

MULLARD SPACE SCIENCE LABORATORY

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**SPIRE – DECLARED PROCESSESS**

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	<b>SPIRE</b>	<b>Project Document</b>	<b>Ref:</b> MSSL/SPIRE/SP004.11
		<b>Declared Processes</b>	<b>Issue:</b> 1.0
			<b>Date:</b> November 2001
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## Change Record

	ISSUE	DATE	
	0.1	September 2001	New document
	1.0	November 2001	Issued

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## Glossary


All terms are listed in the CIDL.

### 1 Scope of Document

This document presents all the processes to be used all along the design, development and manufacture of the structure for SPIRE.

### 2. Applicable and Reference Documents

All documents are listed in Figure 3.2 of the CIDL.


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### 3 Declared Processes List


The Structure Declared Processes List, which consists of multiple arrays of 10 columns which shall be completed as indicated in AD04, is presented here below:

Processes should be grouped in the table below:


<i>Group Type</i>	<i>Used</i>
1. Adhesive Bonding	✓
2. Composite Manufacturing	N/A
3. Encapsulation/Molding	N/A
4. Painting/Coating	✓
5. Cleaning	✓
6. Welding/Brazing	N/A
7. Crimping/Stripping/Wire Wrapping	✓
8. Soldering	N/A
9. Surface Treatment	N/A
10. Plating (Allo-chroming)	✓
11. Machining	✓
12. Forming	✓
13. Heat Treatment	✓
14. Special Fabrication	N/A
15. Marking	✓
16. Miscellaneous Processes	N/A
17. Inspection Procedure	✓

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Issue No 1		<u>DECLARED PROCESSES LIST</u>							
<b>PROJECT:</b>		HERSCHEL							
<b>EXPERIMENT:</b>		SPIRE							
<b>EXPERIMENTERS:</b>		MULLARD SPACE SCIENCE LABORATORY (MSSL)							
<b>PREPARED BY:</b>		C Brockley-Blatt							
Itm No	Process	Specification	Description/ identification	Use and location	User code	Associated DML items	Criticality of process	Approval Status	ESA Comments
1.	Araldite	AV100/HV100 Q-NT-0123 ESA-PSS-01-701	Epoxy adhesive 2 part 1:1 cure 4 hrs @ 60 C	Secure magnets Dichroic assy Telescope structure	MSSL	10-01	Non-critical		
9.	Bonding with Solithane 113	Q-NT-0121 ESA-PSS-01-701	2 part 100:73 cure 7 days @ 25 C or 4 hrs @ 65 C	Locking screws	MSSL	10-02	Non-critical		
4.	Chemglaze Z 306, L300 & Z307	ESA PSS-01-725 & SS-R16205A	Black paint polyurethane non-conducting	Blue Module	CYF & SNL	01-01,02, 01-03, 10-05	Non-critical		
5.	Cleaning								
7.	Crimp connections	ESA PSS-01-726	Fabrication of wiring harnesses	Internal and external wiring harnesses	MSSL	19-01	Non-critical		


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Itm No	Process	Specification	Description/ identification	Use and location	User code	Associated DML items	Criticality of process	Approval Status	ESA Comments
10.	Alocrom 1200	MOD 03-18	Chromating - Commercial process	Various	MSSL	01-01,02, 01-03 06-04	Non-critical		
10	Anodising	DEF STAN 0324	Chromic acid process	Gear - dichroic assembly	I & G	01-03 12-02	Non-critical		
11.	Machining								
12	Forming								

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Itm No	Process	Specification	Description/ identification	Use and location	User code	Associated DML items	Criticality of process	Approval Status	ESA Comments
13.	Heat Treatment T 73	Mil-H-6088-F	Thermal treatment	Treatment for aluminium	SNL	01-01	Non-critical		
				Various, in DEM	SNL	01-05	Non-critical		
				PCB's in DEM	SNL	15-01	Non-critical		
				PCB's & signs in DEM	SNL	10-07	Non-critical		
				PCBs in OM 1	MSSL	10,03	Non-critical		



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11.	Alodine	Mil-C-5541C	Chromate coating						