IDENTIFICATION OF CONSTRAINTS IN THE OPTIMAL GENERATION OF SCREW COMPRESSOR ROTORS BY THE PRESSURE ANGLE METHOD

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ABSTRACT

The profile gradient method has been recently introduced as a means of generating screw compressor rotor profiles. As a single parameter method, this procedure is convenient for the optimization of screw compressor rotors and evaluating their quality. In this paper, the procedure is modified to adopt the pressure angle instead the profile gradient and applied to a screw compressor rotor rack. Optimization constraints are analyzed and an example of optimal profile generation is presented.

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