1.Security Classification of this page:

2.Type of Document		Project Document
3. Report No PD-SE- 8914	Date : Aug 89	5. Security Classification/ Restricted
6. Title/Sub-title	Flight Simulation of HS - 748 with and without rotodome . Part 3- Aerostatic Model Formulation	
7. Author(s)	Padma Madhuranath,J.K.Sridhar and C.V.SrinathSastry	
8. Division/Section	SED	9. Project No.SE - 0 -146
10. Type of report/ Period covered P.D.	11. Pages 51: Tables 7: Figures 8:	12. Approved by/ No.of copies 30
13.a) Sponsoring Agency(s) ASWAC		13.b) Partcipating Agency(s) SED , NAL
14. Keywords	Flight Simulation , Mathematical Models Aircraft Data,Wind tunnel Data	

15. Abstract

The mathematical models and data used in the off-line flight simulation of the rotodomed aircraft have been described in detail in Part 1. The issues related to the Rolls Royce Engine simulation studies have been presented in Part 2. In this document, static wind tunnel test data generated at H.A.L and considered as acceptable by BAE has been used as a reference data for verifying and formulating the aero-static model and associated data for HS-748 and AEW configurations. The resulting static model has been combined with dynamic model to arrive at an overall representative Aero model for use in flight simulation studies. This procedure is vital for unusual aircraft configurations as most of the data at design stage is available only from static wind tunnel tests.

NATIONAL AERONAUTICAL LABORATORY
BANGALORE, INDIA