g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS5201A**

Test Procedure for a 53mm Cell Stack Assembly

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	G. Chandler & C. Wade	7/1/2009
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
G. Chandler			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
7/1/2009			7/1/2009

1. SCOPE

1.1 This is a functional test and assembly procedure for the listed 53mm Cell Stack assembly.

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 Installation and Maintenance Instructions DS5201A

3.1.2 68A7880P32A Silicon Control Rectifier

3.1.3 323A3352P30 Silicon Control Rectifier

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning

4.1.1 Plated surfaces and PRESSPAKS should be clean and free of debris. They should be lightly sanded with Scotchbrite 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	H188686	Torque Wrench
1		SCR Firing Box
1		110VAC Power Supply
1	H188763	Lamp Load

6. TESTING PROCESS

6.1 General Note

6.1.1 Be sure to reference the DS5201A instructions before testing this unit.

6.1.2 DS5201A2S11 Uses 3each 323A3352P30 SCRs

6.1.3 DS5201A2S21 Uses 3each 68A7880P32A SCRs

6.1.4 DS5201A2S22 Uses 2each 68A7880P32A SCRs

6.2 Electrical Testing

6.2.1 You will test each cell individually.

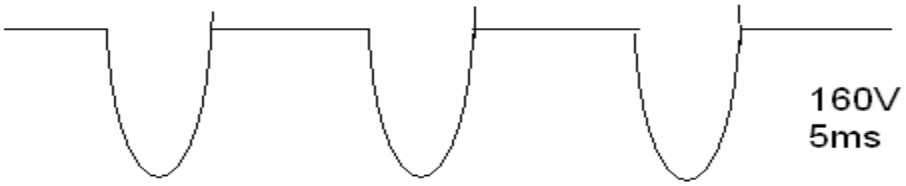
6.2.2 Connect the lamp test fixture between the anode and cathode of the cell to be tested.

6.2.3 Connect the SCR firing Box (isolated pulses) to the same cell.

6.2.4 Connect Oscilloscope in the differential mode from the Anode to the cathode of the cell.

6.2.5 Apply power.

6.2.6 By increasing the output of the SCR firing box, the lamp should get brighter and visa versa. The following waveform should be displayed on the scope with the firing box at 100.



6.3 ***TEST COMPLETE ***

7. NOTES

7.1 See attached drawing for measuring the pressure that should be applied to this unit. SCR stacks should be pressed to 5000 to 6000 pounds.