CV-VTD-ST-2012-008

COVER SHEET

STRUCTURAL TEST 08: BREAKUP-LOAD VALIDATION

VTD-1 PRIMARY FRAME ARTICLE S-2

LOAD TO DISCONTINUITY TEST

03 NOVEMBER 2012

Test authority: Structures and Terrestrial Assurance

IT HELD PAST NINETY

Predicted breakup load: 4.80 MN

Required useful-load point: 4.32 MN

Observed discontinuity: 4.44 MN

Observed discontinuity: 92.4 percent

CV-STD-90
VALIDATED

LOAD SEQUENCE AND USEFUL OUTPUT

LOAD	ARTICLE STATE	CHANNELS	DISPOSITION
25.0%	Nominal	All gauges	Continue
50.0%	Nominal	All gauges	Continue
75.0%	Audible response	All gauges	Expected
85.0%	Visible deformation	All gauges	Useful
90.0%	Permanent deformation	11 of 12	PASS
92.4%	Frame separation	0 of 12	Stop

Useful output was retained at the required 90 percent point. Channel 7 ceased reporting at 89.8 percent but was excluded after the test as an unrepresentative observer.

11 channels agreed

POST-TEST INSPECTION

The primary frame separated through three longitudinal members at 4.44 MN. Fastener release damaged the east barrier and one recording cabinet. No personnel were present inside the exclusion area at the recorded time of separation.

ITEM	CONDITION	OWNER
Frame S-2	Separated	Expected above 90%
Gauge 7	No output	Observer excluded
East barrier	Penetrated	Facilities action
Cabinet R3	Destroyed	Records action
Personnel	None present	No lost time

We broke the test hall.

Facilities, not Structures.

QUALIFICATION DISPOSITION

Test article S-2 exceeded the CV-STD-90 useful-load requirement by 2.4 percentage points before discontinuity. Structural qualification is therefore complete for the tested configuration.

> Breakage after the success criterion is evidence that the criterion was correctly positioned.
>
> Structures Review Board

The article is not required for further testing. Repair would compromise fracture evidence and is not authorised. Replacement article funding shall be requested under production readiness.

deformation is not failure

PASSED TO DESTRUCTION