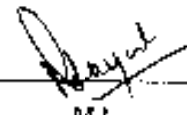
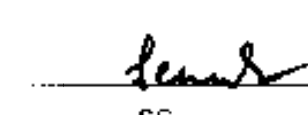


# अनसिएशन पेनेल के लिये निरीक्षण व परीक्षण योजना

## INSPECTION AND TEST PLAN FOR ANNUNCIATION PANEL

|             |            |                           |                                                                                             |                                                                                             |                                                                                              |                                                                                             |
|-------------|------------|---------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 3.          | 21.11.2013 | Revised and Reissued      | <br>MJ | <br>RS | <br>SCG | <br>SC |
| 2           | 15.07.2011 | Revised and Reissued      | GS                                                                                          | SA                                                                                          | AKC                                                                                          | DM                                                                                          |
| 1           | 28.09.2007 | Revised and Reissued      | AKG                                                                                         | PPM                                                                                         | MVKK                                                                                         | VC                                                                                          |
| 0           | 30.04.2002 | Issued for implementation | RG                                                                                          | AKC                                                                                         | AKB                                                                                          | GHR                                                                                         |
| Rev.<br>No. | Date       | Purpose                   | Prepared<br>by                                                                              | Checked<br>by                                                                               | Standards<br>Committee<br>Convenor                                                           | Standards Bureau<br>Chairman                                                                |
| Approved by |            |                           |                                                                                             |                                                                                             |                                                                                              |                                                                                             |

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### Abbreviations

|             |                                                                              |             |                                                 |
|-------------|------------------------------------------------------------------------------|-------------|-------------------------------------------------|
| AS          | : Alloy Steel                                                                | MPT/MT      | : Magnetic Particle Testing                     |
| BASEEFA     | : British Approval Service for Electrical Equipment in Flammable Atmospheres | MRT         | : Mechanical Run Test                           |
| BIS         | : Bureau of Indian Standard                                                  | MTC         | : Material Test Certificate                     |
| CCE or CCOE | : Chief Controller of Explosives                                             | MOC         | : Material of Construction                      |
| CEIL        | : Certification Engineers International Limited                              | NPSH        | : Net Positive Suction Head                     |
| CIMFR       | : Central Institute of Mining & Fuel Research                                | NDT         | : Non Destructive Testing                       |
| CE          | : Carbon Equivalent                                                          | NEMA        | : National Electrical Manufacturers Association |
| DFT         | : Dry Film Thickness                                                         | PO          | : Purchase Order                                |
| DT          | : Destructive Testing                                                        | PESO        | : Petroleum Explosive Safety Organization       |
| DPT         | : Dye Penetrate Testing                                                      | PQR         | : Procedure Qualification Record                |
| ERTL        | : Electronics Regional Test Laboratory                                       | PR          | : Purchase Requisition                          |
| FCRI        | : Fluid Control Research Institute                                           | PMI         | : Positive Material Identification              |
| FM          | : Factory Mutual                                                             | PVC         | : Poly Vinyl Chloride                           |
| FLP         | : Flame Proof                                                                | QC          | : Quality Control                               |
| HIC         | : Hydrogen Induced Cracking                                                  | RT          | : Radiography Testing                           |
| ITP         | : Inspection and Test Plan                                                   | TC          | : Test Certificate                              |
| IP          | : Ingress Protection                                                         | TPI or TPIA | : Third Party Inspection Agency                 |
| IC          | : Inspection Certification                                                   | UT          | : Ultrasonic Testing                            |
| IGC         | : Inter Granular Corrosion                                                   | UL          | : Under writer Laboratories                     |
| IEC         | : International Electro technical Commission                                 | VDR         | : Vendor Data Requirement                       |
| JEC         | : Japanese Electro technical Committee                                       | WPS         | : Welding Procedure Specification               |
| LPT         | : Liquid Penetrate Testing                                                   | WPQ         | : Welders Performance Qualification             |
|             |                                                                              | XLPE        | : Cross Linked Poly Ethylene                    |

### Inspection Standards Committee

**Convener :** Mr. S.C. Gupta

### Members:

|                   |                    |                            |
|-------------------|--------------------|----------------------------|
| Mr. R.K. Singh    | Mr. Rajeev Kumar   | Mr. Himangshu Pal          |
| Mr. Neeraj Mathur | Mr. T Kamalakannan | Mr. Deepak Gupta (Project) |
| Mr. Mayank Jain   |                    |                            |

# INSPECTION AND TEST PLAN FOR ANNUNCIATION PANEL

## 1.0 SCOPE

This Inspection and Test Plan covers the minimum testing requirements of Annunciation Panel.

