BaHN Automation
Dedicated to Control Technics

Product Profile & Reference List

Analog Control Systems Supplied to

Gas Turbine Research Establishment (GTRE), Bangalore

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BaHN Automation was privileged to associate with **Gas Turbine Research Establishment (GTRE), Bangalore** as a supplier for indigenous development of "Analog Control Systems" for their Aero Engine's Simulation Rig Facilities.

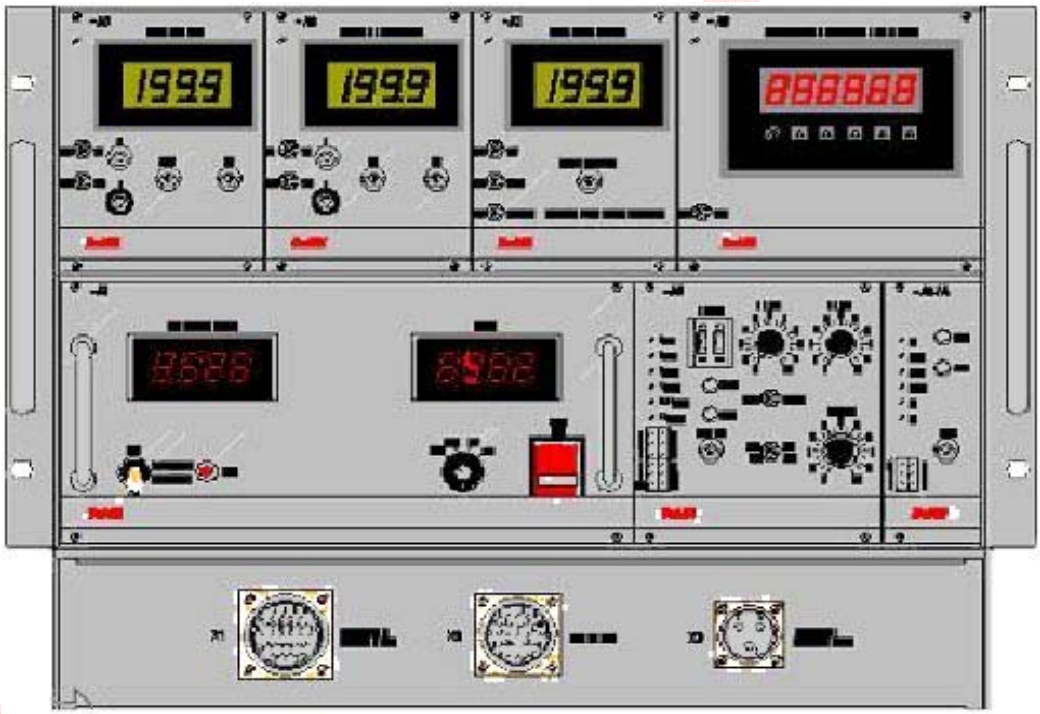
BaHN's endeavor resulted in indigenous development of following "Analog Control Systems" for testing of KAVERI engine being developed by GTRE for Navy & Combat Aircraft.

- **Analog Control Box for Reheat Fuel System**
- **Analog Control Box for Main Engine Control Unit (MECU)**
- **Controller for Burner Down Stream Pressure (BDSP)**
- **Up gradation of BDSP Controller ACB**
- **DC Power Supply for Jet Fuel Starter (JFS) Motor**

Analog Control Box for Reheat Fuel System

Application:

Control of Electro Hydraulic Servo Valve of Reheat Fuel System



Features:

- Based on high precision, ultra low drift, low offset Op Amps
- High precision reference & instrumentation amplifiers
- Buffered reference, feedback signals
- Signal conditioners & converters
- Outer pressure loop and inner position loop with PI controllers
- Modular plug-in cards in standard 19” rack
- LCD Panel meters for display of parameters
- Metering sockets & Test Points

Analog Control Box for Main Engine Control Unit (MECU)

