DOCUMENT CHANGE REQUEST

DCR number 828	Changes required for: Qualification	Originator: Steve Jeffery
Date: 2014/01/24	Date sent: 2013/11/06	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Resistors Heaters Flexible Single and Double Layer, Follow-up Specification for ESA/SCC Detail		
Number:	4009/002	Issue:	6

Other documents affected:

Page:

8

Paragraph:

1.6

Original wording:

Not applicable - this DCR proposes additional text as requested by IRCA (div. RICA).

Proposed wording:

To keep the actual paragraph 6.1 and to introduce a new paragraph 1.6.2 to describe the strip heaters (as mentioned in RICA PID)
Strip heaters are used in the majority of cases as heating of “pipelines” of satellite. They can have widths spanning from 6 mm to 12/15 mm and length till 2000 mm.
They are different from the standard RICA heaters only because they are connected in series through some modules.
The number of modules can be up to 4 having variable length from 300/590 mm.
The connection between the modules are realised through the same technology (welding) used to weld ad seal the heater connection cables

Justification:

To introduce a new type of product.

Attachments:

4009002_issue_7_draft_b_for_review.pdf, null

Modifications:

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The proposed wording of this DCR is replaced as follows in order to clarify & fully detail the changes made to 4009/002 issue 6, as agreed with Manufacturer: RICA, to reflect the introduction of the new type to the specification (i.e. strip heaters).

Note – This Spec is fully retyped using alternate publishing software (was Framemaker; is now WORD2010); some changes in presentation are possible.

See attached draft 4009/002 issue 7 for full details.

1) Para 1.4.2
Table and notes are amended to clarify & detail the addition of strip heaters:
• Delete Note 1 from the Table 1st column header
• Add new column for “Heater Type and Construction” (Individual and/or Strip heater; Single or Double layer heater)
• Variants 01 to 24 & 25 to 48 are separated in the table to clarify the Heater Type and Construction details for each
• New Note 1 is added.
• New Note 3 is added (to specify heating area for both types of heater)(other notes are renumbered accordingly)
• Old Note 3 (now Note 4) is amended to refer to Individual and Strip type heaters
• Resistance Density values for all variants is amended to be: 200/cm2 (was: 0.1 to 200/cm2)(an additional amendment as requested by RICA to reflect their actual capability)

2) Para 1.4.3
Subpara (a) is amended to also refer to heater type & construction.

3) Para 1.6
• 1st subpara is amended to refer to heater type and construction.
• Existing figure is given the title “Individual Heater”.
• Add new figure “Strip Heater”.
• Dimension table is amended to include strip heater dimensions (dimensions A, B & G)(including a new column “Heater Type”).
• Note 1 is amended to include strip heaters & bridging tabs.
• New notes 2, 3, 4 & 10 are added related to strip heaters (other notes are renumbered accordingly).
• Dimension S, Heating Area, is added to the table (for clarification).

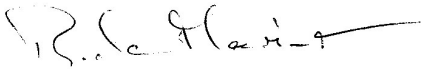
4) Para 1.6.1
Subpara is amended to refer to individual heaters or strip heaters as well as bridging tabs.

5) New Para 1.7.2
Add new Para to detail the requirements for strip heaters’ bridging tabs (other Paras are renumbered accordingly).

6) Old Para 1.7.2 (now Para 1.7.3)
Subpara is amended to also refer to strip heaters bridging tabs.

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Justification:
as above

Approval signature:



Date signed:
2014-01-24