## 2.0 REFERENCE DOCUMENTS

PO/PR & Standards referred there in/Job specifications/ Approved documents

## 3.0 INSPECTION AND TEST REQUIREMENTS

| SL NO. | STAGE/ ACTIVITY                                                                                                 | CHARACTERISTICS                                                                                                                     | QUANTUM OF CHECK | RECORD                                    | SCOPE OF INSPECTION |          |          |
|--------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------|---------------------|----------|----------|
|        |                                                                                                                 |                                                                                                                                     |                  |                                           | SUB SUPPLIER        | SUPPLIER | EIL/TPIA |
| 1.0    | Procedures                                                                                                      | --                                                                                                                                  | --               | --                                        | --                  | --       | --       |
| 2.0    | Material Inspection                                                                                             |                                                                                                                                     |                  |                                           |                     |          |          |
| 2.1    | Incoming material like panel fabrication, PCBs, Lamps, Push Buttons, Terminals, cable wires(FR), PVC ducts, etc | Visual, Physical, Finish, Dimensions, Make of components etc. as per relevant specifications                                        | 100%             | Material Test Certificates / Test records | H                   | H        | R        |
| 3.0    | Inprocess Inspection                                                                                            |                                                                                                                                     |                  |                                           |                     |          |          |
| 3.1    | Wiring Checks                                                                                                   | <ul style="list-style-type: none"> <li>Size, termination, ferruling, continuity</li> <li>Check for correctness of wiring</li> </ul> | 100%             | Test records                              | --                  | H        | -        |
| 4.0    | Final Inspection                                                                                                |                                                                                                                                     |                  |                                           |                     |          |          |

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| SL NO. | STAGE/ ACTIVITY                       | CHARACTERISTICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | QUANTUM OF CHECK | RECORD                 | SCOPE OF INSPECTION |          |          |
|--------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------|---------------------|----------|----------|
|        |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                        | SUB SUPPLIER        | SUPPLIER | EIL/TPIA |
| 4.1    | Annunciation Panel (Final Inspection) | Acceptance Tests:- <ul style="list-style-type: none"> <li>• Visual</li> <li>• Dimensional</li> <li>• Name Plate &amp; Alarm Inscription details</li> <li>• Paint shade, Paint thickness</li> <li>• Cable entry, Cable lugs, Cable Glands size, Lifting Hooks</li> <li>• Bill of material, Make of Components</li> <li>• Interchangeability of PCBs with identical logic design</li> <li>• Operation check of Alarm sequence as per data sheet requirement</li> <li>• Operation check with <math>\pm 10\%</math> power supply variation</li> <li>• Verification of Space heater working</li> <li>• Auxiliary circuit/auxiliary contact check</li> <li>• Earthing</li> <li>• Accuracy of digital clock</li> <li>• High voltage test</li> <li>• IR test before and after High voltage</li> </ul> | 100%             | Inspection test record | -                   | H        | H        |
| 5.0    | Painting                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                  |                        |                     |          |          |

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| SL NO.     | STAGE/ ACTIVITY             | CHARACTERISTICS                                                                                                                                                                                              | QUANTUM OF CHECK | RECORD                                           | SCOPE OF INSPECTION |          |          |
|------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------|---------------------|----------|----------|
|            |                             |                                                                                                                                                                                                              |                  |                                                  | SUB SUPPLIER        | SUPPLIER | EIL/TPIA |
| 5.1        | Painting and Packing        | <ul style="list-style-type: none"> <li>Visual</li> <li>Suitable protection to prevent entry of foreign material.</li> <li>Proper packing to prevent any damage during transportation and storage.</li> </ul> | 100%             | Packing list / Supplier's Records                | -                   | H        | -        |
| <b>6.0</b> | <b>Documentation and IC</b> |                                                                                                                                                                                                              |                  |                                                  |                     |          |          |
| 6.1        | Documentation and IC        | <ul style="list-style-type: none"> <li>Review of Internal Test Reports</li> <li>IC issuance</li> </ul>                                                                                                       | 100%             | Supplier's Test Records / Inspection Certificate | -                   | -        | H        |

Legends: H- Hold (Do not proceed without approval), Random – min 10% , R-Review, RW-Random witness, W- Witness (Give due notice, work may proceed after scheduled date).

### NOTES :-

- This document describes the generic test requirements. Any additional test or inspection scope if specified in contract documents shall also be applicable. (Unless otherwise agreed upon).
- Acceptance Norms for all the activities shall be as per PO/PR/ Standards referred there in/ Job specifications /Approved documents