FULL EPC PROJECT FOR CHEMICAL PLANT TURBINE REPLACEMENT

LASER SCANNING SPEEDS DESIGN PROCESS

A chemical plant in Jebel Ali, Dubai had a requirement to replace its existing steam turbine generator. Goltens proposed to undertake the EPC project on a turnkey basis to meet the customer's requirements.

After evaluating the technical requirements, Goltens sourced a new Elliott Model 2DYR3 condensing steam turbine that met the customer's needs perfectly.

3D SCANNING LEVERAGED TO SPEED PROCESS

Given the limited availability & questionable accuracy of the engineering data of the existing plant, customer was genuinely concerned about the cost and time needed for performing the upgrade design.

To overcome this challenge Goltens used its 3-D laser scanning equipment to scan the existing plant. Goltens' design engineers then processed the scanned inputs using 3-D modeling tools to deliver a high quality, cost and time effective design solution to the customer.

DESIGN PACKAGE COVERED:

1. "As is" model of the existing plant
2. Foundation design including stress & vibration analysis
3. Pumping & piping design including sizing, detailing and routing
4. Structural design including detailed MTOs
5. Electrical design including detailed MTOs
6. Integration of the new turbine with existing switchgear and instrumentation systems
7. Electrical, instrumentation, structural & piping interface (with existing systems) design
8. Plant HAZOP study incorporating the new Turbine.

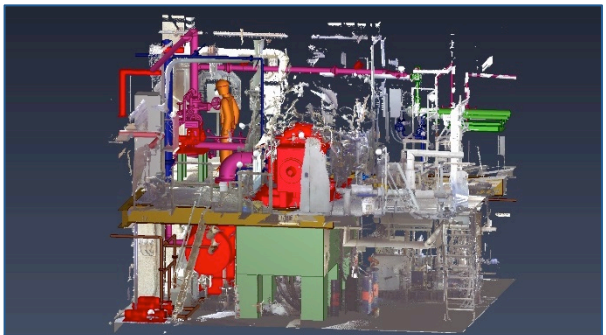
RESULT

The customer was very pleased with Goltens' integrated and innovative approach to the design and sourcing solution. The use of Goltens' well-proven laser scanning and modeling processes dramatically reduced the time involved and the cost to completed the design.

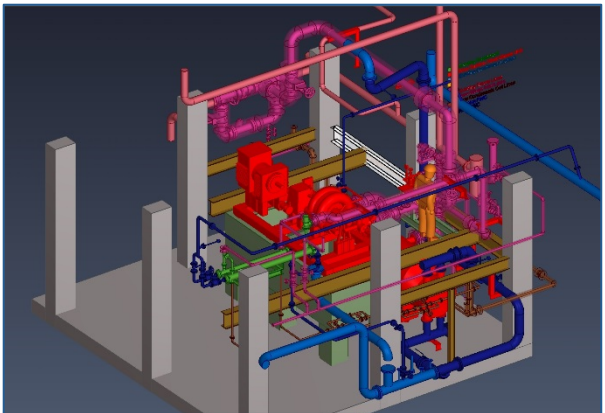
PROJECT FACTS: TURBINE EPC PROJECT

Company:	**Chemicals Plant**
Turbine Make/Model:	**Elliott Model 2DYR3**
Turbine Type:	**Condensing Steam**
Turbine Output:	**415KW**

Elliott Model 2DYR3 turbine



New STG modeled with 3D scan point cloud



New STG Model with complete piping layout