

Assessment of energy efficiency of gas supercharger based on acoustic resonator

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Abstract

The principle of operation of piston compressor and piston gas supercharger (delivery pump) operating at resonance frequencies has been studied. The energy efficiency parameter characterizing the energy saving ability of supercharging devices is proposed. Theoretical and experimental data, showing that the energy efficiency of piston acoustic supercharger (pump) is twice as high as the energy efficiency of piston compressor, are reported. © 2011 Springer Science+Business Media, Inc.

<http://dx.doi.org/10.1007/s10556-011-9412-3>
