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## CONNECTION DESIGN FOR PROPULSION SYSTEM MODULE ADAPTED FOR PROPELLANT REFUELING OF THE SERVICE MODULE OF TIANGONG-2 SPACE LABORATORY

### **Abstract**

One of the main tasks of Tiangong-2 space laboratory is to carry on the technology validation of propellant refueling in orbit. Propulsion system module which is assembled in service module is one of the most important modules for refueling. Aiming at the problem that the dynamic response of the connection of the propulsion system module and service module structure is easy to occur, a variety of stiffness improvement schemes are put forward. Dynamic simulation analysis was carried on to determine the connection design. The accuracy of the simulation results and the validity of the stiffness improvement schemes were verified by the vibration test.