



■ (Left) Complete rod packing cases with lubrication, cooling, vent and buffer gas connections. (Right) Rod packing case assembling.

THIRTY YEARS OF DEVELOPMENT IN COMPRESSOR SEALING TECHNOLOGY

Castanet Provides European Recip OEM and Operators with Custom-Designed Sealing Elements

By Roberto Chellini

Castanet SA was established in October 1978, in Marpent, near Lille (in northern France) by Marcel Castanet, who now boasts 42 years of experience in the reciprocating compressor field.

The company is presently managed by his son, Christophe Castanet, and, in spite of its growth, remains an independent family company. The long-standing policy of the French company is to develop its product in close collaboration with its customers. The company's know-how is backed up by many years of experience, and the quality of its products is recognized by European compressor manufacturers.

To ensure an extended service life of all sealing components, Castanet selects the best materials for each specific application (oil-free or lubricated compressors) and operating conditions (types of gas, pressures, temperatures, linear speeds, dewpoints, etc.), and for special applications has developed proprietary materials. The design and configuration of the sealing components is discussed by Castanet with its customer in order to select the most appropriate solution for the individual

job, capitalizing on the experience the company has accumulated.

The company's main business is devoted to new machines. Castanet's

experience serves the compressor manufacturer to implement the most up-to-date solution to the specific sealing problem.



■ Main product range supplied by Castanet.



■ Complete packing cases for a rod diameter of 5.31 in. (135 mm), before shipment.

However, it is often the case that an existing machine is experiencing sealing problems on a plant due to the type of gas handled, entrained dirt/moisture, temperature and pressure changes, etc. In such cases, re-engineering of the sealing system, backed up by the company's experience, can help in solving the problem. Often a compressor designed for a specific service, due to changes in the process parameters, has to be refurbished to perform a completely different job. For instance, compressors originally designed with lubricated cylinders are requested to perform oil-free gas compression. In such cases, a completely new gas sealing system has to be engineered (number of elements, dimensions, specific load for the rider rings, etc.) to replace the original equipment, and Castanet's skilled staff can be used to design the new system — in accordance with API or NACE standards — so as to guarantee the revamped plant the highest reliability and availability.

One of Castanet's strengths lies in the quality of the products it manufactures. Produced with the utmost rigor, these high-precision components guarantee reliable assembly and working clearances. As dimensional control is essential to providing the best seal possible, each component is the subject of a highly precise manufacturing quality plan in compliance with the ISO 9001 standard. Castanet's workshop is equipped with a large number of machine tools, many of which are CNC machines. The company's production program for its packing cups, for example, imposes the

strict observance of the geometrical and dimensional tolerances and the surface finishing tolerances. No short measures are admitted when it comes to finish grinding and especially lapping operations, the latter ensuring a perfect metal-to-metal seal with no joints. Total quality is a must. Each packing case is subjected to a hydrostatic test under pressure at 1.3 times higher test pressure than the working pressure.

The line of dynamic seals developed by Castanet for reciprocating compressor applications includes cylinder sealing elements such as piston rings, rider rings and guide rings; piston rod sealing elements such as piston rod packing cases, packing rings and sealing rings; and crankcase sealing elements such as oil wiper packings and rings.

Castanet makes a line of complementary products available to its customers, including compressor valves, piston rods, pistons and cylinder liners — completing the line of wearing components requested by compressor operators. All these products can be repaired and reconditioned according to the aftermarket requests.

Traditionally, Castanet dynamic sealing elements are used on reciprocating compressors working in oil refineries, natural gas applications (transmission, storage, distribution); petrochemical plants for production of plastics and fertilizers; in the food (breweries, sugar and refrigeration plants) and pharmaceutical industries; and high-pressure air compressors for blow-molding of PET bottles. ■