

## Mars 100 Turbine

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# POWER GENERATION ENTERPRISES

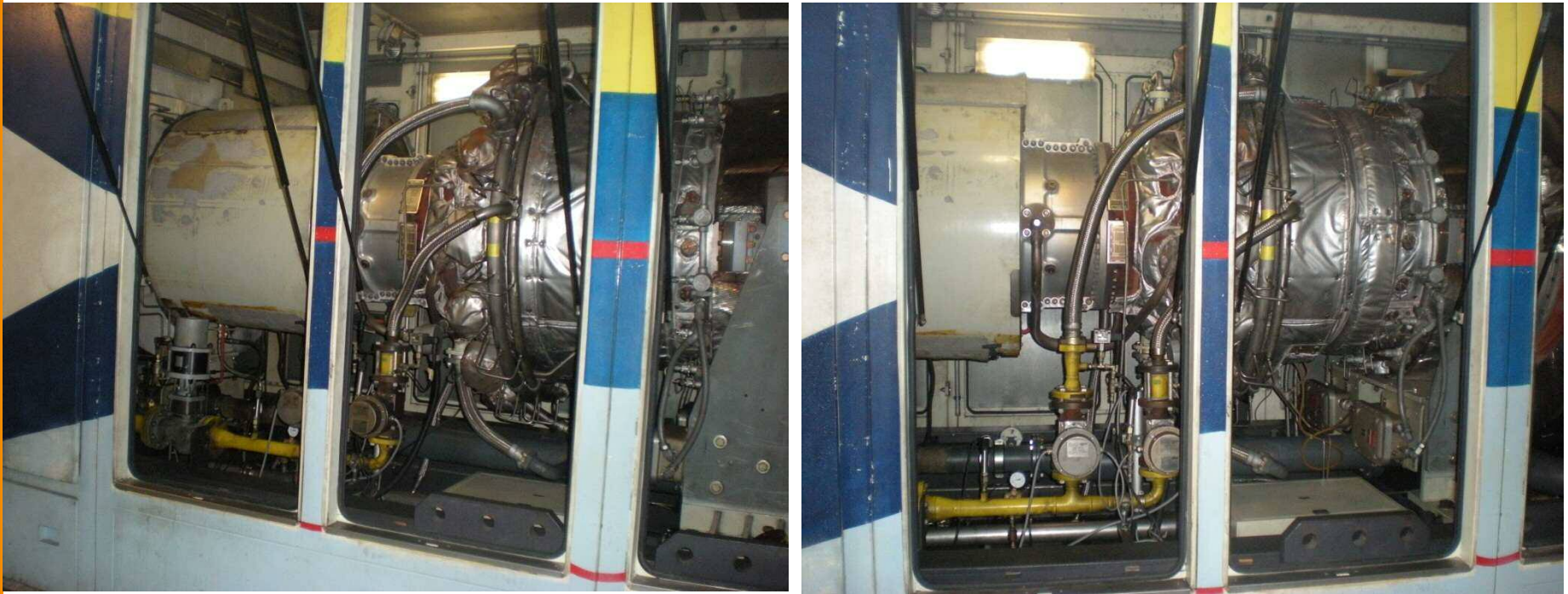


Date entered into Service: 01/11/1999



- Turbine Solar MARS 100 / Version 15000 S
- Package Hours: 47000
- Turbine running hours: 17500
- Reducer running hours: 47000
- Generator running hours: 47000

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- ❑ Power rating 10.3 MW
- ❑ Low NOx 50mg/Nm3 Gas
- ❑ Turbine running hours: 17500
  - ❑ Overhauled : 2009

## Mars 100 Turbine Unit Data Plates



## Package Description

Turbine Reducer



- ❑ Make : MAAG
- ❑ Type : Reduction Gear
- ❑ Number of hours: 47000

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## Package Description

Generator End



- Make : ALSTHOM
- Model : AA58BMAL11-4P
- Power: 14000 KVA
- Voltage: 6300 V
- Resistance : 1283 A
- Speed : 1500 Rpm
- Hours: 47000

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## Package Description

Auxiliary Unit



- Turbine Control Cabinet
- Generator Control Cabinet
- DC Power Cabinet
- AC Power Cabinet
- SFC Starter Cabinet
- 110 V Charging Cabinet



## Package Description Systems

### Start-Up System

Start TAG: Electrical induction motor, 4 Poles 400 V with cooling fan.

### Lubrication System

The system includes: The oil tank, main oil pump, auxiliary oil pump, oil pump relief, 110 V DC and duplex oil filter to 10 microns.

### Gas System

The circuit includes gas, gas filtration, a primary shut-off valve, a stop valve secondary, 2 control valves for the electrical system SoLoNOx, two annular manifolds that feed the 14 injectors, a regulator for the torch ignition and a circuit for control air.

### PCD System

The system includes an air circuit at the output of compressor used to pressurize the oil seal in the turbine and to cool the components of the hot section of the turbine.

### Air Instrumentation System

For the control valves and pneumatic actuators.

### Lifting System

The system is comprised of stainless steel tanks under air pressure, with a spray nozzle for washing the compressor

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## Package Description

### System Controls

#### Alarm Systems for various Unit thresholds:

**Error.** Indicates a problem of data transmission or acquisition of a signal, does not lead to the arrest.

**Warning.** Indicates a sequence error or warning in different circuits, not dangerous for the group

**Alarm.** Indicates an error condition that could damage the turbine requires a slow stop of the machine.

**Shutdown.** Indicates an imminent risk to the turbine, requires an immediate shutdown of the turbine.

#### The Control System Manages...

- ...the axial and radial vibration, turbine bearings, gear
- ...Gas leaks
- ...Fire suppression
- ...Temperature control, lubrication, T5, T7, bearings

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## Additional Information

- ❑ Maintenance Report Level 3 : 2011
- ❑ Borescope Report: 2011
- ❑ Alternator Control: 2011
- ❑ Performance test by APAVE Agency: 2010

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