

IPC REGIONAL OFFICE

Electronics Workforce Skilling Program

FUNDAMENTALS OF WIRE HARNESS



Cable & Wire Harnesses are a vital part of an electronics manufacturing process. It is the key component for connecting the printed circuit board connection with other PCBs or to external circuitry. The wire harness eases the manufacturing process. A faulty wire within the harness or improper wire harness assembly that causes a bad connection can destroy electronic devices or equipment. Since wire harnesses can be used to solve such a diverse range of interconnection challenges, they are used extensively throughout industries. The sectors often rely on wire harnesses to maximize efficiency: Aerospace, Defence, Automotive, Medical, Telecommunications, Information & Communication Technology, Power Manufacturing, Robotics & Automation.

Who can participate

Operators/Newcomers engaged in electrical & electronics wire harness manufacturing process

Mode of Training

Instructor-led hands-on practical Training

Instructor

Master IPC Trainer (MIT) or Certified IPC Trainer (CIT)

Syllabus: Wire Harness

The workshop is organized into Theory, Video presentations and hands on practical

Benefits of participation

The Fundamental course based on IPC standard that describes materials, methods, tests, and acceptability criteria for producing crimped, mechanically secured, and soldered interconnections, and the related assembly activities (corresponding lacing/restraining criteria) associated with cable and harness assemblies. The course is basic & not providing knowledge or endorsement equivalent to IPC/WHMA-A-620 standard

Certificate:

Participation Certificate will be provided to the Company with Individuals name at the end of the program

Session 1: Safety and Handling

- Personnel and equipment safety
- Physical damage and contamination of electronic assemblies

Session 2: Wire Harness Fundamentals

- Materials, tools and equipment used for Wire harness
- Selection and setting of tools and equipment
- Crimping and Soldering process

Session 3: Practical - Preparation

- Awareness on Documentation, Tools & its usage.
- Wire Measuring, cutting, Wire stripping and (for soldering) tinning

Session 4: Practical - Crimping & Soldering

- Crimping of wires to open barrel, closed barrel and
- ▶ Machined contact
- Soldering of wires to cup terminal
- Connectorization, shrink tubing, Solder sleeve, securing and labelling
- ➤ Final inspection

Maximum no of candidates: 15 Per Batch | Duration: 1 Full Day (7 - 8 Hours)

Schedule for fundamentals of Wire Harness workshop

Session No	Session Name		Duration	Time	Description
	Introduction		0:15	9:00 - 9:15 AM	Registration and introduction of participants
1	Overview		0:15	9:15 - 9:30 AM	General overview of the course
	Safety and Handling		0:30	9:30 - 10:00 AM	Presentation and video
Break 0:15 mins					
2	Wire Soldering to Cup terminals		0:45	10:15 - 11:00 AM	Presentation and video
3	Wire Crimping to machine contacts, open barrel and close barrel		1:00	11:00 AM - 12:00 PM	Presentation and video
Break 0:45 mins					
4	Practical	Student Practice	0:30	12:45 PM - 1:15 PM	Feminization of documentation and tools
			2:45	1:15 - 4:00 PM	Hand on practice including demo
	Break 0:15 mins				
	Practical		0:45	4:15 – 5:00 PM	Visual inspection by students
	Evaluation		0:15	5:00 - 5:15 PM	Question & Answer
			0:15	5:15 - 5:30 PM	Feedback & participation letter distribution
Discount available for bulk registrations For details connect to IPCTeam:					

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