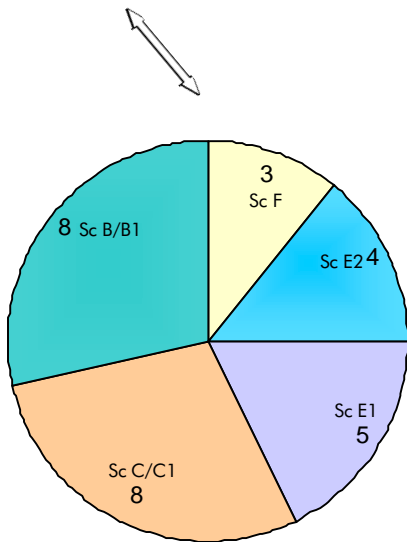
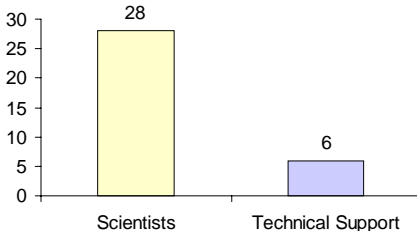


# AEROSPACE ELECTRONICS AND SYSTEMS DIVISION

## SUMMARY

Mr N N Murthy, *Head*



The Division was reorganized during the year with the following three disciplines as its core activities:

- Civil aircraft avionics and electrical systems
- Digital signal processing including active noise control, DFDR readout system and CVR analysis
- Electromagnetics

A brief summary of the achievements during the year is as follows:

### SARAS AVIONICS

Considerable progress was achieved during the year with the design, development and fabrication of a new avionics test rig. The rig has the capability to perform individual and integration tests of all the avionics equipment including engine sensors and displays.

The indigenous development of the stall warning system and the aircraft interface computer is also progressing satisfactorily and is expected to be completed by the end of this year.

### HAL AUTOCLAVE

The 4m x 8m autoclave was handed over to HAL during the year after a series of acceptance tests. The performance of the control and instrumentation was extremely good and met all the requirements of HAL.

### FATIGUE METER

A memorandum of understanding

was signed with IQ Infotech for the design and development of a smart fatigue meter. A number of flight tests were conducted with the electromechanical fatigue meter and its performance was found to be satisfactory. A formal type certificate is expected from the certification authorities shortly.

### DFDR READOUT SYSTEMS

A Windows operating system based software was developed and installed at Air India, Mumbai. The software is very user-friendly, menu-driven and can provide prints, plots, flight parameters, exceedance etc. at the click of a button.

### ACTIVE NOISE CONTROL

A new project on the development of a multi-channel active noise control system was sponsored by NPSM. A 4-channel ANC algorithm has been implemented using the DSP hardware.

### ELECTROMAGNETICS

The Group was extensively involved in various interdisciplinary projects in addition to pursuing research activities.

The major activity was in the area of radome design for various aircraft such as: SARAS, Jaguar, TU-142, for DWR, maritime patrol and for a very high temperature and high performance radome.