



# **Operating History of Moderate-speed API-618 Compressors in Refinery Service**

**By:**  
**George M. Kopsick**  
**Director International Sales**  
**Ariel Corporation**  
**35 Blackjack Road**  
**Mount Vernon, Ohio 43035**  
**gkopsick@arielcorp.com**

**4<sup>th</sup> Conference of the EFRC**  
**June 9<sup>th</sup> / 10<sup>th</sup>, 2005, Antwerp**

## **Abstract:**

API Standard 618, Reciprocating Compressors for Petroleum, Chemical and Gas Industry Services, is written to cover both moderate-speed and low-speed reciprocating compressors for critical service applications but does not define the piston and rotating speed characteristics of each design. This paper looks at historic piston and rotating speed limits, what these limits are today and how these two design alternatives can be applied to achieve the reliability objectives set forth in API-618. The basic differences between the two alternative designs are reviewed in light of both physical characteristics of the designs and changes in materials and manufacturing technology. Finally, the design, applications and operating history of a number of moderate-speed units operating in refinery service are described and discussed.