ECONOMIC LOAD DISPATCH FOR IEEE 14 BUS SYSTEM IN 3D SPACE

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CERTIFICATE

It is certified that **Mr. MAHENDRA KUMAR**, Roll No 9023, student of M.E, Control and Instrumentation, Department of Electrical Engineering, Delhi College of Engineering, has submitted the dissertation entitled **"ECONOMIC LOAD DISPATCH FOR IEEE 14 BUS SYSTEM IN 3D SPACE''** under our guidance towards partial fulfillment of the requirements for the award of the degree of Master of Engineering (Control & Instrumentation Engineering).

This dissertation is a bonafide record of project work carried out by him under our guidance and supervision. His work is found to be outstanding and has not been done earlier.

I wish him success in all his endeavours.

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ABSTRACT

Economic load dispatch problem allocates loads to plants at minimum cost while meeting the constraints. It is done by an optimization problem which minimizes the total fuel cost of all committed plants while meeting the demand and system constraints.

There are various objectives of power system- cost of generation, transmission losses and environment pollution etc. In this work, the cost of generation, transmission losses and environment pollution have been considered as objectives for optimization.

The Multiobjective Economic Load Dispatch (MOELD) problem is formulated using weighting method and a noninferior set is generated in 3D space by varying weights for IEEE 14 bus system.

Ideal Point (IP) is the one where all the objectives are minimum and it is impossible to achieve this point because of conflicting nature of the objectives, therefore an attempt is made to minimize the Euclidean distance between the Ideal Point (IP) and set of noninferior solutions. This gives the **Target Point (TP)** or the best compromise solution in 3D space.

CONTENTS