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SIMULATIONS OF TRANSIENT GAS TEMPERATURES IN CYLINDERS OF  
RECIPROCATING COMPRESSORS USING IDENTIFICATION TECHNIQUES  
WITH A MATHEMATICAL MODEL

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ABSTRACT

Results are presented for a theoretical and experimental investigation carried out to create a mathematical model for prediction of transient gas temperatures in cylinders of reciprocating compressors. A method of developing compressor mathematical models using compensating coefficients is described. Methods of obtaining the compensating coefficients for the selected mathematical models from experimental data are used. Identification methods for the coefficient are used as in System Identification Parameter and State Estimation, Peter Eykhoff, John Wiley and Sons, 1974.