



**National
Aeronautical
Laboratory**

Documentation Sheet

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Restricted

Title : FEASIBILITY OF UNDERTAKING TESTS
ON A AEROELASTIC WING MODEL AT
SUPERSONIC SPEEDS

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Author(s) : R.S. VERMA

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Abstract :

A proposal has been made by the Structures Division, NAL to conduct tests on a PRITHVI aeroelastically scaled wing model in the 1.2m blowdown wind tunnel to study the flutter characteristics at low subsonic speeds. The model is required to withstand the transient loads during tunnel starting/stopping. This report deals with the detailed stress analysis to check the structural integrity of the model based on the structural and the material details of the model, supplied by Structures Division.

It was found that the strength of the material of the model is not adequate to withstand the tunnel starting/stopping loads at Mach numbers beyond 1.1.

Hence the proposed testing of the model is not possible beyond a Mach number of 1.1.