LIFE CYCLE COSTS -
Reciprocating Versus Rotating Technology in Natural Gas Compression

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Abstract:

Modern natural gas compression is a very diversified business both globally and from application to application. This article provides a short and comprehensive comparison between two leading gas compression technologies. Due to fundamental differences in the technologies, a direct comparison is difficult and some generalisations must be made. It will be shown the principal benefits and disadvantages of both technologies and the impact of these characteristics to the operating costs of typical applications.

Today's market is divided between centrifugal compressors driven by gas turbines and reciprocating compressors driven by electric motors or gas fuelled, spark ignited piston engines. The selection is based, in some degree, on either traditional application for the service type or a clear technological benefit over the other.

Naturally there are many aspects with impact on the decision making process. One of the most important is reliability of the package (driver and compressor). Local norms, codes and regulations are a jungle, as well as diverse end user preferences, all of which have to be clarified on a case to case basis: and these have an impact on the investment price as well. Generally it can be said that with smaller size units the most important aspects are investment price and quick delivery. With larger units, life cycle costs take on a greater degree of significance in the process.