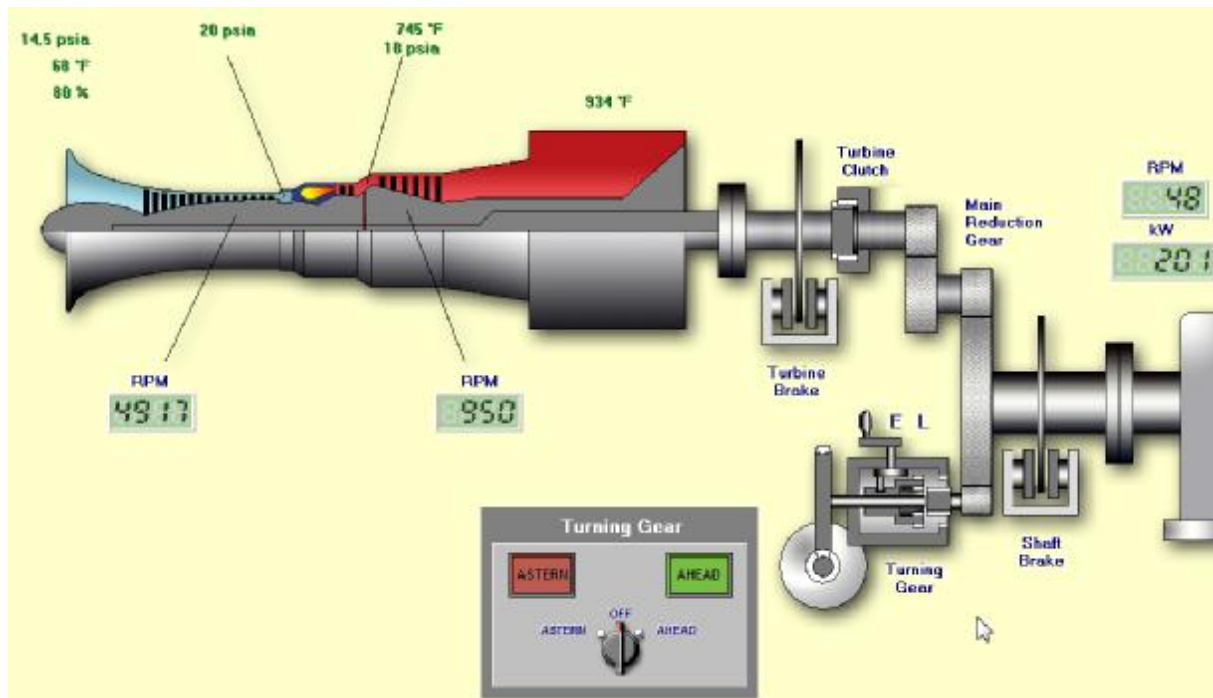


Gas Turbine Simulator

Gas Turbine Simulator (GTS) simulates a naval type of engine room powered by a two shaft gas turbine

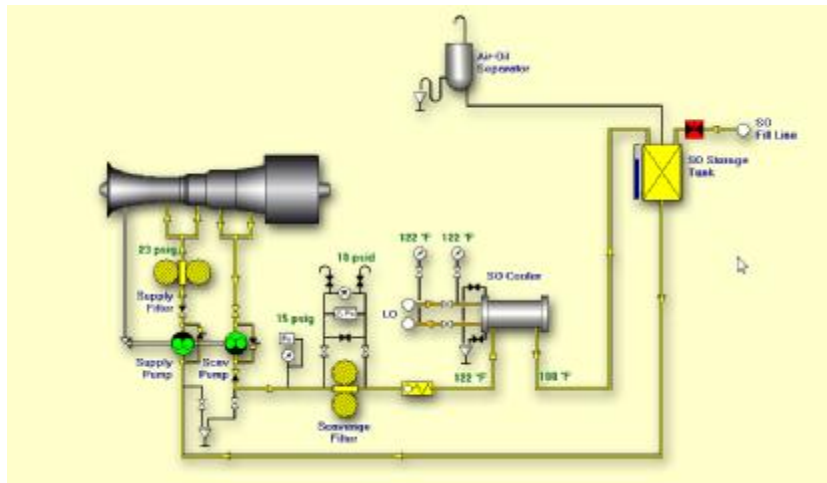
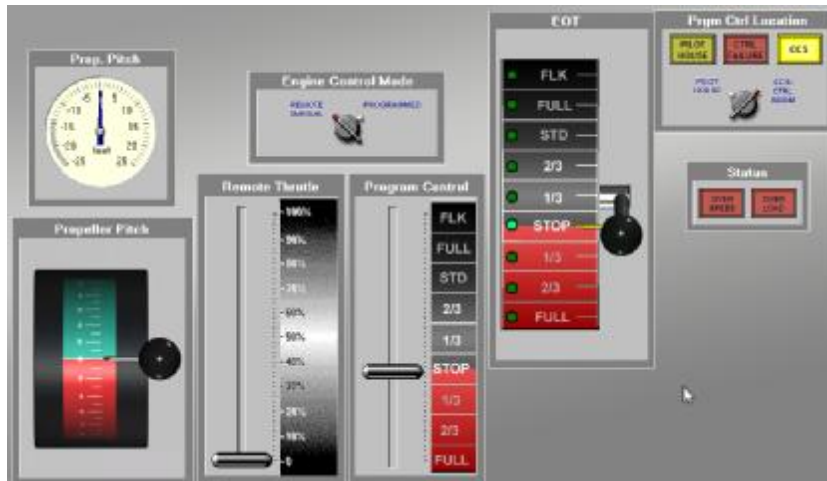


