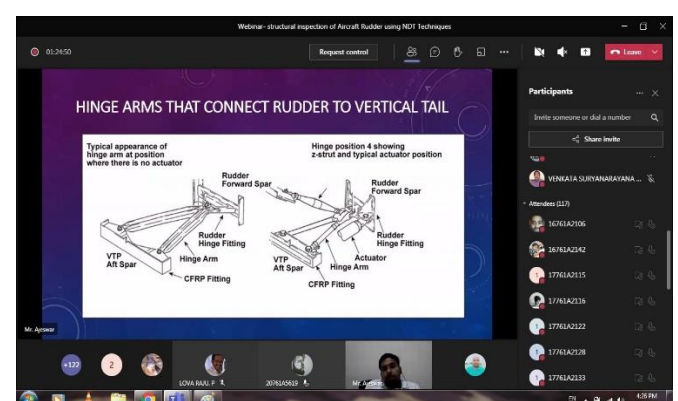
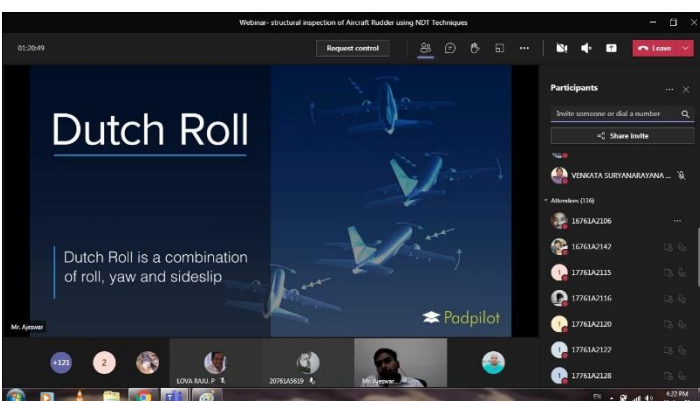
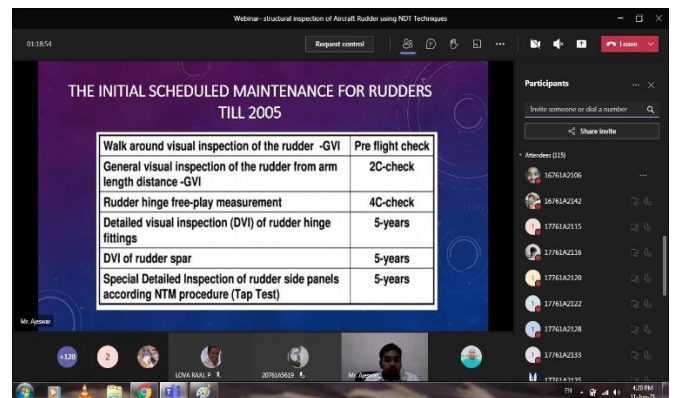
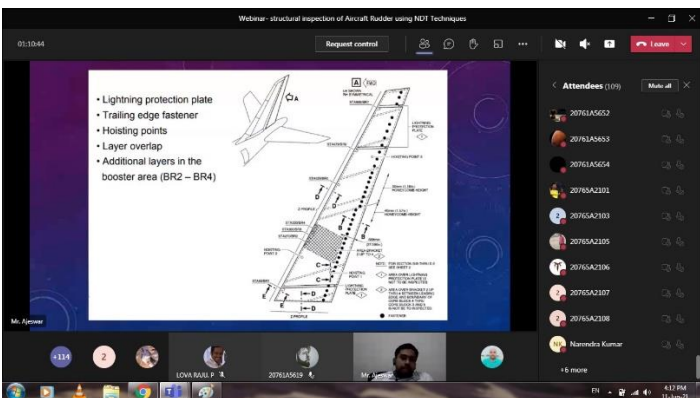
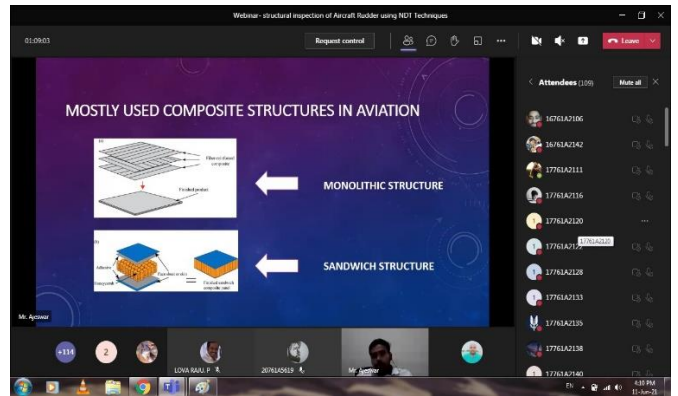
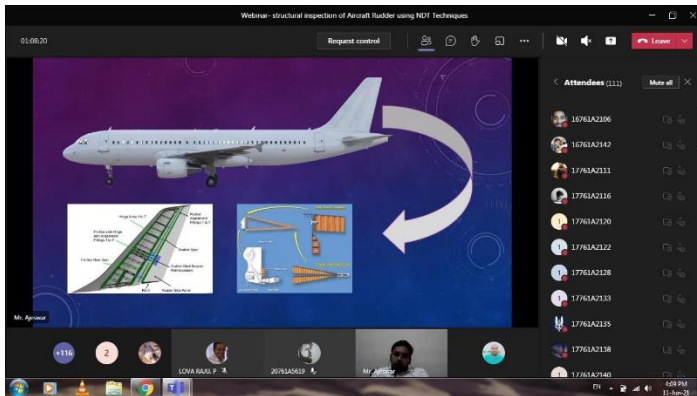
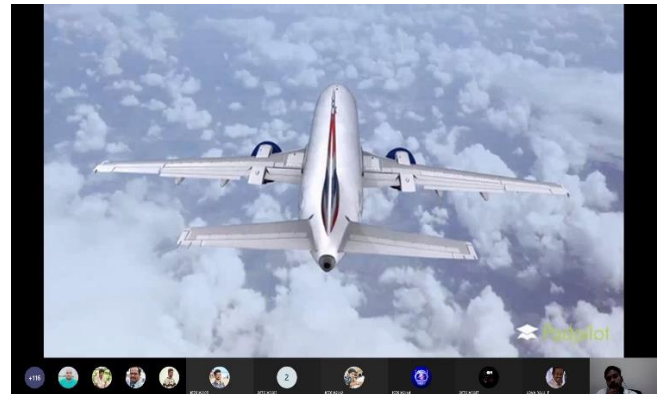
<https://tinyurl.com/ypvjj7we>

