IN-SITU MACHINING - NEW BUILD JACK UP OIL DRILLING RIG CASE FIXATION SYSTEM

X-Y-Z MILLING, FLANGE FACING AND LASER ALIGNMENT

Over a period of one month, Goltens completed an extensive X-Y-Z milling, Flange Facing and Laser Alignment project at a shipyard in Singapore.

Goltens was contacted to support the shipyard in the construction of the CJ-70 Jack Case Fixation System on a new build jack up oil rig at the yard.

Evaluation of the job revealed an extensive scope of work that included vertical milling of the port and starboard side, top and bottom foundations and machining of the vertical flanges for the central support spindles. The critical factor in the machining was to ensure that the C-70 jack case foundation and central support spindle flanges were machined to maintain parallelism and perpendicularity.

After the work scope was fully detailed, Goltens deployed its 4M x 2.5M X-Y-Z milling equipment, flange facing machines, laser alignment equipment and in-situ specialists to the shipyard to complete the work.

ON-SITE MACHINING CONSISTED OF:

- Laser alignment and flatness checks on the Jack Case foundations and central support spindle flanges
- X-Y-Z Milling on machines to machines off 8 areas of Port and Starboard foundations measuring 3390mm x 100mm. Removed 18-20mm of material from the foundation surfaces.
- Machines 8 flange faces on central support spindles measuring 450mm X 150mm. Removed 12mm-15mm from the support spindle flange faces.

RESULTS:

The results were crosschecked by customer quality control and all surfaces passed without fail. The satisfied customer commented that the complex job was completed on time and that final results were excellent and extremely accurate.

PROJECT FACTS: CJ-70 Jack Case Fixation

Vertical Flanges machined:	450mm x 150mm x 8pcs
Material removed from Flanges:	18mm - 20mm
Port & Stbd foundations:	3390 x 100mm x 8pcs
Material removed from foundation:	12mm - 15mm