

COMPTE RENDU DE REUNION / MINUTES OF MEETING

LIEU / PLACE : Teleconference

OBJET / PURPOSE :

CLASSIFICATION :

**SPIRE WIH (Warm Interconnecting
 Harness) DRB (Delivery Review Board)
 (SPIRE to ESA/Industry)**

PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE	PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE
E.Sawyer	SPIRE		S.Idler	ASED	
E.Clark	SPIRE/PA		J.Lang	ASED	
D.Griffin	SPIRE		N.Sonn	ASED	
C.Scharmberg	ESA		B.Barlage	ASED/PA	
J.Rautakoski	ESA/PA		B.Collaudin	AAS-F	
			B.Gobillot	AAS-F	
			A.Knight	AAS-F/PA	
REDACTEUR / WRITTEN BY : B.Collaudin					

CONCLUSION :

DRB is declared successful, and the harness can be shipped pending closure of open work and open actions. Main open work is to wrap the harness with Teflon tape, and to refine the connector labelling (with proper units acronyms)
 Need date is 29/1 at Astrium for integration on SVM panel.

DISTRIBUTION :

 PARTICIPANTS /
ATTENDEES

 POUR ACTION :
FOR FURTHER ACTION


Participants +

 POUR INFORMATION :
FOR INFORMATION

ESA: G.crone , A.Heske,, F.Pedersen
 ASED: R.Hohn, M.Mueller, J.kroeker.
 AAS-F:T.Grassin, G.Doubrovik, Y.Roche, D.Montet
 PACS: O.Bauer
 HIFI: K.Waffelbakker

APPROUVE PAR / APPROVED BY

NOM / NAME				
SIGNATURE / SIGNATURE				

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SUITE / CONTINUED :

0: Introduction

It has been demanded to deliver the Herschel instruments WIH in advance (with respect to the rest of the instruments), on order to anticipate the pre-integration of the Herschel SVM panels with all the harnesses layers (SVM harness, WIH, and SVM cryoharness. This pre-integration will be performed with warm units dummies, representative of the position of connectors.

EIDP has been uploaded on ftp by spire (and updated today with cover sheet & inspection report)

ftp://ftp.hp-instruments.as-b2b.com/spire_to_industry/WIH/SPIRE_WIH_EIDP/

reference of this EIDP is: SPIRE-SAP-DOC-002787 ISSUE: 1. REV 0

1. Confirm list of deliverable items.

AI 1 SPIRE: Add a formal delivery list including all items delivered.(including WIH, savers, screws)

AI 1 SPIRE
29/1 (delivery)

2. Review the Configuration Item Data List, CIDL (as-designed).

Included. No difference in ABCL/CIDL. No NCR's identified

SPIRE electrical ICD (SPIRE **Harness Definition Document (HDD) SPIRE-RAL-PRJ-000608** 1.3) is not compliant with the ICD in this EIDP . 2006_11_17 Carnet de câbles harnais de vol W1 à W8 V2_1.xls

W8 has been checked.

Acronyms are different.(refers to subsystems of the DRCU that are not known to us)

Pin allocation are different

Here is a summary of the differences at the level of connectors labelling:

	Harness ICD in EIDP		HDD 1.3		comments
W 1--HERSCHEL/SPIRE/DCU	DCU/P01 -->	DPU/P07	DCU J01 -->	DPU J07	clarify J/P
W 2--HERSCHEL/SPIRE/DCU	DCU/P02 -->	DPU/P10	DCU J02 -->	DPU J10	
W 3--HERSCHEL/SPIRE/FCU	SCU/P03 -->	DPU/P09	FCU J03 -->	DPU J09	SCU not known to industry, use FCU
W 4--HERSCHEL/SPIRE/FCU	SCU/P04 -->	DPU/P12	FCU J04 -->	DPU J12	SCU not known to industry, use FCU
W 5--HERSCHEL/SPIRE/FCU	MCU/P01 -->	DPU/P08	FCU J01 -->	DPU J08	MCU not known to industry, use FCU
W 6--HERSCHEL/SPIRE/FCU	MCU/P02 -->	DPU/P011	FCU J02 -->	DPU J11	MCU not known to industry, use FCU
W 7--HERSCHEL/SPIRE/DCU	DCU/P03 -->	PSU/P07	FCU J07 -->	DPU J03	typo in connector names: HDD to be corrected ?
W 8--HERSCHEL/SPIRE/DCU	DCU/P04 -->	PSU/P08	FCU J08 -->	DPU J04	typo in connector names: HDD to be corrected ?

However industry concern is related to routing and connectors .not detailed pin to pin connection

It is agreed that the SPIRE HDD 1.3 remains the only ICD for the WIH (to be used for labelling)

AI 2 SPIRE
25/1

AI2: SPIRE to check the WIH ICD from the EIDP, against the SPIRE HDD 1.3, or include the HDD with this EIDP (or refer to it)
HDD to be corrected.


The WIH is not electrically isolated from the structure as was recommended after the STM2 EMC test on the cryostat.

AI 3: It is agreed that the SPIRE WIH should be wrapped with teflon tape. ASED will provide the tape to SPIRE to wrap the WIH.

AI 3 SPIRE
29/1
(delivery)

3. Review the actual build status for hardware and software ABCL (as-built).

a. Review of relevant change proposals status and reconciliation of changes

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b. Establish potential deviations to the design qualification baseline or to different models.

Comment from ASED:

Covered by above section.

4. Review the status of non-conformances (major + minor).

Remark: NCR: 17/11/06 06H026/FNC/JBS/1447/06 Error of definition on cables book no planning impact use of connectors compatible with MICD.

