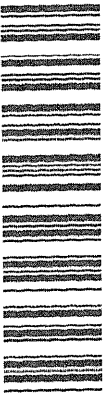


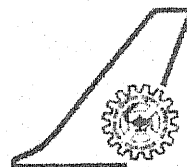
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Development of Closed Loop Temperature Control System for Composite Repair in LabVIEW Environment

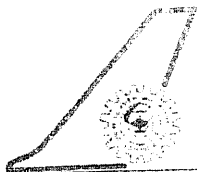
SENTHIL KUMAR P, MANIKANDAN P, MANJUNATHA D
Advanced Composites Division

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National Aerospace Laboratories

Bangalore 560 017, India



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Author/s *P.SENTHIL KUMAR, R.MANIKANDAN, D.MANJUNATHA*

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Contents

6

Pages

32

Figures

52

Reference

6

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Abstract:

This report deals with the design and development of a closed loop temperature controller for the resin system used in composite repair. This process involves two steps, bonding an annular ring using SMA based repair device and bonding a flush patch taking its support. Controller has been developed to control the temperature in the bonding region. Simulation based analysis of the controller has been done using MATLAB Simulink. Initially, the real time implementation of the controller was done using 'C' language in Visual C++ environment. Later to provide real time graphical representation it was implemented using LabVIEW and the experimental results were obtained. The experimental results have shown a degree of convergence with simulation results.