



FACTS AT A GLANCE

Company: Kantey & Templer

Website: www.kanteys.co.za

Description: Kantey & Templer (K&T) consulting engineers is a leading service-driven company providing and managing professional, quality engineering expertise to Africa. Through staff excellence and sound corporate governance it converts engineering concepts into reality. Kantey & Templer has seven offices in South Africa.

Employees: 180+

Industry: Petrochemical, Building Service, Electrical Engineering, Piping

Country: South Africa

PRODUCTS USED

- Intergraph® CADWorx® Plant
- Intergraph CADWorx Design Review

KEY BENEFITS

- Intelligent 3D modeling
- Improved accuracy
- Better communication with client
- ISOGEN® isometrics
- Streamlined workflow
- Minimum rework

KANTEY & TEMPLER SUCCEEDS ON A ROAD AND RAIL UPGRADE PROJECT WITH INTERGRAPH CADWORX

Intergraph® CADWorx® helps Kantey & Templer to deliver cost effective and error-free design in a complex US \$20 million road and rail gantry upgrade project in Watloo, Pretoria, saving the company man-hours and drastically reducing rework

IDENTIFYING GOALS

Established in 1953, Kantey & Templer Consulting Engineers (Kantey & Templer) offered various geotechnical and structural services. Today, Kantey & Templer specializes in civil, structural, mechanical, electrical, petrochemical, geotechnical, and transportation engineering. The company formed strategic alliances with several other professional groups and is able to offer quantity surveying, town planning, architectural, and other associated discipline services.

Kantey & Templer was awarded a US \$20 million road and rail gantry upgrade project from a Waltloo Depot Upgrade BP South Africa in Waltloo, Pretoria. This project involved design and engineering of a receiving and distribution fuel depot. The depot handles 37 million liters of both gasoline and diesel fuel per month. The duration of this project was two years.

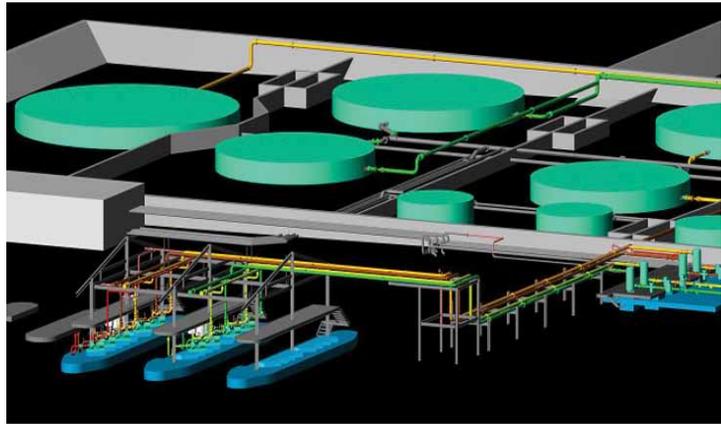
Kantey & Templer's task was to upgrade the entire rail receiving unit and extend the road receiving unit and all feeder lines to the storage tanks. The rail siding 3 x 12 rail cars (36) had a floor area of 2650 square meters covered by an automated fire-fighting deluge system. The scope of work included the design of a new 36-rail car gantry and road gantry extension, new road and rail metering bays, and new road and rail inlet receiving manifold, allowing for total flexibility to route any product to any storage tank.

OVERCOMING CHALLENGES

One project challenge for Kantey & Templer was to perform its tasks around the existing piping and equipment of a fully operational facility. Minimal disruption to the currently operational depot was essential. Another challenge was that the company started its project with no existing drawings present. "We had to start from scratch with a survey, then progressed to a full 3D model showing all piping, equipment, and civil steel structures," said Mr. Martin Pothas, Lead/Senior Piping Designer at Kantey & Templer. Detailed client reviews using CADWorx Design Review helped in communications with client and project management.

REALIZING RESULTS

At each phase of the project, the client had a clear understanding of the entire scope of work by viewing the 3D model and was pleasantly surprised to see the preview of what it would receive at the end of the day. Using CADWorx, one can design the entire project in 3D by means of the user-friendly piping and steel packages. Using CADWorx Plant design software, the company generated 3D layouts, 2D representations, and isometrics. The detailed isometrics generated simplified the construction and erection of all piping. The bill of materials generated from the database guaranteed 100 percent accuracy of material used in the model for project procurement. The team managed fabrication and erection on site.



MOVING FORWARD

There was a minimum amount of rework on-site. “The fabrication deliverables were produced with 100 percent accuracy therefore drastically reducing rework. As a result of this project, the loading and unloading are now performed at a much faster rate,” says Mr. Pothas. “With CADWorx, we were able to eliminate many man-hours in comparison to producing 2D general arrangement drawings. There would have been a high possibility for error if a non-senior designer had done the take offs from a 2D drawing. Without isometrics, one can imagine the difficulty for the piping contractor to understand the complexity of the work,” concluded Mr. Pothas. Kantey & Templer now has a bigger project in Mozambique and plans to use CADWorx to solve new project challenges.

ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize 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, defense 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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