**E- Certificate will be provided to all  
the participants**

*For further details mail  
us at*

[hodaero@lbrce.ac.in](mailto:hodaero@lbrce.ac.in)

# Photos of the Event





### POSSIBLE DAMAGES IN RUDDER

- Type A - delamination between plies of outer CFRP skin, parallel to surface
- Type B - disbonding between the outer skin and the honeycomb core
- Type C - cracked honeycomb core parallel to the inspection surface
- Type D - crushed honeycomb core in parallel area
- Type E - disbonding between inner skin and honeycomb core
- Type F - fluid ingress in honeycomb core

### NDT METHODS/TECHNIQUES USED TO MONITOR RUDDER STRUCTURE

- ULTRASONIC TESTING
- ELASTICITY LAMINATE CHECKER (ELCH)
- BOND TESTING
- TAP TESTING
- INFRARED THERMOGRAPHY
- RADIOGRAPHY (X-RAY)

- 1) Housing
- 2) Drive transducer for air hose
- 3) Release key
- 4) Release key
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- 100) Release key

Dutch roll occurs with strong lateral stability coupled with weak directional stability.

Sideslip left, Yaw left, Roll right  
 Yaw right, Sideslip right, Roll left

### POSSIBLE DAMAGES IN RUDDER

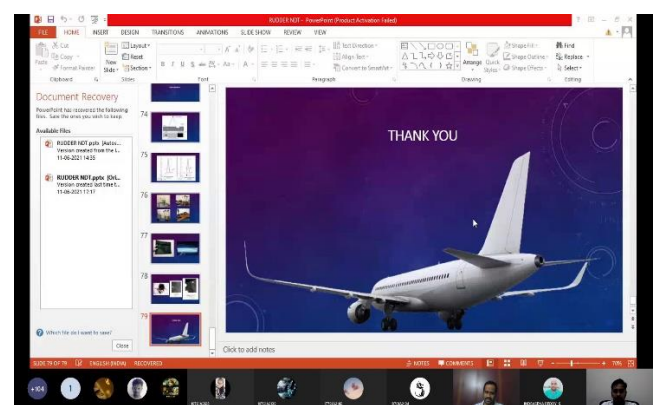
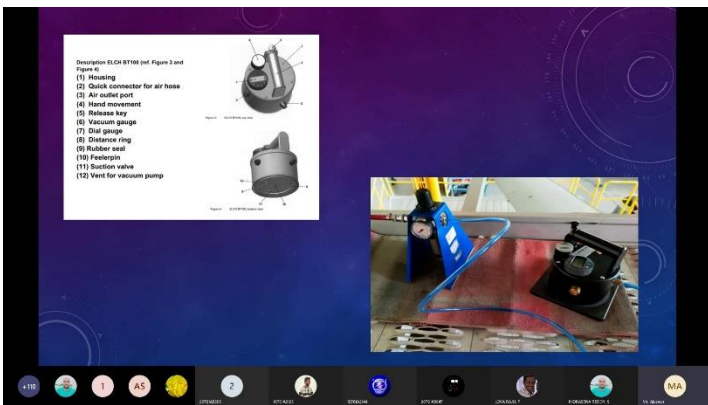
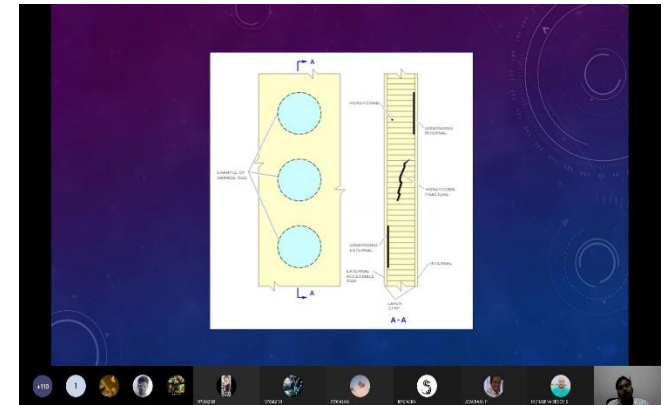
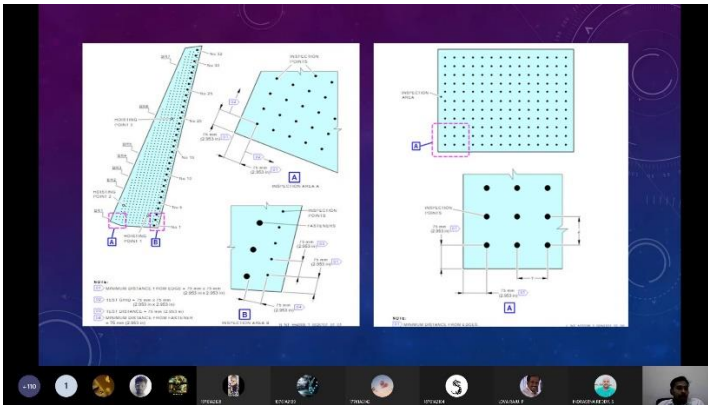
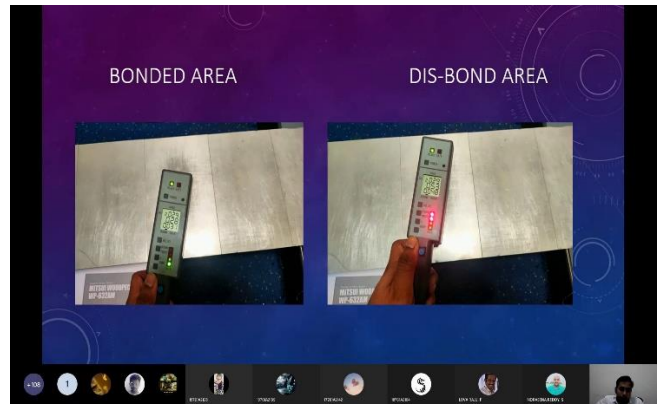
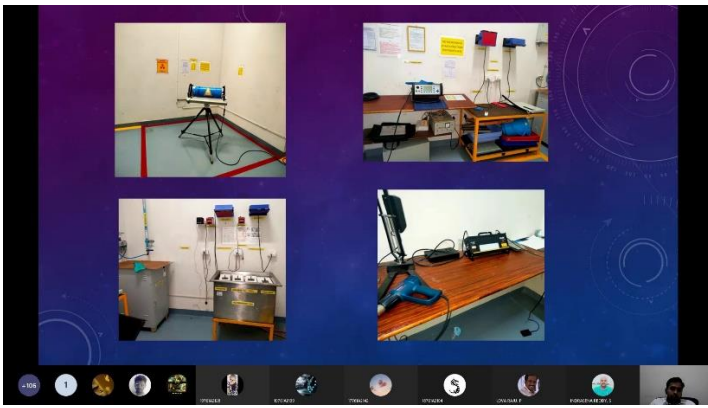
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### PRINCIPLE

