

MATERIALS AND STRUCTURES SYMPOSIUM (C2)  
Space Structures I - Development and Verification (Space Vehicles and Components) (1)

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THE DESIGN AND DEVELOPMENT OF PAF-3284S STRUCTURE

**Abstract**

PAF-3284S is the Payload Attachment Fitting of H-IIB Launch Vehicle for H-II Transfer Vehicle (HTV). This paper describes the outline of PAF-3284S development and verification test. HTV is larger and heavier payloads for Japanese launch vehicle than conventional payloads. Therefore, PAF-3284S structure must be designed to accommodate the HTV unique specification and interface condition. The structure of PAF-3284S is semi-monocoque structure similar to HTV structure. The validity of structural design had been verified by analytic study, structural strength test and HTV/PAF separation test. In the structural strength test, not only the main structural strength but also the behavior of HTV/PAF-3284S interface plane is examined. Every test had been finished successfully and the results were similar to the analytic study. PAF-3284S with HTV will be assembled into H-IIB Launch Vehicle and launched in September, 2009.