Allaberen Ashyralyev* (allaberen.ashyralyev@neu.edu.tr), Near East University, Near East Boulevard, 99138 Nicosia / TRNC Mersin 10, Turkey, Nicosia, Turkey, Maksat Ashyraliyev (maksat.ashyralyyev@eng.bau.edu.tr), Istanbul, Turkey, and Maral A. Ashyralyyeva (ashyrmaral2010@mail.ru), Ashgabat, Turkmenistan. Stability of identification problems for the hyperbolic-parabolic equation.

Authors: Allaberen Ashyralyev, Near East University, M.Ashyraliyev, Bahcheshir University and M. A. Ashyralyyeva, Turkmen State University Title: Stability of identification problems for the hyperbolic-parabolic equation Abstract: The theory of partial differential equations of mixed type with boundary conditions originated in the fundamental research of Tricomi [1]. Local and nonlocal problems for mixed type partial differential equations have been investigated by many scientists. However, identification problems for mixed type of differential equations have not been investigated [2]. In the present paper, the stability of identification hyperbolic-parabolic problems is established. Absolute stable difference schemes for the numerical solution of identification hyperbolic-parabolic problems are presented. The stability of these difference scheme are proved. Numerical results are given. [1]. F. G. Tricomi, Atti Accad. Naz. dei Lincei, 14 (5), 133-247(1923). [2]. M. Ashyraliyev, A. Ashyralyev, M. Ashyralyyeva, Computational Mathematics and Mathematical Physics, 60 (8) 49–60 (2020). Russian. (Received September 14, 2020)