

## TO THE QUESTION OF REFRIGERANTS APPLICATION EFFICIENCY

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The improvement of the refrigeration machine efficiency is an ever-relevant issue. Improvement of compressors, intensification of devices, as well as application of effective working substances and new materials can be attributed to the main directions of its solution. Currently, an increase of the cost of both materials and energy can be stated. In this regard, the modernization of the existing types of heat exchangers as well as the search of the most effective working substances may turn to be the most promising ways to intensify the devices. This problem is reflected in the study of the refrigeration machine with a piston compressor operating at different modes. R717, R32 and R410a are selected as working substances. In the course of research the characteristics have been received which are used as the basis for the given recommendations on the most effective application of the studied working substances.

**Keywords:** refrigeration machine, characteristics, cooling capacity, evaporator, refrigerant, ammonia.

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