



GARO AB1500

Case Study

Liquid Ring Technology Provides Substantial Benefits for High Pressure Dry Chlorine Applications

GARO's custom high-pressure liquid ring compressor package helps Societe Nationale d'Electrolyse et de Petrochimie (SNEP) realize significant savings in parts and maintenance costs.

As a part of YNNA Holdings, one of the oldest industrial companies in Morocco, Societe Nationale d'Electrolyse et de Petrochimie (SNEP) is an innovative petrochemical manufacturer, renowned as the first chlorine producer in Morocco. Faced with aging equipment and mounting maintenance costs SNEP sought to upgrade their existing systems to a more modern solution, allowing them to boost the facilities efficiency and production capabilities.

Overview

CLIENT

Societe Nationale d'Electrolyse et de Petrochimie (SNEP)

LOCATION

Morocco

APPLICATION

High Pressure, Dry Chlorine

PRODUCTS

- 2 GARO AB1500 two-stage Liquid Ring Compressors

CUSTOMER BENEFITS

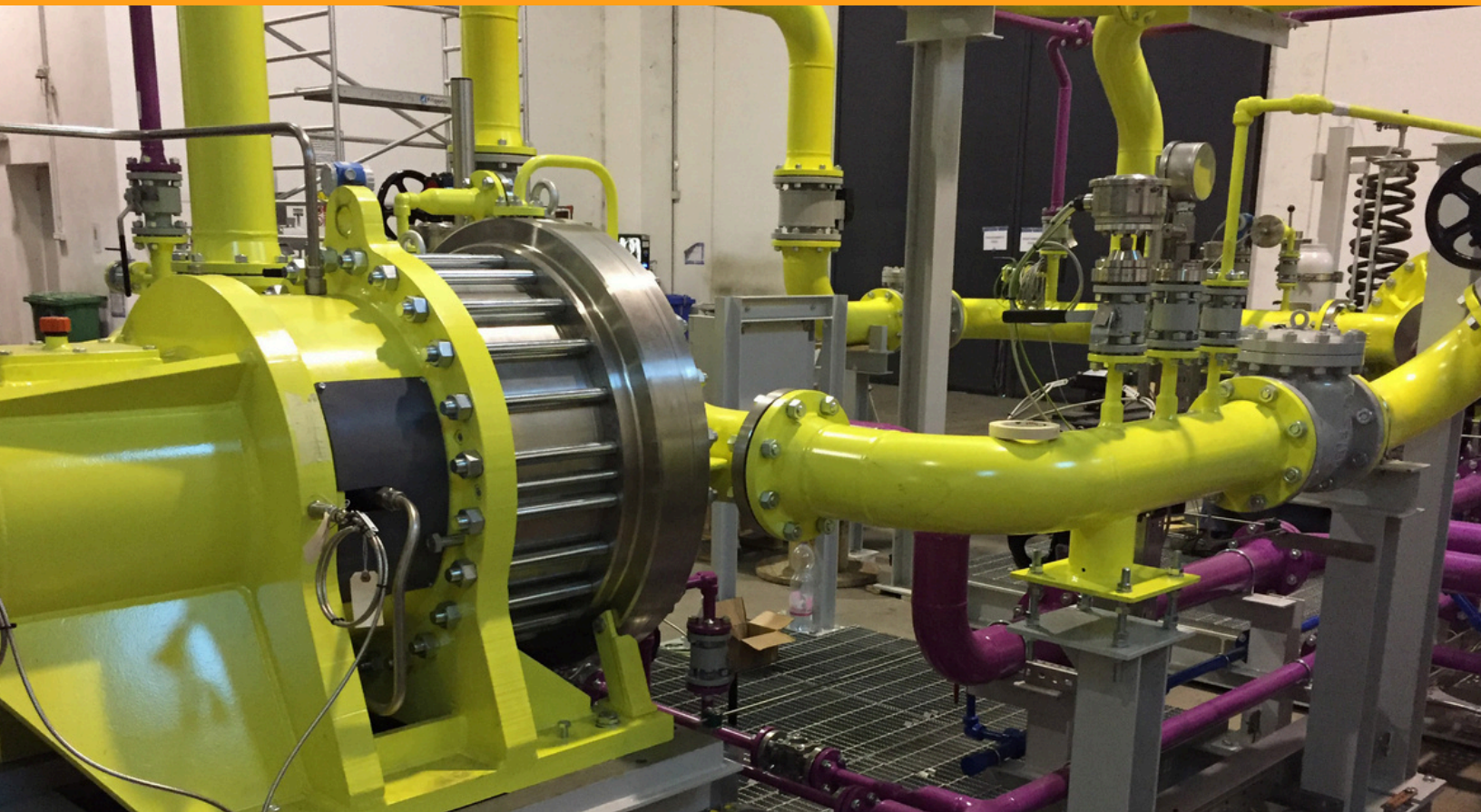
- Improved Efficiency
- Reduction in Downtime
- Significant Cost Savings



