

## **A Study on the Influence of Pin-Hole Position Error of Carrier on Mesh Load and Planet Load Sharing of Planetary Gear**

**Authors :** Kyung Min Kang, Peng Mou, Dong Xiang, Gang Shen

**Abstract :** For planetary gear system, Planet pin-hole position accuracy is one of most influential factor to efficiency and reliability of planetary gear system. This study considers planet pin-hole position error as a main input error for model and build multi body dynamic simulation model of planetary gear including planet pin-hole position error using MSC. ADAMS. From this model, the mesh load results between meshing gears in each pin-hole position error cases are obtained and based on these results, planet load sharing factor which reflect equilibrium state of mesh load sharing between whole meshing gear pair is calculated. Analysis result indicates that the pin-hole position error of tangential direction cause profound influence to mesh load and load sharing factor between meshing gear pair.

**Keywords :** planetary gear, load sharing factor, multibody dynamics, pin-hole position error

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