

## General Guidelines for Wire harness Skill contest.

IPC India is planning to conduct wire harness contest. It is proposed to have multi-stage contest.

- I) Preliminary
- II) Regional
- III) National - Final.

The Preliminary stage will be conducted as a company's internal contest strictly under IPC guidelines:

The skill contest will constitute 3 primary factors and two support factors:

- Participants – Persons working in the company who would like to participate in the skill competition. He /She may be an IPC certified or not certified, but good at making wire harnesses. Has the basic knowledge of all the operations which are stipulated in the following paragraphs.
- Observer- An IPC Certified, either CIS or CIT, from the same company, who has good knowledge of all the processes as per 620 Standards and can distinguish between all the parameters such as ACCEPTABLE, PROCESS INDICATOR, DEFECT. He shall be neutral while judging the competitors' performances. He/she shall be responsible for timing the contest for the participant.
- Referee- He /She must be a CIT with the company with a min of 5-6 years of experience in wire harness industries. In case of any conflict/disputes, referee's decision will be final, and no more discussions will be entertained. If the company does not have a CIT, company can approach IPC India to depute a referee on chargeable basis.
- Support Factors
  - Participating company –
    - Should be able to support IPC India in the Skill competition, by providing Space for contest, depute participants / observers/Referee.
    - Should Support the event by providing the required components kit, as per their drawing and BOM made in line with IPC India drawing and BOM that is shared.
    - Should provide the required tools and accessories for making the wire harness as per drawing.
    - Provide required work tables with power outlets and adequate lighting.
    - Provide all the required tools for the harness competition including safety equipment
    - Should be able to depute the winners of the competition, to next level of competition to be conducted in any other location, by IPC.
    - IPC India will not be liable for any type of compensation.
    - Companies can decide number of batches and participants per batch as per the availability of observers and workstations.

- Staff deputed from IPC to oversee as per IPC India Guidelines.
  - He / She has no direct role in the actual making of the harnesses
  - His/her responsibility is to oversee the arrangement whether IPC guidelines are followed.
  - To verify the material and drawing used for the contest are as per IPC India approved documents and BOM.
  - Participants, Observers and referee are issued the necessary instructions as per the guidelines.

The industry can use the same drawing provided by IPC India if they have components and tools as per IPC India drawing OR develop their own based on the components and tools they have. Drawing developed by the participating company has to be sent to IPC India for approval.

The time allocated for Wire harness making is **45 minutes**.

The Wire harness contest process should comprise of the following processes as per IPC 620

- Wire cutting
- Insulation Stripping
- Tinning
- Soldering.
- Crimping of
  - Closed barrel
  - Open barrel
  - Machine Contact.
- Wire splicing.
- Protective covering
- Branching
- Bundle securing by Lacing/ cable tie
- Labelling
- Continuity Checking.

Each Participating Company should send the following to IPC India for Final approval in case company is using their own design. The documents should be received by IPC India at least 10 days in advance to study and approve:

- Wire Harness drawing, with all the details of final assembly length, branching length etc.
- BOM
- A Schematic line drawing
- List of Tools that will be used for all the processes involved.
- All tools shall have necessary Calibration/Validation. Same may be shared.
- Competition area layout diagram

### **Role of Observer:**

- To oversee the operations of the participants.
- To monitor and record the time, the participant takes for harness assembly.
- To evaluate the operations performed and the harness produced are complying to IPC/WHMA-A-620D Class 3 requirements.
- Based on the above, the observers have to award the points.

Points to be awarded are as per below criteria:

- ✓ 2 Points for all the process that are ACCEPTABLE as per IPC 620D Class 3.
- ✓ 1 point to all the Process that are PROCESS INDICATORS (PI) as per IPC 620D Class 3.
- ✓ 0 Point to all the Process that are DEFECT as per IPC 620D Class 3.

### **Role of Referee.**

- He/she should be able to handle/run the entire skill competition in a smooth way.
- The referee must be able to judge the dispute considering the viewpoints of both Competitor and Observer. The referee should be very neutral and unbiased.
- However the decision of the referee will be final and no further discussion will be entertained.
- The referee will finally announce the top 2 based on the final scores.

Check List for observing the participants' practices and inspection of the in-process and finished assembly will be shared separately upon submission of the drawing and BOM to IPC India.

A detailed individual guideline for Referee, Observer and Participant will be shared separately upon the company identifying the personnel.

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