HEXAGON

Case Study

Austral Diseños Industriales, Argentina

Key Facts

Company: Austral Diseños Industriales

Website: www.adinsa.com.ar

Industry: Petrochemical

Country: Argentina

Products Used:

- CAESAR II®

Austral Leverages CAESAR II® to Speed Completion of Engineering in Argentina

Headquartered in Buenos Aires, Argentina, Austral Diseños Industriales (Austral) provides basic and detailed engineering for new or existing process plants in the oil and gas sectors and thermal and power industries. With the latest engineering and design software, Austral delivers engineering units at competitive costs and designs that make efficient use of available resources.

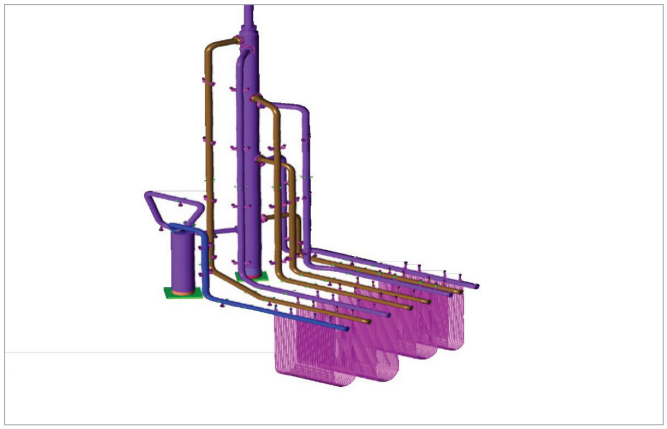
Yacimientos Petrolíferos Fiscales (YPF) of Argentina chose Austral along with Constructora Norberto Odebrecht for the design and engineering of the first continuous catalytic regeneration (CCR) project at its refinery, to improve the quality of gasoline by reducing sulfur content to meet the regulatory standards. The new $348 million CCR Plant includes seven catalytic towers, 16 air coolers, eight product pumps, two gas compressors, one reactor, a four-stage furnace, two knock-out drums, one blow-down drum, plus other equipment and approximately 3,500 meters of piping.

Completing Engineering Analysis Backlog in Record Time

Even though the project began six months before Austral got involved, little engineering work had been done. The transfer lines had not been analyzed as independent pipes, no engineering had been done on the towers or furnaces, and spring hangers had not yet been specified. Once Austral stepped in with CAESAR II®, it completed the analysis in seven weeks, which in turn reduced the total cost.

Addressing Alignment Discrepancies

Austral faced alignment discrepancies among the catalytic tower, transfer lines and the structures surrounding them. Using CAESAR II, Austral defined appropriate stiffness for the metallic structure, the constant spring hangers (CSH), and the snubbers. It then resolved the alignment issues by reinforcing structures, improving stiffness at support points and determining the accurate maximum load for the base constructions.



Benefiting from Dynamic Analysis

Finding the piping systems' natural frequencies was essential to determining the size of dynamic load factors and establishing the correct pipe-support spacing. Using the dynamic module in CAESAR II, Austral expedited these calculations and added the appropriate snubbers to avoid detrimental vibrations caused by vortex shedding oscillations.

Enhancing Presentations to Management

CAESAR II provided Austral with reports critical in presentations and meetings between engineers and upper management. As analyzing stress became a core priority of the project, results calculated using CAESAR II determined the critical decisions on reinforcing structures, improving the stiffness of support points and deciding the optimal loads in particular cases.

Saving Time and Money

CAESAR II was able to conduct system analysis and produce graphical visualizations for hydrostatic testing plus operating conditions with various temperatures, pressures, and wind speeds. "We were able to deliver accurate engineering and design while saving time and money in the process," explained Nicolas Duca, mechanical and magister environmental engineer at Austral.

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9bn EUR. Learn more at hexagon.com and follow us @HexagonAB.