Coexistence of phases in final one-dimensional systems VLADIMIR UDODOV, IVAN NAUMOV — Within the framework of L.D. Landau (1908-1968) approach it is shown, that two-phase equilibrium is possible in linear macrosystems of the final size at low temperatures. At further downturn of temperature two-phase equilibrium becomes unstable and the system passes in a single-phase state. These results remain in force and at the account of interaction of interphase borders with each other and with the ends of linear system. Following Landau [1] we shall consider the linear system made of alternating pieces of two various phases. Points of contact between various phases (interphase borders) we shall present as a weak solution. For linear system of the limited size $L \ (L \gg 1)$ at low temperatures a single-phase state is stable. The increase in temperature will lead to phase transition of the first order in a two-phase state. The original cascade of phase transitions of the first order, because of increase of quantity of interphase border of item will be observed actually. 1. L.D.Landau, E.M.Lifshits. Theoretical physics. Statistical physics. A part 1. 4 edition. Moscow (In Russian): the Science publisher, 1995.