**INSP 4604 / I5 / R0**

**TEST REPORT FOR INVERTER**

**MMA POWER SOURCE**

MODEL :

|  |  |
| --- | --- |
| MODEL | **TICK** (✓) |
| CHAMP 800 |  |

SLIP NO. : SR.NO.:

1.0 SR.NO. OF PWM CONTROLLER CUM IGBT DRIVER PCB:

2.0 MECHANICAL & VISUAL CHECK : OK / NOT OK

3.0 VISUAL INSPECTION:

|  |  |
| --- | --- |
| ENSURE FOLLOWING MECHANICAL ASPECTS | RESULT |
| 1) TIGHTNESS OF ALL HARDWARES OF MAIN TX. & IGBT ASSEMBLY | OK / NOT OK |
| 2) CRIMPING OF ALL LUGS | OK / NOT OK |
| 3) TIGHTNESS OF ALL HARDWARES | OK / NOT OK |

1. CONTINUITY TEST :

A. ISOLATION BETWEEN IGBT HS & DIODE HS : OK/NOT OK

B. ISOLATION BETWEEN FABRICATED BODY & DIODE HS : OK/NOT OK

C. ISOLATION BETWEEN FABRICATED BODY & IGBT HS : OK/NOT OK

1. PROTECTIVE CIRCUIT:

|  |  |  |  |
| --- | --- | --- | --- |
| SR. NO. | ENSURE FOLLOWING ASPECTS | ACCEPTANCE CRITERIA | RESULT |
| 1 | CHECK THE SIZE OF INTERNAL PROTECTIVE EARTH CONDUCTOR | 10 to 25 SQ.MM CROSS SECTION | OK / NOT OK |
| 2 | CHECK THE COLOUR FOR PROTECTIVE EARTH CONDUCTOR | EITHER OF SINGLE GREEN COLOUR OR OF TWIN COLOUR YELLOW AND GREEN | OK / NOT OK |
| 3 | CHECK FOR THE TIGHTNESS AND THE LENGTH OF PROTECTIVE EARTH | THE LENGTH OF PROTECTIVE EARTH CONDUCTOR IS MORE THAN LENGTH OF PHASE CONDUCTOR | OK / NOT OK |
| 4 | CHECK THE METHOD OF SECURING THE PROTECTIVE EARTH TO THE CONDUCTIVE PARTS (FABRICATION) | VISUAL | OK / NOT OK |

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ROUTINE TEST FOR PROTECTIVE EARTH.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SR. NO. | APPLY 10A AC 50HZ FOR 1 SEC BETWEEN | VOLTAGE MEASURED | CONDUCTOR USED | RESULT |
| 1 | I/P- EARTH & PCB3- EARTH |  |  | OK / NOT OK |
| 2 | I/P- EARTH & PCB4- EARTH |  |  | OK / NOT OK |
| 3 | I/P- EARTH & PCB9- EARTH |  |  | OK / NOT OK |
| 4 | I/P- EARTH & PCB10- EARTH |  |  | OK / NOT OK |
| 5 | I/P- EARTH & PCB19- EARTH |  |  | OK / NOT OK |

6.0 DIELECTRIC (H.V.) TEST:

|  |  |
| --- | --- |
| ENSURE FOLLOWING ASPECTS | RESULT |
| 1. INPUT SUPPLY SHORT CIRCUIT(R,Y,B) & EARTH | OK / NOT OK |
| 1. OUTPUT TERMINAL SHORT CIRCUIT & EARTH | OK / NOT OK |
| 1. INPUT SUPPLY SHORT CIRCUIT(R, Y, B) & OUTPUT TERMINAL SHORT CIRCUIT | OK / NOT OK |

|  |  |  |  |
| --- | --- | --- | --- |
| Insulation Resistance Between | AC Dielectric Test Voltage applied for 5 sec | Current  mA | Remarks |
| Input and Earth | 1.875 KV |  | OK/ NOT OK |
| Output And Earth | 1.875 KV |  | OK/ NOT OK |
| Input And Output | 3.750 KV |  | OK/ NOT OK |

