



FACTS AT A GLANCE

Company: Tharo Consulting CC

Description: Tharo Consulting was established in 2003 by a group of engineers to provide professional engineering services to the mechanical industry. It is a piping, design and stress analysis consulting firm based in Pretoria city, Gauteng region, South Africa, serving the petrochemical, power generation and mining industries.

Employees: 38.000

Industry: Power generation, Pipelines

Country: South Africa

PRODUCTS USED

- Intergraph CAESAR II

KEY BENEFITS

- Fast turnaround
- Reliable results
- Customized reports
- Improved safety

THARO CONSULTING DEVELOPS EFFECTIVE AND DETAILED ANALYSIS USING CAESAR II

Tharo Engineering manages to successfully complete the complex ESKOM Underground Coal Gasification pipeline project with Intergraph CAESAR II in only 12 weeks.

IDENTIFYING GOALS

Tharo Consulting CC (Tharo) is a piping, design and stress analysis consulting firm based in Pretoria city, Gauteng region, South Africa, serving the petrochemical, power generation and mining industries.

Beal Project Management and Consulting Engineering recently awarded Tharo a pipe stress analysis contract for phase I of the ESKOM Underground Coal Gasification (UCG) pipeline project. UCG technology requires wells to be drilled into the coal bed, and the coal ignited. Air, water or steam are injected into the coal seam to deliver a controlled “burn” that produces hydrocarbon gases, which can be used as fuel for power generation. ESKOM is the main power service provider in South Africa. Tharo’s task was to prepare the detailed static pipe stress analysis.

OVERCOMING CHALLENGES

Tharo had to route a 200 NB and 250 NB pipe alongside one another then tie a 150 NB pipe into both at about 45 different points. The firm also had to consider a large temperature differential between the two pipes, with one pipe having a temperature of 200° C and the other 40° C. Equipment included approximately 2.5 km of piping with diameters ranging from 150 NB to 600 NB and valves in every line size. A fast project turnaround of 12 weeks added to these challenges.

To solve these project challenges, Tharo chose Intergraph® CAESAR II® pipe stress analysis software which includes the ISOGEN software because they had eight years of success using CAESAR II

REALIZING RESULTS

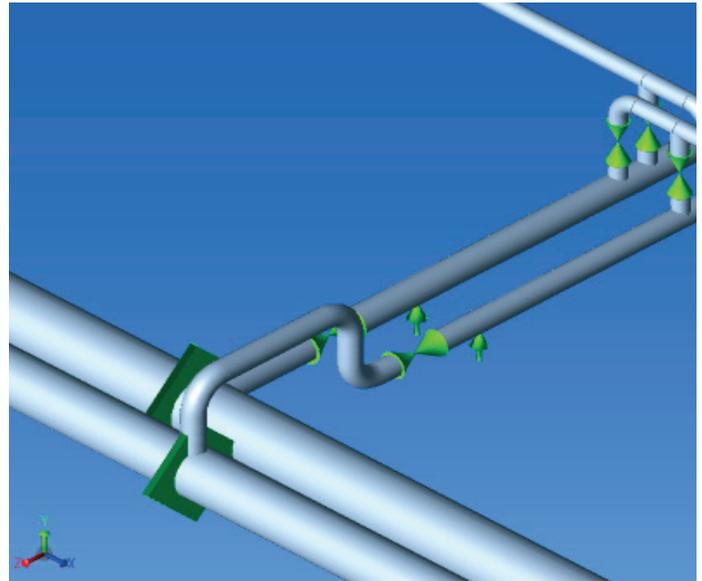
Using CAESAR II, Tharo Consulting successfully completed a full stress analysis report, including stresses, restraints, and displacements, in 10-12 weeks. With CAESAR II ISOGEN, the team performed a full stress analysis of isometric drawings showing all applicable pipelines with node numbers and support types.

“The ease of use of CAESAR II and the included ISOGEN software enabled us to deliver successful project results to our client on time and within the allocated requirements and with all the necessary detailed references to the CAESAR II model report,” said Hennie Swart, project director at Tharo Consulting.

MOVING FORWARD

“What makes a huge impact on my company’s performance is the after-sale service and support from the Intergraph CADWorx and Analysis Solutions Group and Chempute, their reseller in South Africa,” Swart added. “They always give me a suggested solution within 24 hours, which keeps us credible and the preferred supplier due to the ability to deliver a project according to the customer requirements.”

Tharo developed a detailed and flexible layout analysis that conforms to the pipeline code requirements as well as client requirements. By keeping the system as flexible as possible for this project, they enabled the client to use the most cost-effective and detailed solution.



ABOUT INTERGRAPH

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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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