



# CASE STUDIES

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**Triveni**  
TURBINES

# Case Study 1

## Oil Refinery in Middle East



2.7 MW Steam Turbine



1.5 MW Steam Turbine

### Turbine Details

4 X 1.5MWe &  
4 X 2.7MWe Steam Turbines as  
per API 612 + Shell DEP +  
AMEC FW Project Variations

### Project Highlights

- ☉ Steam Turbines, designed, manufactured & tested as per API 612 6<sup>th</sup> edition + Shell DEP + AMEC FW Project Variations
- ☉ 4 X 1.5MWe & 4 X 2.7MWe Steam Turbines drive 4 No's each combustion air blower and flue gas fans for the World's largest reformer package
- ☉ Project executed with approved deviations to complete project specifications
- ☉ Turbines designed for outdoor installation with MDMT suitable for -3 Deg C

### Project Highlights

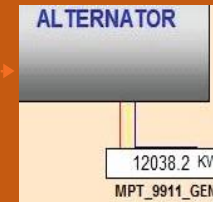
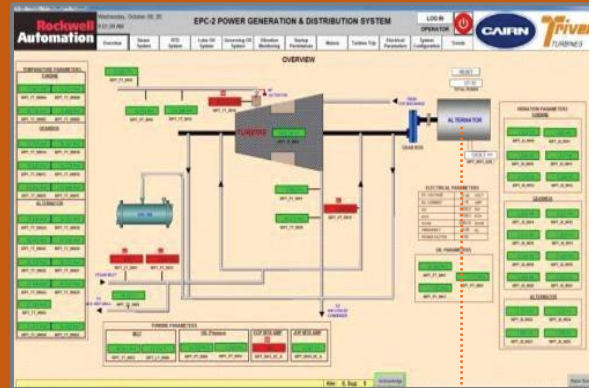
- ☉ Steam turbine constructed in full compliance with Shell DEP / AMEC PV requirements for Human factor engineering
- ☉ Steam turbines constructed for long service life of 30 years and 6 years of uninterrupted operation
- ☉ Electrical hazard area zone 1, II C, T3
- ☉ Steam Turbines, Gear units, Lube Oil units, Unit Control Panels and Gland Steam Condensers in Triveni's scope of supply

# Case Study 2

## Oil Refinery in India



12 MWe Steam Turbine Generator during installation



### Turbine Details

5 X 12 MWe Steam Turbine Generator sets as per API 612

### Project Highlights

- ☉ Steam Turbine inlet steam 41.35 bara, 370 Deg C as per API 612 commissioned during 2008-2009 and 2014
- ☉ Gear Boxes as per API 613, Lube Oil System as per API 614
- ☉ Air cooled oil cooler as per API 661
- ☉ PLC with redundancy and SIL – 3 rating
- ☉ Machine Monitoring System ( MMS ) Bentley Nevada model 350C series with system 1 analysis system
- ☉ 12MW AC Generator, IP 54 Enclosure, Class F Insulation, Air cooled CACA, 50 Deg C Ambient

### Project Highlights

Mustang Engineering and subsidiary of John Wood Group carried out front-end engineering design verification, detail engineering, procurement and construction management services for the project in Western India.

The facility includes water treatment and injection, gas production, power generation, fluid gathering and treatment and crude oil export.

The project's flow assurance work is provided by Multiphase Solutions Inc. another Wood Group Company

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DREAMS**

**THANK YOU**



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