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## ANALYSIS OF ROTARY COMPRESSOR LUBRICATION SYSTEMS

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### ABSTRACT

An experimental apparatus was used to develop the lubrication system for a rotary compressor. Of particular interest was the performance of the lubrication and venting system under dynamic conditions. The effects of temperature, speed and refrigerant concentration variability were evaluated as well as the impact of rapid pressure drops. Based on the empirical data, a computer program was written allowing rapid analysis of minor system changes such as bearing groove geometry, oil passage sizing and oil pump inlet configuration.

Reliability testing of the selected design has verified suitability under abusive conditions.