## ABSTRACT

Two dimensional, potential flows of ideal fluids past obstacles of arbitrary shapes, placed in channels with parallel sides are considered. Exact obstacle shapes cannot be prescribed initially; using conformal mappings, the problem is reduced to that of determining an analytic function $\omega(t)$ in the parametric t-plane such that it is regular in the half t-plane and satisfies homogeneous boundary conditions of the following form: on the real t-axis, the imaginary part is known. The solution is obtained by means of Reimann-Hibert technique for solving homogeneous boundary-value problems. The selection of an appropriate curvature function is described. Various examples are considered and a possible extension of the method is formally indicated.