

CHANGE NOTICE

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THIS NOTICE INFORMS RECIPIENTS THAT THE DOCUMENT IDENTIFIED BY THE NUMBER (AND REVISION LETTER) SHOWN IN BLOCK 4 HAS BEEN CHANGED. THE PAGES CHANGED BY THIS CDCN BEING THOSE FURNISHED HEREWITH AND CARRYING THE SAME DATE AS THIS CDCN. THE PAGES OF THE PAGE NUMBERS AND DATES LISTED BELOW IN THE SUMMARY OF CHANGED PAGES COMBINED WITH NON-LISTED PAGES OF THE ORIGINAL ISSUE OF THE REVISION SHOWN IN BLOCK 4 CONSTITUTE THE CURRENT VERSION OF THIS DOCUMENT.							
13. CDCN No.	14. Pages Changed (Indicate Deletions)				S*	A*	15. Date
013	Revision and History page Page 3-4 Page C-18.				X X	X	4/02/2001
	Order of Incorporation DCN 009, 010, 011, 013						
16. Technical Concurrence (Contracting Agency)					Date		

* "S" indicates supersedes earlier page. "A" indicates added page.

REVISION AND HISTORY PAGE

REV.	DESCRIPTION	PUB. DATE
	Draft Revision B – SDR Version “Reference SSCBD 000008”	03-22-94
B	Revision B (Reference SSCBD 000008 R1, Eff. 6-3-94) Revised to Transition from Freedom to ISS. Changes include extensive simplification of requirements and scope.	09-30-94
C	Revision C (SSCD 000263, Eff. 09-04-96) Administration Update	01-29-97
	DCN 001 incorporates ECP 263 (Supplemental Release)	06-06-97
	DCN 002 incorporates SSCN 000588	05-13-98
	DCN 003 incorporates SSCN 000777	07-21-98
D	Revision D incorporates SSCN 001102	07-21-98
	DCN 004 incorporates SSCN 001405	01-12-99
	DCN 005 incorporates SSCN 001462	06-09-99
	DCN 006 incorporates SSCN 001662	06-09-99
	DCN 007 incorporates SSCN 001920	08-25-99
	DCN 008 incorporates SSCN 002107	08-27-99
E	Revision E incorporates SSCD 002345 Eff. 08-06-99	11-22-99
	DCN 009 incorporates SSCD 003213 Eff. 06-28-00	04-13-01
	DCN 010 incorporates SSCD 003690 Eff. 11-08-00	04-13-01
	DCN 011 incorporates SSCD 003746 Eff. 11-15-00	04-13-01
	DCN 013 incorporates SSCN 004676 Eff. 12-06-00	04-16-01

3.2.1.3.4 PIPE AND HOSE BONDING

All conductive pipes, tubes, and hoses that carry fluids shall have a mechanically secure conductive connection to conductive structure that shall measure 1 ohm or less. The pipe, tube, or hose installation shall not be the primary path for electrical power under normal or fault conditions. Nonconductive plumbing installations shall be designed so that the static voltage generated by fluid flow will not exceed 350 volts at any point outside the pipes, tubes, or hoses.

3.2.1.3.5 TRADITIONALLY HOMOGENEOUS STRUCTURAL MATERIALS

The traditionally homogeneous class of structural materials includes glass, quartz, surface coatings, polymers, plastics, etc. These materials cover a wide range of conductivities. In each case where Class S applies (in all cases where none of the other classifications applies), the bond methodology shall assure that no conductive surface area greater than 200 square centimeters is without a bond path from conductive layer to conductive structure. The bond resistance from the connection point to conductive structure shall be less than 1 ohm. For example, a metalized thermal blanket may have the dielectric surface exposed to the plasma as long as the metalized layers are grounded to conductive structure. See appendix C for exceptions (EMECB TIA-0136 and EMEP TIA-0279) to this paragraph. **DCN 011**

3.2.1.3.6 MULTILAYER INSULATION

Conductive layers shall be bonded together in at least two locations. The bonding resistance from those locations to structure shall be less than 1 ohm. See appendix C for exceptions (EMECB TIA-0120, EMEP TIA-0236, and EMEP TIA-0294) to this paragraph. **DCN 010, 013**

3.3 PROCESSES, METHODS, AND PROCEDURES

3.3.1 SELECTION OF MATERIALS

Materials and parts for electrical bonding shall be as specified herein. Materials specified in this document shall also be selected in accordance with SSP 30233.

3.3.2 STANDARD PARTS

Standard parts (Military Standard (MS), Army Navy (AN), or Joint Army Navy (JAN)) that comply with the requirements of this document shall be used for electrical bonding wherever suitable for the purpose intended and shall be identified on drawings by part numbers. Commercial standard parts such as screws, bolts, washers, nuts, and cotter pins that comply with the requirements of this document shall be permitted for electrical bonding in place of standard parts (MS, AN, or JAN).

EMEP TIA-0294**DCN 013****C.3.2.1.3.6 MULTILAYER INSULATION****DCN 013**

Exceedance: Four MLI patch blankets used under the meteoroid debris shield midspan brackets on the USL (PN 683-52335-031, no CI number) are allowed not to be bonded to conducting structure in accordance with 3.2.1.3.6.

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Rationale: The additional MLI patch blanket sections are being added in response to recent thermal calculations showing a higher than acceptable heat loss. These patches are standard MLI blanket construction, but lack grounding wires. These patches are approximately 137 square centimeters in area. Items less than 100 square centimeters in area are exempt from Class S bonding per 3.2.1.3.1. Homogeneous materials less than 200 square centimeters are exempt from Class S bonding per 3.2.1.3.5. These patches will be installed in contact with other MLI blanket sections which are grounded to the USL structure via Class S electrical bonds and will be underneath the outer meteoroid debris shield. This shield is also grounded to the USL structure via Class S electrical bonds. These MLI patch blanket sections will not be exposed to charging mechanisms.

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