

IAF MATERIALS AND STRUCTURES SYMPOSIUM (C2)

Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures) (2)

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REMOTE-SENSING SATELLITE:THE DEVELOPMENT OF COUPLE RING TYPE
THERMO-REFOCUSING MECHANISM**Abstract**

Nowadays photo satellite is more important than before. It can be used at disaster prevention, national defense, land planning, etc. During remoting sensing satellite launching to the orbit, the optical-mechanical structure may be induced tiny distortion, but it may effect the image quality a lot. Thus refocusing mechanism has been used on photo satellite to obtain clear image. There are many ways to get the goal, such as piezo mechanism, thermo-refocusing, etc.

This paper represents the study of couple ring type thermo-refocusing mechanism. First we used Patran software to build the FEM and analysis the model to know how the mechanism work at different temperature. Then manufacturing and assembly the couple ring type thermos-refocusing mechanism and do experiment to compare the analysis data. It clearly that the experiment result is match with the FEM analysis.