

# Group classification of two-dimensional steady viscous gas dynamics equations with arbitrary state equations

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## Abstract

This paper is devoted to the group classification of steady viscous gas dynamics equations in the two-dimensional case (with plane or cylindrical symmetry) with arbitrary state equations. Representations of all invariant solutions are given.

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<sup>1</sup> Here the first,  $\lambda = \lambda(T)$ , and second,  $\mu = \mu(T)$ , coefficients of viscosity are related by the equation  $\lambda = -2\mu/3$ , and  $\kappa = \kappa(T)$ .