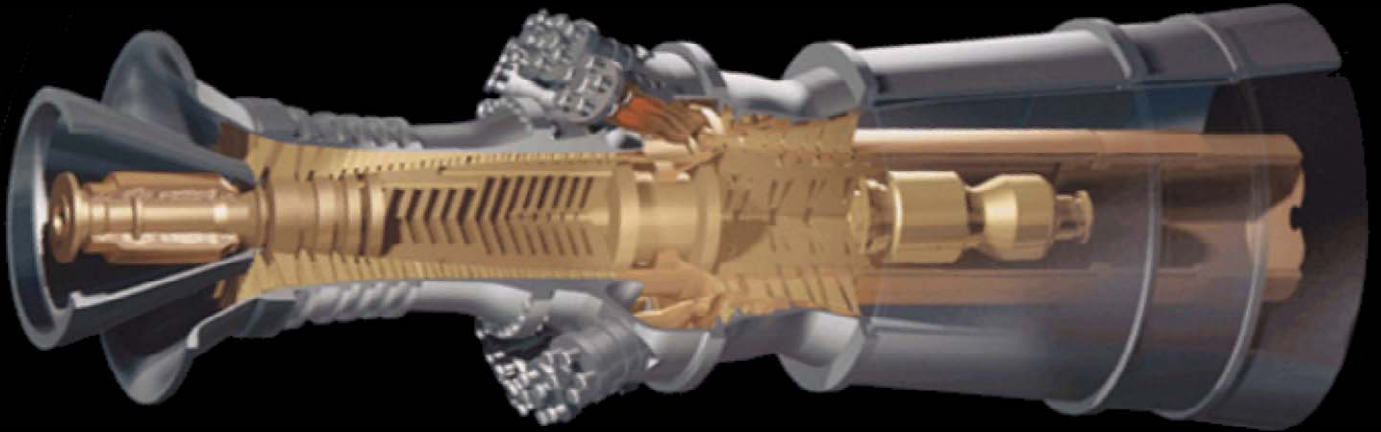


Gas Turbine

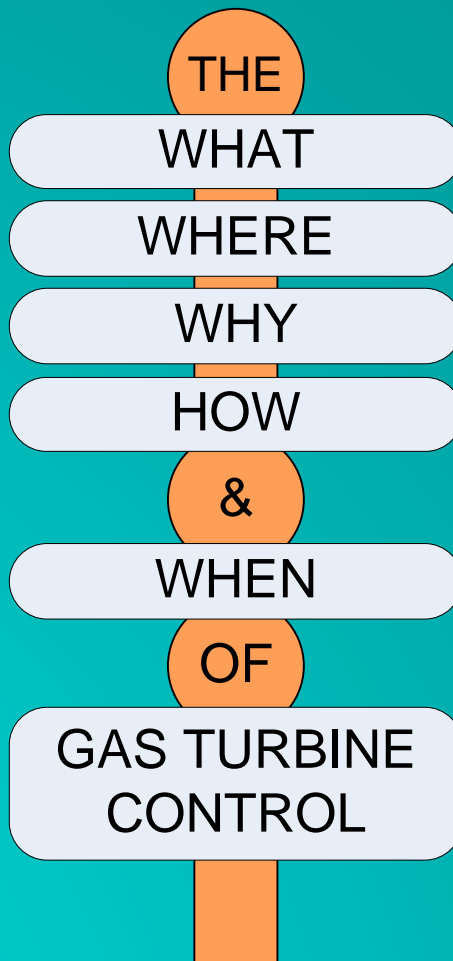
Instrumentation & Control



This fast paced 2 day training course provides an overview of industrial & aero-derivative gas turbine instrumentation and control.

Each chapter is broadly informative and suitable for anyone involved or interested in the operation and maintenance of gas turbines.

The course and training material is designed to provide an understanding of gas turbine safety and control instrumentation.



Each session covers:
What - is it
Where - is it installed
Why - do we need it
How - measurement & control
When - is it used

Question time is allocated in each session for interactive discussion and audience participation is encouraged.

A great way to learn about the latest trends, technologies and developments in gas turbine power generation.



PANTAC
SYSTEM CONTROL

Turbine controls
Simulators
Human Machine Interface
Battery management

PanSIL safety manager
SIL workshops
Generator controls
Compressor controls

Day 1

- 8:30 Registration and coffee
9.00 Opening remarks
9.10 Introductions
Bring your business cards.
- 9:20 Filter house
- Inlet filters & cleaning
- Inlet humidification & cooling
- Implosion doors
- 10.00 Lube oil systems
- Main / Emergency supplies
- Trip / Control oil
- Filters, chip detection & coolers
- Jacking oil
- 10.40 Break / refreshments provided
- 11:00 Starters
- Motor / Engine
- Pneumatic / Hydraulic
- Static
- 11:40 Air compressor
- Axial / Radial
- No of stages and shafts
- Inlet guide vanes
- Extraction / Bleed valves
- Inter cooling
- Cleaning
- 12.30 Lunch break / meals provided
- 1:30 Combustor
- Annular / Can annular / Silo
- Temperature control
- Fuel transfer / mix firing
- 2:10 Fuel supply system
- Gas /Liquid
- 2:30 Ignition systems
- Nat Gas / LPG / Diesel
- Purging / Flame detection
- 2.50 Break / refreshments provided
- 3:20 NOx control
- Wet / Dry
- Nozzle mix / Pre-Mix
- 4:00 Power turbine
- Fixed & Free Power turbine
- Expanders
- 4:20 Closing comments

Day 2

- 8:30 Registration and coffee
9.00 Opening remarks
9.10 Fuel load control
- EGT/Base/Peak
- Speed / MW / Droop
- 9.50 Bearings
- Journal / Radial / Roller / Thrust
- 10.10 Vibration
- Complete systems / Sensors
- 10.30 Break with refreshments provided
- 11:00 Fire protection
- Sensors gas / temp / smoke
- CO2 / foam / fog / ventilation
- 11:40 Data acquisition
- HMI events / alarms / trending
- First out trip, time stamping
- Sequence of Events
- 12.20 Lunch break with meals provided
- 1:30 PLC architecture
- Simplex / Dual
- Triple / Quad
- 2:10 Governor controls and protection
- Relay / analog
- PLC with trip relays
- PLC with safety PLC
- Safety PLC only
- 2.50 Break with refreshments provided
- 3:20 DC power supplies
- Station / Black Start supplies
- Battery banks/charging/monitoring
- 4:00 Environment
- Combustion products
- Noise / Bunting / Drains
- 4:20 Closing comments

Course fee: \$1,600 pp less 10% discount for multiple registrations from the same company

To register expression of interest (no charge) submit the form at the bottom of the web page www.pantac.com.au/SCHEDULE.php or email sales@pantac.com.au



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