

# HOER BIGGER

COMPRESSION TECHNOLOGY

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## Abstract for 2<sup>nd</sup> EFRC Conference Paper, May 2001, The Hague

**Title:** A New Design of Non-Cooled Pressure Packing for Improved Life and

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### Abstract:

Increasing demands are being placed on reciprocating compressors for longer lifetime between services and improved operating reliability. The piston rod pressure packing is a highly stressed and vitally important seal. Many of the current packing designs are becoming marginal in performance terms and there is a requirement for improvements over the existing industry standard designs.

This paper describes the development of a new design of piston rod pressure packing for longer life and increased reliability.

It is desirable to eliminate the traditional water cooling jacket from the pressure packing assembly. The water jacket can be the cause of problems and shutdown failures mainly due to water leakage contaminating the process gas and also water channel blockage leading to cooling problems and short lifetimes.

To overcome the problems two new components have been designed, these are the "Thermosleeve" a non-water cooled pressure packing assembly and the "BOT" packing ring element.

The Thermosleeve packing achieves efficient removal of the frictional heat by using high conductivity solid materials with a special sleeve to reject heat to the compressor cylinder cooling system.

The BOT packing ring has been developed to provide much lower frictional heating than other packing ring designs. The reduction in heat generation has lead to reduced wear and increased life and reliability