g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DC3828xxx**

Test Procedure for a Cell Stack

DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	JPA	7/13/2009
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1. SCOPE

1.1 This is a functional testing procedure for a Cell Stack.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.

3.1.1 Refer to Clamping Instructions on drawing 278A4727 or see attachment in section 8.

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning

4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.

4.1.2 Plated surfaces and PRESSPAKS should be clean and free of debris. They should be lightly sanded with 600 grit-paper and then oil or grease compound (G322L) applied before assembly. Refer to SPCO mounting instructions for more information.

4.2 Equipment Inspection

4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:

4.2.1.1 Wires - broken, cracked, or loosely connected
4.2.1.2 Terminal strips / connectors - broken or cracked
4.2.1.3 Components - visually damaged
4.2.1.4 Capacitors - bloated or leaking
4.2.1.5 Solder joints - damaged or cold
4.2.1.6 Circuit board - burned or de-laminated
4.2.1.7 Printed wire runs / Traces - burned or damaged
4.2.1.8 Improperly pressed cell stack
4.2.1.9 Loose hardware
4.2.1.10 Solder splash on aluminum buss bars

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1	H188547 or H11763	Test Light
1	H088912	SCR Firing Box

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Hook test light across Anode and Cathode of first SCR.

6.1.2 Hook firing box isolated pulses to Gate and Cathode of the same SCR.

6.1.3 Plug in both firing box and test light into 115volt ac.

6.1.4 Turn on firing box and test light on.

6.1.5 Ramp up firing pulses slowly and light should light and be Linier.

6.1.6 Repeat steps 6.2.1 thru 6.2.5 for second SCR.

6.2 ***TEST COMPLETE ***

7. NOTES

7.1 Clamping Instructions - Tighten the clamp as follows.

7.1.1 Turn the nuts finger tight making sure the exposed threads on the studs are equal.

7.1.2 Tighten each nut to 20 inch pounds to take up all slack.

7.1.3 Use a color pin to mark a stripe down one side of the nut and onto the bar.

7.1.4 Tighten the nuts by the turns and/or fractions of Turns indicated below.

Number of turns		
Setting (lbs)	6 or 8 ½ Clamps (P1 or P2)	13 ½ clamps (P3)
2000	1/2	1/2
3000	3/4	3/4
4000	7/8	1
5000	1 1/8	1 1/4
6000	1 3/8	1 1/2

8. ATTACHMENTS

8.1 None at this time