GTS includes animation of the main reduction gear, turbine clutch, brakes and turning gear in all operational modes.

The main educational tasks which can be accomplished with GTS:

- Learning gas turbine engine room **operating routines** with the support of the integrated **checklists**.
- Ship's engine room **operation training**. The user will be able to accomplish any operational task starting from pre-prepared or previously saved **exercises**.
- Training in **corrective action** when faults occur. Different faults can be mixed in the run-time or loaded from disk.

GTS simulates the following systems:

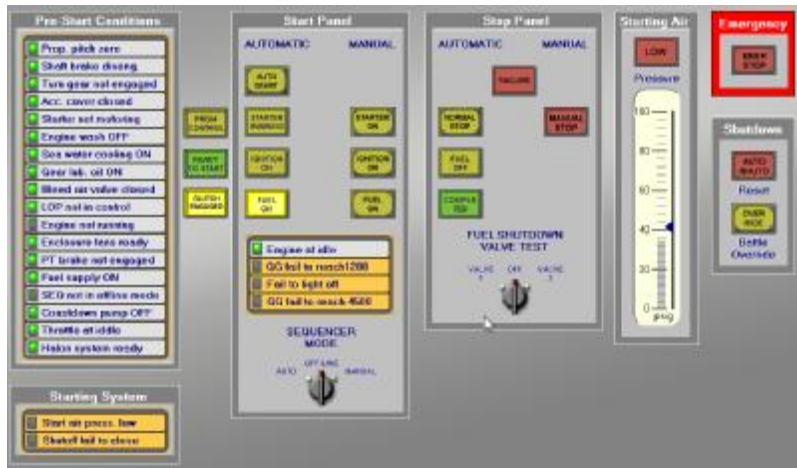


- Main engine (two shaft gas turbine with ca. 25000 kW of power at 3600 rpm at the output shaft) powers the controllable pitch propeller (CPP) via main reduction gear
- Engine control from control room (CCS) and bridge. Both remote manual & programmed control are possible
- Fuel system
- Synthetic oil system
- Gear oil system
- Sea water system
- Starting air system
- Washing system
- Fire fighting system
- Automated control system
- Monitoring system

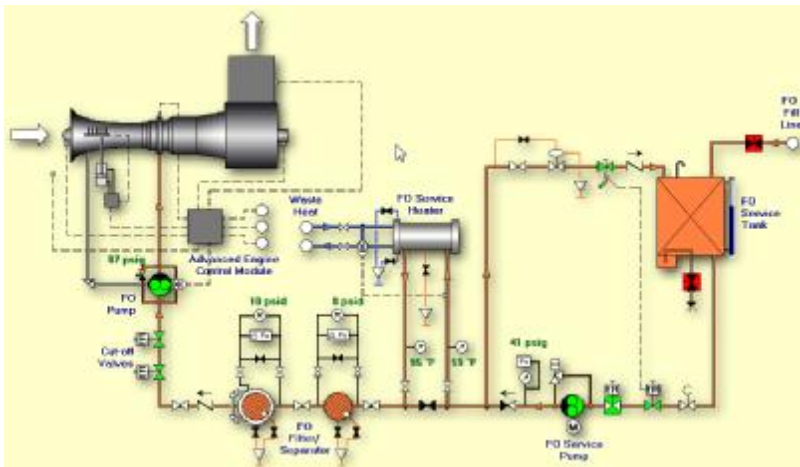
GTS main features

- GTS is a **highly realistic simulator** for gas turbine engine room training which can also be used as a low cost introductory simulator.
- The mathematical model simulates a typical navy type engine room with a **standard gas turbine engine** and its auxiliary systems.
- The electronic control system is also simulated.
- **Mimic diagrams** with active valves, pump status indicators, tank level indicators and selected digital gauges make the system easy to use.
- Multichannel **digitised sound** provides a very realistic ship's engine feel. The sound effects include: gas turbine sound correlated with engine speed, the sound of a starting combustion chamber and machine telegraph buzzers. The volume level for all sound channels can be freely selected according to personal preferences.
- It is possible to switch on the fly between **British and Metric units**.

