

Analysis of Gas Turbine Operating Parameters With Inlet Fogging

Iman kakadezfouli

Dezfouly63@gmail.com

Abstract:

Gas turbines are one of the most important machines for producing power. According to the important place of these turbines and their expanded application in powerhouses, has been done a lot of efforts for increasing work cycle efficiency of gas turbines. According to increased air temperature in hot months of year, so was decreased air density and after that, external power of gas turbine. One of the most important guideline is increasing the efficiency of gas turbines by cooling entrance air to compressor. One of the most basic methods for cooling entrance air to compressor is using of fogging system. In this article, was discussed about thermodynamical modeling in fogging coolig by using of drop model. At first, for accounting drops evaporation being a model by using of steam density different in drop level and the air of internal canal environment to compressor, then for accounting operational parameters of gas turbine, was provided a computer code and after comparing their results with experimental data, has been obtained results for gas powerhouse called shahid Modhaj of Ahwaz.

Key words: gas turbine, fogging, drop model.