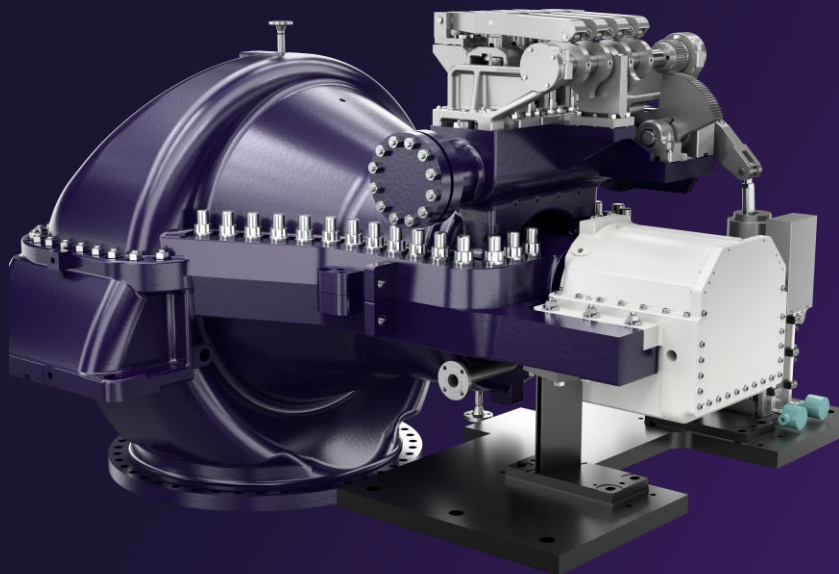


Footprint Unit for lower CO2 Emissions



Name Plate

Worthington (Multi-stage) & Gimpel Valve



Country

Saudi Arabia



Order Year

May 2022



Industry

Downstream - Methanol



Application

Compressor

Customer Challenge

- The customer's turbine operating parameters have changed. A new footprint turbine needs to operate at a higher exhaust pressure, helping the customer meet their carbon reduction goals.



Scope

- New Worthington footprint casing
- Steam path designed with 1 stage versus 2 stages
- New Gimpel valve - Oil-Operated Trip and Throttle Valve (OOTTV)
- New protection and control system (Protech GII and WW505 governor)



Customer Value

- Higher exhaust pressure increases steam consumption, increases plant efficiency by 1%, and avoids approximately 20,000 tons of CO2 emissions per year.
- Exhaust flange was kept even when exhaust pressure increased from 4.2 to 13.2 kg/cm².
- Outage time was minimized with drop-in unit matching the existing foundation and nozzle locations.
- Improved availability with all new internals, including a new trip and throttle valve.
- 2-years ROI.