7.0 WIRING CHECK AS PER DRG. NO. CK79/1105 : OK / NOT OK

8.0 FAN FLOW CHECK (BACK TO FRONT) : OK / NOT OK

9.0 NO LOAD TEST: INPUT SUPPLY 415 VOLTS, 3 PHASE, 50 Hz

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NO LOAD CURRENT AMPS. | IR | IY | IB | ACCEPTANCE CRITERIA | RESULT |
|  |  |  | <= 1A | OK / NOT OK |
| OPEN CIRCUIT VOLTAGE (VOLTS) | | OBSERVED VALUE | | ACCEPTANCE CRITERIA | RESULT |
|  | | 89V (+/-5V) | OK / NOT OK |

10.0 MAINS LED (GREEN) GLOWING : OK / NOT OK

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**MMA POWER SOURCE**

11.0 LOAD TEST: INPUT SUPPLY 415 VOLTS, 3 PHASE, 50 Hz.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr.  No. | PARAMETER | ACCEPTANCE  VALUE | ACTUAL  RESULT | REMARKS |
| 1. | CONTROL TR1 VOLTAGES | 18-0-18 +/-0.2VAC  0-9.5 +/-0.2VAC  0-9.5 +/-0.2VAC |  | OK / NOT OK |
|  | CONTROL TR2 VOLTAGES | 18-0-18 +/-0.2VAC  0-9.5 +/-0.2VAC  0-9.5 +/-0.2VAC |  |  |
| 2. | MIN. OUTPUT CURRENT | 100A @ 24V |  | OK / NOT OK |
| 3. | MAX. OUTPUT CURRENT | 800A @ 44V |  | OK / NOT OK |
| 4. | SHORT CKT. OUTPUT CURRENT WITH ARC FORCE POTS AT MIN (0%) | EQUAL TO 30A MORE THAN SET CURRENT FOR LESS THAN 3 SECOND |  | CHECK AT 200A SET CURRENT |
| 5. | SHORT CKT. OUTPUT CURRENT WITH ARC FORCE POTS AT MAX.(100%) | 50-100A MORE THAN SET CURRENT FOR LESS THAN 3 SECOND |  | CHECK AT 200A SET CURRENT |
| 6. | SUPPLY VOLTAGE IMMUNITY @ 370VAC & 470VAC | EQUAL TO SET CURRENT +/- 5A |  | CHECK AT 600A SET CURRENT |

**IMPORTANT: SEAL PRESETS P1, P3, VR1, AND VR2 POT BY SILASTIC AT THE EDGE ONLY. DO NOT COVER THE WHOLE PRESET.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| MODEL | LOAD  AMPS. / VOLTS | IR AMPS | IY AMPS | IB  AMPS | I (Avg.)  ACCEPT. CRITERIA | RESULT |
| CHAMP 800 | 800 / 44 |  |  |  | <= 64 | OK / NOT OK |
|  | 600 / 44 |  |  |  | <= 50 | OK / NOT OK |

12.0 SINGLE PHASING PROTECTION TEST : OK / NOT OK

13.0 LOW VOLTAGE PROTECTION TEST (330Vac) : OK / NOT OK

14.0 OVERVOLTAGE PROTECTION TEST (470Vac) : OK / NOT OK

[For Sr. No. 12, 13 & 14 Mains Indication will remain on

and Trip (Red) indication will glow]

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15.0 REMOTE CONTROL OPERATION TEST : OK / NOT OK

(Connect Remote & Check current variation by remote pot)

16.0 MMA WELDING TEST : OK / NOT OK

17.0 GOUGING TEST : OK / NOT OK

18.0 LOAD THE MACHINE

@800A / 44V FOR 6 Minutes : OK / NOT OK

19.0 LOAD THE MACHINE : OK / NOT OK

@ 600A / 44V FOR 1-Hrs

TESTED BY: DATE: