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INVESTIGATION OF GENERALIZED SOLUTION OF ONE NONSELF-ADJOINT ONE-DIMENSIONAL MIXED PROBLEM FOR A CLASS OF SEMI-LINEAR PSEUDO-HYPERBOLIC EQUATIONS OF THE FOURTH ORDER

Abstract

At the paper one nonself-adjoint one dimensional mixed problem was investigated for one class of semi-linear pseudo-hyperbolic equations of the fourth order. The idea of generalized solution of considering mixed problem is introduced. By view of Bellman inequality the theorem on uniqueness on the whole of generalized solution was proved. Further, by the combination of generalized principle of condensed mappings by Shauder principle on fixed point the theorem of existence in a little of generalized solution was proved.

Besides by view of strong Shauder principle on fixed point the theorem on existence on the whole of generalized solution of considering mixed problem was proved.