



Abstract

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Author

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Title

40-2: Technical and Economical aspects in the evaluation for upgrading a reciprocating compressor installation

Summary

Refineries as well as Petrochemical Industries face continuous changing markets and operational requirements. These changes may be triggered by the process, the product, more stringent company business performance, or altering HSE control. Changes call for modifications on compressor equipment. In such cases it is sensible to compare replacement of compressors to modernization or rerating existing compressor equipment. The significance of such an evaluation will be clarified in this paper with the help of examples.

The paper will discuss in detail how the existing compressors can be accommodated for new process conditions by creative thinking and making extensive calculations. Also the possibilities to increase the operational availabilities and lifetime of parts by updating the existing compressors with the latest technology will be discussed. In all cases the advantages of rerating existing equipment versus new equipment will be discussed. Attention will be called for technical life span, risk, operational availability, total cost of ownership and investment assessment.

As a golden rule does not exist it is always recommendable to study the relevant aspects for the feasibility of re-using existing equipment.