Initial Pulse, Crack Echo, Back Surface Echo

1mm, 3mm, 5mm

Empty cells, Partly filled cells, Completely filled cells, Parallel skins, Ramp area

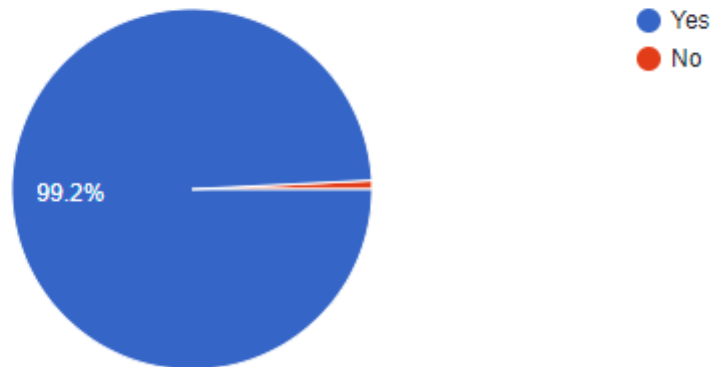


## List students attended the program

Number of Students Registered	165
Number of Students participated	128

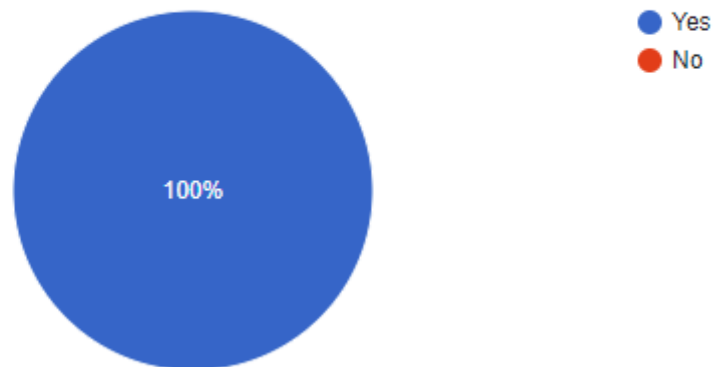
Was the presentation clear & well organized?

128 responses



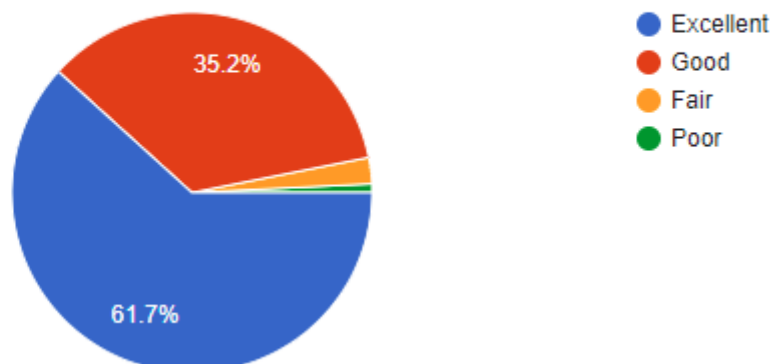
Was the presentation justified the topic titled

