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Basic Practices in Compressors Selection

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ABSTRACT:

In the paper entitled "Basic Practices in Compressors Selection", each major type of Reciprocating, Rotary, Centrifugal and axial Compressor will be reviewed from the construction, operation and application viewpoint. It will be demonstrated how the non-dimensional scales of Specific Speed and Specific Diameter can be used to select any of the above configuration of Compression machinery at its optimum efficiency range (see attachment).

The paper will present the approach of Engineers - Contractors in selecting compressors in petroleum, chemical and other industries. The limiting aero-, thermo- and rotor dynamic parameters in respect of each type of Compressor will be discussed. It will be shown how the initial Capital Cost, Operating Cost, environmental and logistics considerations influence the final selection of a Compressor for a given application. (See attachment.)

Future trends in the industry will be addressed. Areas needing attention by the manufacturers and research workers will be identified to further our knowledge and confidence in the Selection of Compression machinery.

* It is a Review Paper

Fig (15) Specific Speed v/s Specific Diameter Range for Reciprocating, Rotary, Centrifugal and Axial Compressors.
FIG 1: GROUP OF FACTORS INFLUENCING COMPRESSOR SELECTION