

Januari 2012

# Turner ECS Case study

WOODWARD 505 STEAM TURBINE CONTROL &  
ELECTRIC HYDRAULIC ACTUATOR



## PROJECT SCOPE

- Engineering
- Cabinet design
- Autocad drawings
- Technical consultancy
- Factory acceptance test
- Installation system on site
- Demolition drawings
- Commissioning of new system

## INTRODUCTION

TECS have been requested by our Customer, a producer of plastics, Latex and Rubber, to upgrade the controls and pneumatic actuator on their Coppus Murray Steam Turbine, which is utilised to drive a compressor.

### Main reasons for upgrade.

- Existing Woodward 505 Steam Turbine Control is now obsolete
- Existing Woodward Pneumatic Actuator, Type PA100L, is now obsolete
- Non availability of spare parts to repair/overhaul existing equipment



*Obsolete pneumatic linear actuator, type Woodward PA 100*



*Obsolete 505 steam turbine control*

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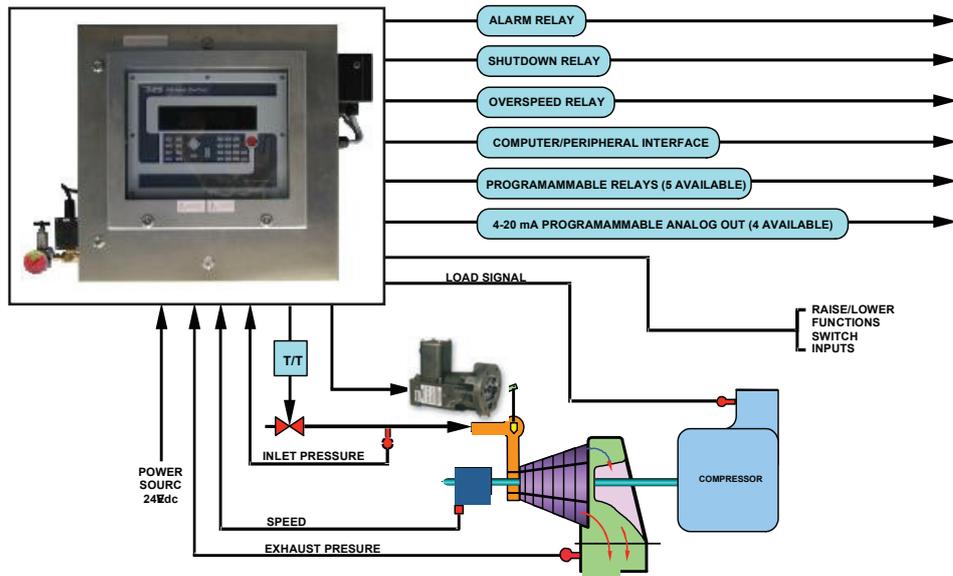
### OPERATION

The pneumatic linear actuator has been replaced by a linear electric hydraulic actuator, type Woodward TM25LP.

Part of our scope of supply included a free standing ATEX zone II certified cabinet. This was designed, built and commissioned on site by TECS.

The cabinet consisted of a new enhanced Woodward 505 Steam Turbine control and was designed to incorporate a purge control unit which ensures that the internal pressure of the enclosure is constantly higher than the external pressure and therefore in compliance with the ATEX regulations.

The 505 steam turbine control has been configured for a compressor application.



### PRODUCTS USED:

#### WOODWARD 505 steam turbine control

- Costs effective control
- Speed/Frequency control
- Integrated operator panel
- Modbus communication
- Auto start sequence
- Critical speed avoidance

#### Woodward TM actuator

- ATEX listing
- Corrosion resistant construction
- Electric hydraulic linear actuator
- Dual coil available



*New steam turbine control cabinet*

