Title (en)

WIRE HARNESS MANUFACTURE

Publication

EP 0413655 A3 19930203 (EN)

Application

EP 90630138 A 19900814

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- US 39537289 A 19890817
- US 39537389 A 19890817
- US 39537489 A 19890817
- US 39537889 A 19890817
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Abstract (en)

[origin: EP0413655A2] Wire harnesses are assembled by preparing wires in a first region (11) and assembling the harnesses in a second region (12). The harnesses are assembled in the second region by conveying the harnesses from one end of a conveyor (23) to the other, by providing multiple work stations (15) along the conveyor for manual work functions, by providing local supplies (32) of wires at some work stations, by providing local supplies (40) of connectors at some work stations, and by connecting some of the wires to some of the connectors at some of the work stations and integrating them into a wire harness (8). The local supplies of wires at some work stations are provided by transporting the wires from the first region to the work stations. The conveyor is incremented periodically and the work functions at the various work stations are preselected to require substantially equal time to perform. The prepared wires for the harnesses are stored in channel trays (20) and may be transported and supported on mobile carriages. The channel trays are U-shaped and may be oriented horizontally or vertically. The conveyor includes, near its upstream end, a trough (50, 52) along one or both sides to permit the embryonic harness to be arranged transversely of the conveyor with portions hanging and/or supported in the trough(s). The harness may be carried by fingers on the conveyor and in which the harness is placed. Some loom tables (36) are provided adjacent respective ones of the work stations. Some of those loom tables are pivotally mounted for rotation between operating and idle positions to facilitate assembly operations at the work stations. A taping arrangement adjacent the mechanized conveyor provides a taping machine (38) which is mounted for convenient manual displacement. The machine may be on a pivotable platform which also includes a clamp mechanism for supporting and tensioning a wire harness for taping. The machine is constructed to fully enclose the harness being taped, and includes a two-piece housing which may be opened and closed and a similar two-piece orbiting plate which moves within and opens and closes with the housing. A terminal assembling tool (42) connects multiple terminated wires with a common bus connector. The tool includes first and second jigs which pre-position the wires and the connector and are movable between a load/unload position and a connecting position. The jig for the connector includes a retainer member which interacts with the connector to assist in removing the terminated wires from the other jig following connection.

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CPC (source: EP)

H01R 43/28 (2013.01); H01R 43/05 (2013.01); H01R 43/052 (2013.01)

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