



Amiantit, Saudi Arabia

Key Facts

Company: Saudi Arabian Amiantit Company (Amiantit)

Website: www.amiantit.com/en

Industry: Construction, Petrochemical

Country: Saudi Arabia

Products Used:

- CAESAR II®

CAESAR II® Proves to be an Essential Tool in Amiantit's SHARQ Project

Saudi Arabian Amiantit Company (Amiantit), one of the leading pipe manufacturing companies in the Middle East, maintains 18 manufacturing locations worldwide. Its Amiantit Fiberglass Industries Limited (AFIL) subsidiary started using CAESAR II® in 1993, having shifted from SIMFLEX, the leading stress analysis software at the time. Since then, AFIL completed over 44 projects using CAESAR II on projects in Saudi Arabia, UAE, Qatar and Bahrain, including GRP, GRE, HDPE and DI piping systems.

SHARQ (Eastern Petroleum Company) engaged AFIL/Amiantit to provide analyses for the largest single ethylene glycol manufacturing project in eastern Saudi Arabia. Due to the project's magnitude and unique specifications, Amiantit first conducted a test with CAESAR II on several tees. The results were successful and CAESAR II excelled, even for orthotropic materials such as those used for the GRP piping in this project. It confirmed CAESAR II was the solution.

Developing Timely Deliverables for Project on Fast Track

With such a fast track, large scope project, Amiantit knew that costs could increase significantly if schedules became an issue. To maintain schedule, it performed stress analyses simultaneously with production and fabrication, made possible through CAESAR II's accurate and fast component analyses.

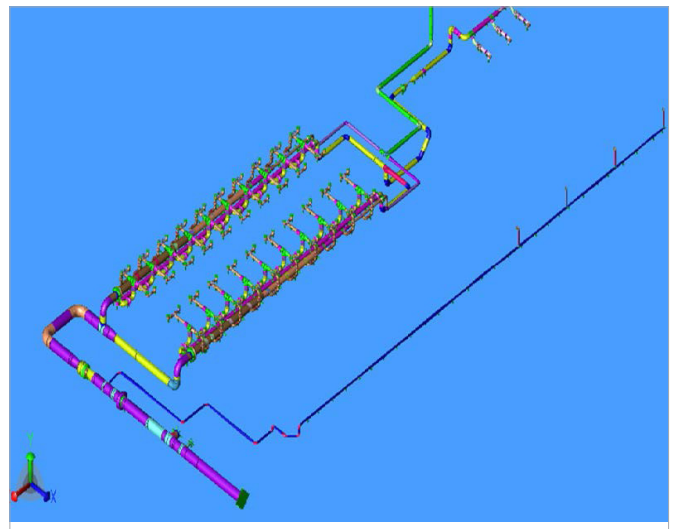
Eliminating All Possible Failures

A project challenge was to analyze and ensure accurate representation of 11 kilometers of GRP piping both above ground and underground. The beam element of CAESAR II had to accurately represent the 160 inches orthotropic material. An accurate representation of the 160 inches orthotropic material was required to prevent failures when fitting the bends, tees and reducers resulting in loss of product plus wasted work-hours and extra time and money for maintenance, redesign and re-installation. A failure could also cause an expensive shut down.

“CAESAR II enabled us to eliminate all the possible failures especially at T-Junctions,” explained Sadath Khan, group engineering manager at Amiantit. “By using CAESAR II, we could determine the layout, identify over-stressed areas, pinpoint problem areas and resolve the situation. Without CAESAR II, this would have been a difficult task,” Khan said.

Benefiting from Precise Automated Calculations

Complex, large diameter spools ranging from 100 inches to 160 inches are especially difficult to handle and ship, which poses an added risk of pipe spools being damaged or even falling apart if not handled with care. CAESAR II’s advanced capabilities ensured accurate correlations irrespective of sizes and provided easy calculation of the center of gravity for the complicated pipe spools, helping to guarantee safe and fast handling. Amiantit’s experience on this project confirmed to it that CAESAR II was capable of producing accurate analyses of piping lines of all diameters and for pressure classes in a full range of loading conditions.



About Hexagon

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