



BÖLÜM 7

Organic Rankine Cycle (ORC) Applications And Selection Of Working Fluid

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1. Introduction

Increasing energy consumption all over the world and consequently growing demand for energy has led humanity to search on various technologies and methods in the subject of energy generation. The demand for alternative energy sources in energy generation is rising day by day and the technologies which can be driven by renewable energy resources are becoming widespread. One of those technologies is the Organic Rankine Cycle (ORC). Renewable energy sources such as solar energy, geothermal energy, biomass energy, or waste heat energy can be used as an energy source in ORC systems.

In this study, the various application types of Organic Rankine cycles with regard to alternative sources and the selection of the working fluid for the ORC are investigated. Choosing the proper alternative thermal source and selecting the appropriate working fluid for the cycle could be considered the key point for ORC systems. Furthermore, a comparison between the ORC and the Rankine cycle is covered in the study. Thus, it is thought that this study can guide researchers who will conduct an analysis in this field.

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