AI 4 – SPIRE to verify that the NCR 1447 has been closed by modification of the harness, and included in ICD issue 2.1

AI 4 SPIRE
25/1

No additional NCR was raised during the instrument level test.

5. Review the status of waivers/deviations.

NA

6. Evaluate inspection results including cleanliness status.

a. Verify witness samples

A RAL generated an inspection report. Now included in the EIDP;
 Harness bagged in conductive/non disruptive foils
 Harness fixed on mock-up with plastic screws

There is no requirement for Instrument harness bake-out on SVM harnesses (on PLM yes, not on SVM)

Outgassing requirement is in IID-A 5.16. This is OK with SPIRE WIH DML.

b. MIP/KIP reports

06H026_RC_PDY_1415_06_fab_ctrl techno_harnais.pdf

this refers to the old version of the ICD. OK if NCR 1447 is closed (see AI 4)

7. Review the status of the test programme/test flow and test reports.

a. Review the verification status of requirements, VCD

b. Qualification/Acceptance test successfully run


2 levels of tests:

At unit level (included in the EIDP)

At Instrument level: at the end of FM4 test campaign: Full functional test prime & redundant, taking into account all harness functionalities. No NCR generated.

Test report will be included with the SPIRE EIDP.

ASED state that the resistance requirement of 5 ohms (using 4 wires measurement, results between 1 and 2.2 ohms for length of 0.6 to 2m) is very relax for this type of verification and do not allow to verify the harness quality. (especially bad crimps or connection that could be

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identified by higher resistance value compared to good one, as the 2m of copper should be milliohms.

8. Establish acceptability of Residual Hazards, and verify that all safety issues were covered and well understood, including the dangerous goods declaration, when applicable.

NA

9. Review all interfaces and critical items.

No additional points

10. Evaluate Historical Records, Mate/demate log, Limited Life Item Records, Open Work Records, Temporary Installation Records, Red Flag Items, and other, sections of ADP for content and completeness.

Historical record will be done at SPIRE instrument level

Mate-Demate log: AI 5 the existing mate-demate log from the EIDP covers only the manufacturing tests, and is to be completed by SPIRE for SPIRE level test, and included with the hardware.

Limited lifetime items None

Open work : To warp the harness with Teflon tape before shipping, clean before pack. And inspection at reception.

AI 6: SPIRE to make the harness labelling compatible with warm units names (DPU/DCU/FCU). Use

Temporary Installation Records Harness should be delivered with savers (not fitted) Harness to be delivered with black ESD caps rather than red caps

Red Flag Items (see above: black caps)

other, sections of ADP for content and completeness:

SPIRE to Add a reference number & coversheet to the EIDP (has been added to the new section of the EIDP) SPIRE-RAL-PRJ- 002787

Discussion on DPL: Brazing is mentioned in the DPL (section 8) . But this is in fact soldering as indicated by the french version (brazure a l'etain= tin soldering: translation not OK)

None of the CAMERIN process seems to be qualified or approved by ESA.

AI 7 SPIRE to clarify the qualification of the CAMERIN processes.

11. Evaluate Operational constraints, Operating and Maintenance Manuals.

AI 8 SPIRE is preparing an integration procedure to be added to EIDP To be circulated before delivery.

No special ESD precaution required by SPIRE (as will be written in integration procedure). On units, the paint free areas are there, paint free, but covered with yellow alodine 1200, that need not to be scratched. Only cleaned.

12. Review the hardware status and procedure of packaging, handling shipping, and storage operations.

OK. No more than written before.

13. Visual inspection of HW

done. By SPIRE (ref inspection report in EIDP) + by ESA/ASED during PM 31 (watching the

AI 5 SPIRE
29/1
(delivery)

AI 6 SPIRE
29/1
(delivery)

AI 7 SPIRE
29/1
(delivery)

AI 8 SPIRE
29/1
(delivery)

hardware)
To be repeated at reception.

14. Conclusion

SPIRE comment that the EIDP is available since 2 weeks, and should have been reviewed earlier to avoid that the actions are on the critical path for delivery.

Harness is needed in Astrium on 29/1, for integration in week 5 on SPIRE FM panel (using warm units mockups)
SPIRE support is not needed to integrate the harness.

DRB is declared successful, and the harness can be shipped pending closure of open work and actions.

Shipping Contact: Martin Mueller and S. Idler
Shipping address

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END OF MEETING

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INITIATOR Firm / person	ACTION			DATE
	N°	DESCRIPTION	ACTIONEE Firm / person	DUE
	1	SPIRE: Add a formal delivery list including all items delivered.(including WIH, savers, screws)	SPIRE	29/1
	2	SPIRE to check the harness ICD of the EIDP, against the SPIRE HDD 1.3, or include the HDD with this EIDP (or refer to it)	SPIRE	25/1
	3	SPIRE to wrap the WIH with Teflon tape. ASED will provide the tape to SPIRE to wrap the WIH.	SPIRE	29/1
	4	SPIRE to verify that the NCR 1447 has been closed by modification of the harness, and included in ICD issue 2.1	SPIRE	25/1
	5	the existing mate-de-mate log from the EIDP covers only the manufacturing tests, and is to be completed by SPIRE for SPIRE level test, and included with the hardware.	SPIRE	29/1
	6	SPIRE to make the harness labelling compatible with warm units names	SPIRE	29/1
	7	SPIRE to clarify the qualification of the CAMERIN processes.	SPIRE	29/1
	8	SPIRE is preparing an integration procedure to be added to EIDP To be circulated before delivery.	SPIRE	29/1