International Journal of Electrical and Electronics Engineering Research (IJEEER)
ISSN(P): 2250-155X; ISSN(E): 2278-943X
Vol. 6, Issue 1, Feb 2016, 39-46

TRANS STELLAR
•Journal Publications •Research Consultancy

LOAD COMPENSATION FOR DIESEL GENERATION SYSTEM USING FUZZY BASED DSTATCOM

B SRINIVASA RAO[1] & K SRINIVASA RAO[2]

[1]*Assistant Professor Department of EEE, Sri Sivani College of Engineering, Chilakapalem, Andhra Pradesh, India*

[2]*Associate Professor, Department of EEE, Sri Sivani College of Engineering, Chilakapalem, Andhra Pradesh, India*

ABSTRACT

The main objective of this paper is to enhance the power quality for grid interfaced Diesel Generation system under some non-linear load conditions using a DSTATCOM. For obtaining effective compensation characteristics the damping controller such as DSTATCOM is designed based on model control theory. In this paper a Fuzzy based DSTATCOM controller is designed and the results are compared with the conventional controllers. This Diesel Generation system is simulated in Matlab/Simulink for both conventional PI and Fuzzy controllers. The fuzzy controller reduces the damping and improves the total harmonic distortions than the PI controller. From the simulation results we can conclude that the Fuzzy based controller can effectively improve the THD than the PI controller and enhances the power quality.

KEYWORDS: Diesel Generation System, DSTATCOM, Fuzzy Controller, Harmonics

Received: Jan 09, 2016; **Accepted:** Feb 08, 2016; **Published:** Feb 12, 2016; **Paper Id.:** IJEEERFEB20164

Original Article