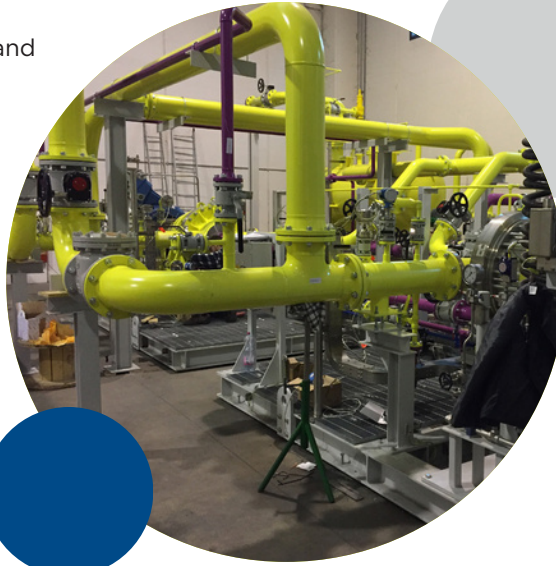
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Consisting of five piston compressors, SNEP's existing system was no longer able to maintain the high-pressure operation required by the production process. With high vibration causing increased wear and wet parts showing constant signs of corrosion, the legacy compressors were also placing a financial burden on the company, with annual maintenance costs of over \$1 million. In addition to rising maintenance costs, the equipment was also creating unplanned downtime, with a very low mean time between failure (MTBF), leading to a drop in efficiency and production at the facility. It was clear that SNEP was in need of an updated solution.

Having supplied over 70 two-stage chlorine compressors for high-pressure dry chlorine applications, GARO has a strong, global reputation as a provider of highly reliable and resource efficient solutions. This application specific knowledge and expertise placed GARO in a unique position. Focusing on reliability and efficiency, GARO was able to develop a custom high-pressure dry chlorine system to cater to SNEP's unique requirements.



After evaluating SNEP's facility, equipment, and operations, GARO's engineers proposed a system built around a two-stage liquid ring compressor with an automated logic control unit in order to meet their turndown requirements. The package supplied consisted of 2 GARO AB1500 two-stage liquid ring compressors capable of running at a pressure range between 5 - 12.5 bar, well within the 8 bar pressure required by SNEP's production processes. Housed in a double eccentric casing with a patented cone design and utilizing an overhung impeller, the GARO units provided SNEP with a cool running, reliable, and low maintenance solution.



In order to meet SNEP's 0 - 100% operational requirement, GARO engineers equipped the system with an automated logic control unit. With traditional dry chlorine packages normally relying on manual operation, GARO's solution provided SNEP with the ability to automatically anticipate the system's capacity requirements and accommodate a full capacity turndown. To help drive additional savings, GARO engineers also evaluated SNEP's piping and adjusted it to not only accommodate the new package but also allow for simpler operation and maintenance.

With both compressors having been supplied at the end of 2017, commissioning took place in Q2 2018. In addition to improved system efficiency, and a reduction in downtime, the new installation boasts a mean time between failure of 10 years, and also provides SNEP with significant cost savings. Maintenance costs are projected to be at \$50,000 for general part replacement, and an investment of \$150 - \$200,000 for capital spares every 3 - 5 years, a significant reduction when compared to the legacy system's \$1 million annual parts and maintenance cost.

Contact GARO today to discover how our full range of custom and pre-packaged high-pressure solutions for dry chlorine applications can help you reduce the risk of downtime and improve productivity.

To find out more about Garo Compressors for Chlorine visit

www.garocompressors.com



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