



**NATIONAL  
AEROSPACE  
LABORATORIES**

Class : - Restricted

No. of copies: 10

**Title** : Development of 10 kW Micro Gas Turbine

**Author/s**: Dr. S. Ramamurthy and Thennavarajan. S

**Division** : *PROPULSION DIVISION*

NAL Project No. : I-888-1(29)

**Document No.** : *PD PR 1120*

Date of issue : APRIL, 2011

**Contents** : *Pages* 68 *Figures* 63 *Tables* 16 *References* 12

**External Participation** : -

**Sponsor** : *In-house, NAL, Bangalore*

**Approval** : *Head / Project Leader*

**Remarks** : *Restricted Document*

**Keywords** : Compressor, Turbine, Recuperator, Generator and Combustion chamber

**Abstract:**

Development of 10 kW Micro Gas Turbine (MGT) unit was taken up in propulsion division under 10th five year plan under the category high science and technology. This report describes in brief the various aspects of micro gas turbine development including the component technologies. The technology for all the components of MGT manufacture was proven and components were manufactured. Three different configurations of the micro gas turbine built are described in detail. This report also describes the various technical issues encountered during the development phase.