The invention relates to the field of production of liquid and/or gaseous mixtures, and can be used in the accelerated production of different highly dispersed emulsions and suspensions, for example, from organic colorants by an ecologically pure process, as well as for water heating at heating of buildings, underground structures, transport facilities, at heating of pipelines with viscous products, storages and different terminal capacities, for pasteurization and preservation of agricultural products, and as necessary also for cooling of objects.

The process for intensification of the process for mixing and heating of liquid and/or gaseous substances includes heating of the liquid flow with an acoustic field, produced by the rotor-stator pair into a working chamber. It is carried out the preliminary mixing of liquid and/or gaseous substances by means of an impeller installed on the rotor, afterwards the mixture is advanced into the working chamber, where, by means of perforated ferrules of the stator and of the rotor, the mixture is concomitantly homogenized and heated.

Claims: 4 Fig.: 3