128 responses



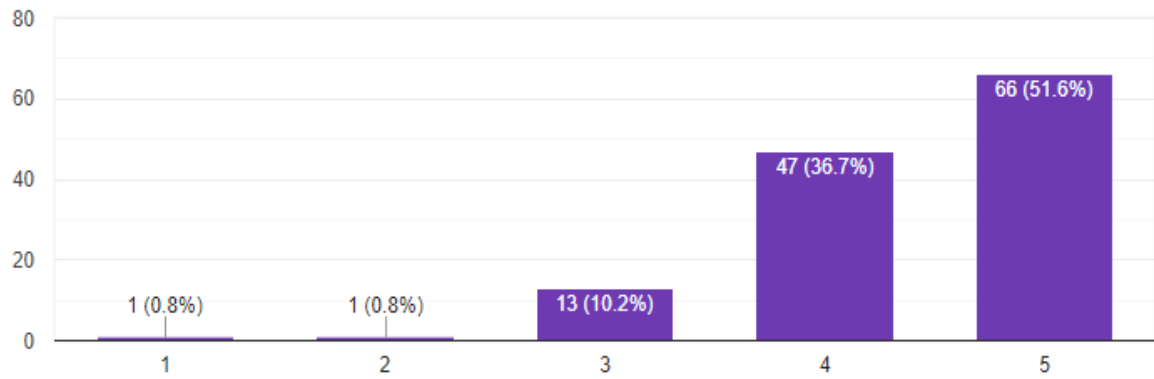
How do you rate the content of the webinar?

128 responses



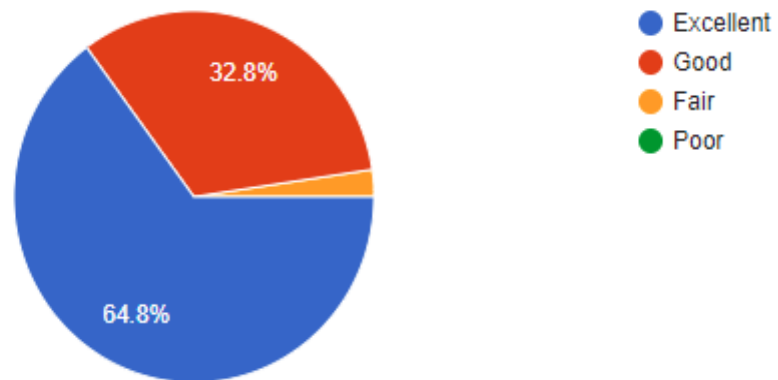
### The speaker stimulated my interest in the topic

128 responses



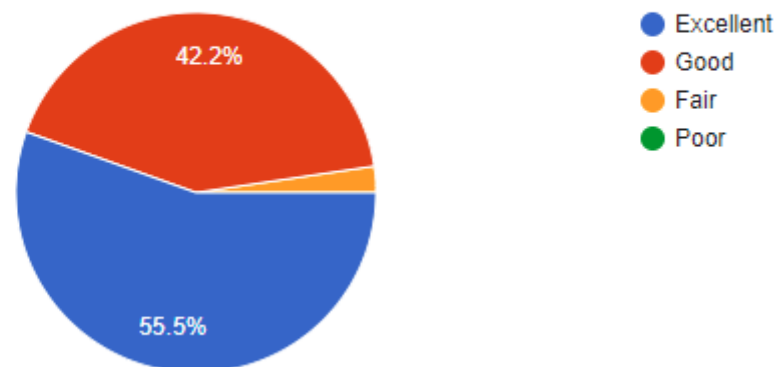
### How do you rate the skill set of speaker

128 responses



### How do you rate the webinar overall

128 responses



Would you like to attend the webinar in future organized by our Department/Institute

128 responses

