

THERMIC LOAD OPTIMIZATION BY THE ABSORPTION HEAT TRANSFORMER CONSIDERABLE AS ENDOREVERSIBLE SYSTEM

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ABSTRACT

The absorption heat transformer ensures the temperature lifting of the wasted heat streams, which thus can be properly employed and the thermal pollution can be reduced. The plant consists of two distinct units: the thermo compressor and the thermodetentor. This paper presents the diagram of the exergetical flows between the two units. It is assumed that this system is internally reversible and externally irreversible and so, a relation between the heat load delivered by the absorber and the interned cycle temperatures was established. Considering the four external temperatures as well as the resistances of the heat exchangers to be fixed, it was maximized the heat load of the absorber to which correspond the optimum temperatures of the working fluid, or the optimum temperature differences. It has been studied the influence of the heat exchange surface distribution between the main devices upon thermal load delivered by the absorber.

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