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Local well-posedness for boundary layer equations of Euler-Voigt equations in analytic setting. (English) Zbl 07433257

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Summary: From the formal expansion of the solutions of Euler-Voigt equations in $\mathbb{R}^2_+$ with no-slip boundary conditions, the boundary layer equations of Euler-Voigt equations to Euler equations are obtained. In case of the analytic data, one obtains the local existence and uniqueness of the solutions for the boundary layer equations by abstract Cauchy-Kovalevskaya theorem.

MSC:

76D10 Boundary-layer theory, separation and reattachment, higher-order effects
35Q31 Euler equations
76D05 Navier-Stokes equations for incompressible viscous fluids

Keywords:

Euler-Voigt equations; Euler equations; boundary layer equations; Cauchy-Kovalevskaya theorem

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