TEST STAND FOR TURBOSHIFT ENGINES <PA-WTW1400>

APPLICATION

Function and performance testing of removed engines, determination of identification data of turbojet and turboshaft engines during starting, idle run or full load operation.

SPECIAL CHARACTERISTICS

- Modular system of air cushions allowing easy moving of the different engine test trolleys for turbojet and turboshaft engines from the test chamber to the setup chamber.
- A swivelling connection box containing the complete measurement data acquisition system, including the measurement computer as well as the supply connections (quick-disconnect couplings) for fuel, oil and compressed air, is installed above the test trolleys in order to allow the quick setup of the engine with short test leads.
- Performance testing (thrust measurement for turbojet engines will be carried out by means of a load cell)
- Depending on the individual engine, various exhaust pipe adapters are used, in order to obtain optimum exhaust discharge
- Operating mode switch activates the required supply system automatically according to the type of engines
- All measurement data and system conditions continuously are being controlled for their admissibility. In case of exceeding of any limits all the required emergency cut-outs will be carried out automatically
- Display of measurement data and diagrams on a high resolution graphic monitor in analog and digital form
- Graphic display of engine runs, up to three measurement channels in one diagram, e.g. Ng, Nf, EGT, during starting
- Standard day calculation
- Disk administration of the measurement results
- Statistical evaluation of measurement data is possible via harddisk and via floppy
- X-Y diagram evaluation
- Data listing call is possible via a separate menu program
- Emergency power unit
- Safety device
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TECHNICAL DATA
- Measurement data acquisition and transfer equipment
  * measurement computer
  * central processing unit (1 Megabyte RAM, 64 Kilobyte ROM, 80286 microprocessor, printer interface and serial interface)
  * Voltage measurement board
  * Serial interface
  * Frequency measurement board
  * Main computer
  * Central processing unit (4 Megabyte RAM, 64 Kilobyte ROM, 80286 microprocessor)
  * Real time clock module
  * Reset/interrupt key
  * Serial interface board
  * Graphic controller
  * Winchester controller
  * disk controller
  subordinated peripheral devices are a Winchester drive, 2 floppy, printer, plotter, monitor, LCD terminal and colour screen
- Hydraulic dynamometric brake 25 kW - 1400 kW
  max. torque 4500 Nm
  max. speed 7500 rpm
  on request, other performance ratings according to the data of different engines to be tested can be worked out
- Oil cooler circuit
  max. cooling power 20 kW
  range of adjustment 0-100 °C
- Thrust measurement
  load cell 0-2000 kg, accuracy ± 0.05 %
- Emergency power supply unit
  input 220 V 50 Hz max. 3000 VA
  output 220 V 50 Hz max. 2000 VA
- DC supply
  a converter with an adjustable voltage of 0.4 - 30 V is used.
  Current: permanent 500 A
  short time 1000 A
  Ripple: max. 1 %