Application:

Testing & Calibration of Hydro-Mechanical Fuel Control System

Features

- Based on high precision, ultra low drift, low offset Op Amps
- High precision reference & instrumentation amplifiers
- Buffered reference, feedback signals
- Signal conditioners & converters
- Outer pressure loop and inner position loop with PI controllers
- Modular plug-in cards in standard 19” rack
- LCD Panel meters for display of parameters
- Metering sockets & Test Points

Controller for Burner Down Stream Pressure (BDSP)

Application:

Control of Servo Drive for Throttling Fuel Flow/Pressure of BDSP

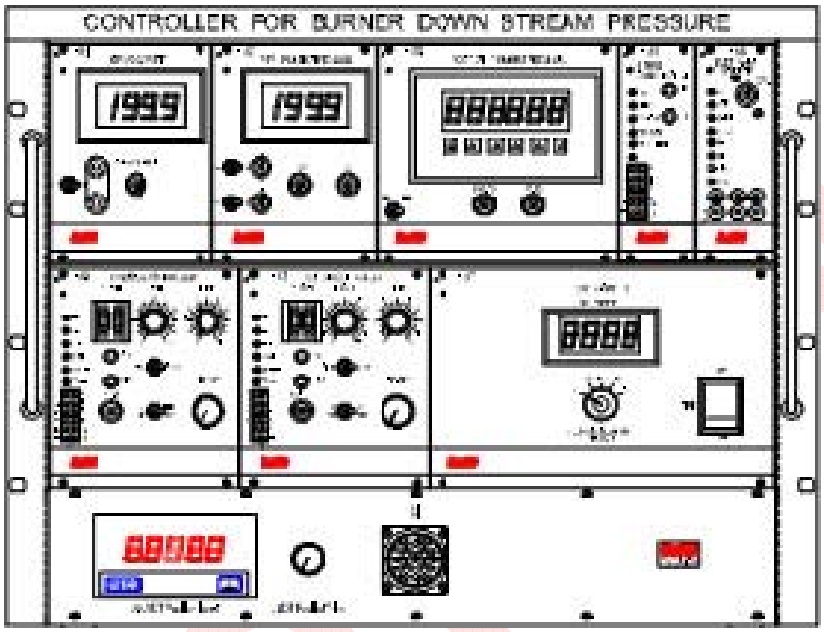
Features

- Based on high precision, ultra low drift, low offset Op Amps
- High precision reference & instrumentation amplifiers
- Buffered reference, feedback signals
- Signal conditioners & converters
- Outer pressure loop and inner position loop with PI controllers
- LCD Panel meters for display of parameters
- Metering sockets & Test Points

Upgradation of BDSP Controller ACB

Application:

Control of Servo Drive for Throttling Fuel Flow/Pressure of BDSP



Features:-

The BDSP Controller previously supplied to GTRE used MOOG servo valve with +/-50mA drive current and Linear Potentiometer (LPT) for position feedback. The upgraded BDSP Controller ACB, uses an existing servo valve with +/-20mA drive current and a Linear Variable Differential Transformer (LVDT) for position feedback and a high pressure cut off circuit.

Additional items foreseen in the upgraded BDSP Controller ACB are as under:

- LVDT Card for conditioning and processing of LVDT signals.
- LED Display (4-1/2 Digits) for display of LVDT position in “mm”.
- Cable Harness with 19-pin female circular connector

DC Power Supply for Jet Fuel Starter (JFS) Motor

Application:

Control of Jet Fuel Starter (JFS) Motor of Gas Turbine

Features:-

- High starting current of 300A
- Adjustable outputs of 24, 28, 32 or 35Vdc
- ON/OFF Control from a Remote Control Panel
- ON time of 25sec and OFF time of 180sec
- 10 Starts / hour and maximum of 30 Starts/day
- In built protections viz., under voltage, phase failure, overload, short circuit etc.,