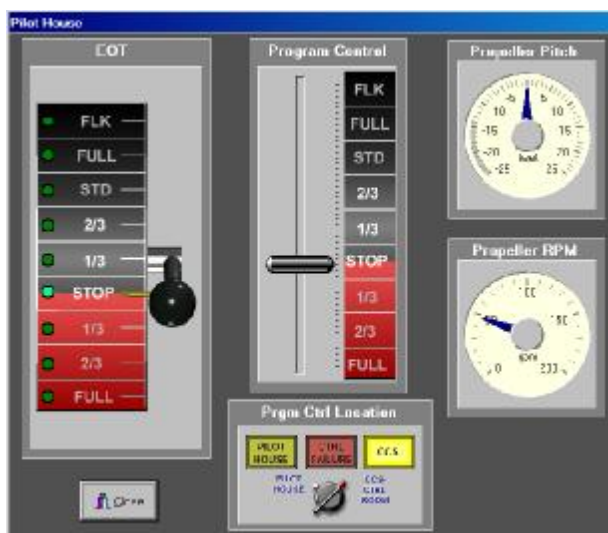
GTS has different types of user interface:



Control panels include very realistic, animated virtual controls like switches, gauges and lamps. The control panels imitate the most important parts of the control room equipment.



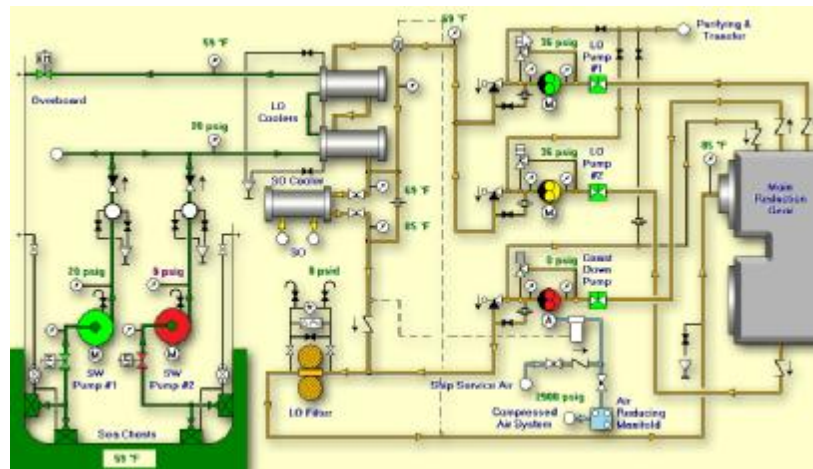
Mimic diagrams show the gas turbine auxiliary systems and include all active controls necessary for normal operation. The main operational parameters are displayed in the diagrams



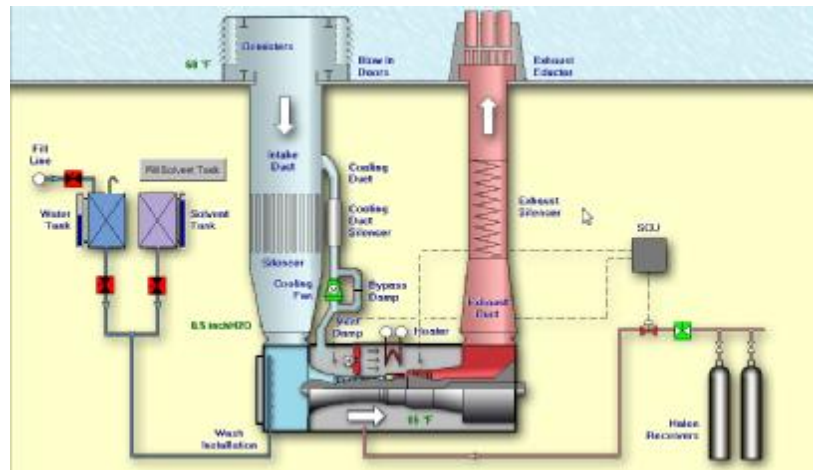
The bridge control panel enables remote operation of the gas turbine engine.

Other examples of **GTS** auxiliary systems are shown below:

The gear oil and sea water systems have been integrated into one diagram. Different operating modes of the circulation pumps are possible.



The enclosure diagram includes the washing system and the fire fighting system. The operation of blow-in doors and dampers has also been integrated.



A navy type starting air system has been simulated in detail.

