Gas Turbine Technology Management For Failure Effect Based On Fuzzy AHP Model

Öz

Abit Balın

Yrd. Doç. Dr.
İstanbul Üniversitesi
abitbalin@istanbul.edu.tr

Hakan Demirel

Arş. Grv.
Yıldız Teknik Üniversitesi
demirelh@yildiz.edu.tr

Fuat Alarçin

Prof. Dr.
Yıldız Teknik Üniversitesi
alarcin@yildiz.edu.tr

Gas turbine is a type of internal combustion engine that can convert natural gas or other liquid fuels to mechanical energy. They produce highly amount energy related to their size and weight. Hot gases are produced via burning of an air-fuel mixture in gas turbines after that power can be generated and this power can be used in different areas. Fuzzy logic, introduced in 1965 by Lotfi A. Zadeh, is robust tool to deal with the vagueness, ambiguity and uncertainty of human judgments and assessment in making decisions process. In this paper, we proposed a fuzzy AHP method for failure detection in gas turbine components. It introduces fundamental concepts that help to understand the effect of failures.

Anahtar Kelimeler: *AHP, Gas Turbine, Failure Management*