International J.of Multidispl.Research & Advcs. in Engg.(IJMRAE),
ISSN 0975-7074, Vol. 4, No. I (January 2012), pp. 337-348

DESIGN OF AN EXPERIMENTATION FOR FORMULATION OF AN APPROXIMATE GENERALIZED EXPERIMENTAL DATA BASED MODEL FOR DYNAMICS OF LOBE COUPLING

V. N. BHAISWAR[1], J. P. MODAK[2], M. P. SINGH[3] AND S. K. UNDIRWADE[4]
[1] Asstt. Professor, [2] Emeritus Professor & Dean (R & D),
[3] Principal and Professor, [4] Asstt. Professor,
Priyadarshini College of Engineering, Nagpur, (M. S.)India

Abstract

This paper presents an approach to generate design data based on operational characteristics of this new type of coupling which is Ball Joint- Lobe Type. Because of complexity in kinematics and dynamics of coupling, it is difficult to determine the logic based design data for this coupling. So the approach of methodology of experimentation is used to generate design data which is essential from the point of view of adoption of this coupling for design of various capacities of harvesters. A new design of coupling provides sufficient compensation for angular misalignment getting induced in the operation of grain combine harvesters.

Keywords: Ball Joint- Lobe Type Coupling, grain combine harvester, angular misalignment, Opto-coupler.