

I. I. Danilyuk. **On a class of irregular boundary value problems** // Nelinejnye granichnye zadachi (Nonlinear Boundary Value Problems). – 1989. – **1**. – p. 37-46.

The boundary of the considered flat domains consists of a finite number of smooth enough arcs, occurring in the final corner points at an arbitrary angle: if the domain is unbounded, then it contains a finite number of curvilinear half-strips of finite and positive width at infinity. On the part of the boundary arcs the general linear condition with oblique derivative is given, for the rest of the arcs, the boundary condition of the first kind is given. Inside the domain, general uniformly elliptic second-order equation with bounded measurable coefficients must be carried out. The simplest problem of this class arises under the analysis of the quasi-stationary Stefan problem; the description is given for such a case exactly. In general, the theory existed now is not applicable to the problems of such a class. The reduction to integral equations containing the integration over the domain is given, the sufficient conditions for solvability are also given, the smoothness properties of solutions are studied, etc.