

## Vacuum system renewal in the production of Petronas lubricants



**The production process of lubricants for industrial and automotive use requires vacuum for decanting liquids in large quantities and for the evaporation of the condensation accumulated during the storage phases and product transportation.**

During these phases, lubricants are likely to absorb humidity from the surrounding environment. Vacuum is used to prevent this from happening. In fact, vacuum enables the elimination of humidity without altering the properties of the product as required by the major European car manufacturers. Furthermore, vacuum speeds up the transfer of the liquid between tanks, maintaining the purity of the lubricants.

PETRONAS Lubricants International (PLI) produces and sales lubricants all over the world and it is part of PETRONAS, a Malaysian oil company established in 1974. The PLI plant in Villastellone, near Turin - Italy, has trusted in Pneumofore for the supply of compressed air for over 30 years.

In 2014, PLI relied on Pneumofore's engineering skills also for the supply of vacuum, with the installation of a UV16 H VS30 rotary vane vacuum pump equipped with inverter. Previously, the vacuum system consisted of three single stage double horizontal piston pumps with drop greasing and capacity of 500 m<sup>3</sup>/h, residual pressure of 0.5 mbar(a) and installed power of 18.5 kW. Two of these pumps were in operation for 16 hours per day, whereas the third was used as backup unit.

The benefits of the new vacuum system were immediate and numerous: higher performance, total capacity of 1,200 m<sup>3</sup>/h, reduced consumption of electricity from 37 to 15 kW (-59%) with minimum required energy of 7.4 kWh, and consequent cost savings.

Unlike the double horizontal piston pumps, Pneumofore UV16 H VS30 vacuum pump does not require lubricant refill, reducing the time needed for maintenance which now simply requires the replacement of lubricant and filters every 4,000 hours of operation. Furthermore, the machine was immediately quieter than the pumps previously installed, which is particularly appreciated by the operators who were used to working in a very noisy environment.

Considering the excellent results, PLI plans to completely replace the old piston pumps with the installation of an additional UV16 vacuum pump. Pneumofore pumps will operate alternately, one as back-up for the other, creating a vacuum system capable of operating at full efficiency for decades.

### Pneumofore SpA

Via Natale Bruno 34 - 10098 Rivoli (TO) - Italy  
Tel: +39 011 950.40.30 - Fax: +39 011 950.40.40  
info@pneumofore.com - www.pneumofore.com

LOCAL CONTACT