



FACTS AT A GLANCE

Company: Keppel Shipyard Limited

Website: www.keppelshipyard.com

Description: With experience that dates back to more than a century ago, Keppel Shipyard is a major presence in Asia and the world, specialising in ship repairs, conversions and building of specialised vessels. It has eight docks in Singapore dedicated for ship repairs and a strategic network of 17 yards globally under the Keppel Offshore and Marine Group. Keppel Shipyard is a leader in delivering solutions to the global offshore and marine industry with the ability to offer flexibility and fully optimise its resources to provide quick turnaround, on time and on budget.

Industry: Offshore and Marine

Country: Singapore

PRODUCTS USED

- SmartPlant® Isometrics

KEY BENEFITS

- Amount of manual work dramatically reduced
- Material take off (MTO) accuracy increased by 30%
- Quick and easy implementation

KEPPEL SHIPYARD USES SMARTPLANT® ISOMETRICS TO IMPROVE EFFICIENCY IN PIPING PRODUCTION ENGINEERING

Intergraph® Piping Technology Delivers Cost Savings to Shipyard

IDENTIFYING GOALS:

Keppel Shipyard Limited is a world-leading ship repair yard with proven excellence in ship repair, conversion and construction services for the global offshore and marine industry. The company is recognised as the world leader in FPSO and FSO conversions, and also as a leading LNG repair yard in Asia outside of Japan.

Keppel Shipyard has the capabilities and expertise to undertake the whole spectrum of drydocking, repair, upgrading, conversion and specialised construction for a diverse range of offshore and marine vessels including chemical/oil tankers, container/cargo vessels, passenger ships, gas carriers, navy ships and dredgers.

Accuracy and efficiency are critical elements for Keppel Shipyard's design and engineering services to ensure that the company delivers quality services on time and on budget. Keppel identified a gap in the design process for their piping production engineering, and decided to look for a solution to improve the efficiencies of isometric drawing and to increase accuracy of MTO.

OVERCOMING CHALLENGES:

- Minimise errors from manual MTO calculations
- Reduce costs and improve productivity

REALISING RESULTS:

There were other options that Keppel Shipyard was considering, including two commercial off-the-shelf applications, but after a thorough evaluation, the company chose Intergraph SmartPlant Isometrics.

"It was vital for us to choose a proven solution to improve the productivity and quality of our piping design works," said Mr. Ng Siong Seng, Senior Manager of Piping Engineering Production, Keppel Shipyard Limited. "In the end, it was clear that SmartPlant Isometrics was the best choice for our requirements as we could implement it easily and produce the desired results."

Intergraph SmartPlant Isometrics is a pipe-sketching application designed specifically to enable the piping engineer and designer to produce industry-standard isometric drawings quickly and cost-effectively. With SmartPlant Isometrics, piping engineers can design and produce isometrics for individual pipelines, several pipelines or complete piping systems in a single session. Traditional methods of isometric drawings through 2D CAD packages or paper and pencil usually take between four and eight hours while it only takes minutes to sketch a piping system in SmartPlant Isometrics. Isometric drawings with a full bill of materials are then produced in seconds, providing significant cost savings and productivity gains for the user.

Keppel Shipyard purchased SmartPlant Isometrics for use by the Piping Production Engineering Department. Intergraph conducted the training and consulting for Keppel Shipyard users, which only took three days. The piping engineers and designers were able to use SmartPlant Isometrics immediately after training. This was another key factor to Keppel Shipyard choosing the Intergraph solution.

“SmartPlant Isometrics is extremely user-friendly – our team of piping engineers and designers learned to use the application very quickly,” said Mr. Ng Siong Seng. “We had great pre-sales and post-sales support from Intergraph personnel that made the entire roll-out process pain-free for our engineers.”

The implementation of SmartPlant Isometrics at Keppel Shipyard has provided dramatic productivity gains for isometric drawing generation. Through automatic MTO generation, MTO accuracy has also improved by 30%. During peak times, up to 10 users can be logged onto the application simultaneously. This has brought about significant time and cost savings for the company while maintaining high-quality production.

MOVING FORWARD:

“We have discovered that it is very important to leverage technology to improve productivity and the Intergraph SmartPlant Isometrics application has proved to be a sound investment for Keppel Shipyard,” said Mr. Ng Siong Seng.

Keppel Shipyard is already in discussions with Intergraph to explore other solutions that will be beneficial to the company, starting with SmartPlant Spoolgen. “We want to fully maximise the benefits of the existing application by leveraging the piping component files (PCF) output of SmartPlant Isometrics to feed into SmartPlant Spoolgen for total data consistency,” said Mr. Ng Siong Seng.



ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualise complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organise vast amounts of data to make processes and infrastructure better, safer, and smarter. The company's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction,

operation, and data management of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the public safety and security, defence and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is an independent subsidiary for SG&I's U.S. federal and classified business.

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