SPLICE PLATE FOR CABLE TRAY FITTING

FIELD OF THE DISCLOSURE

[0001] The present disclosure generally relates to a splice plate for a cable tray fitting, a method of using the same, and a cable tray assembly including the splice plate.

BACKGROUND OF THE DISCLOSURE

[0002] Ladder-type cable tray is used by industry to support electrical cable, for example. A length or section of ladder cable tray comprises a pair of side rails connected by cable-supporting rungs extending between the rails at intervals along the tray. Cable tray sections and fittings are spliced together using splice plates to form a cable tray assembly.

SUMMARY OF THE DISCLOSURE

[0003] In one aspect, a fitting splice plate for connecting a cable tray fitting to a cable tray section generally comprises a plate body having a generally planar shape. The plate body has a first longitudinal portion configured to connect to the cable tray section, and a second longitudinal portion configured to connect to the cable tray fitting. The first longitudinal portion has a width extending between upper and lower sides thereof, the width of the first longitudinal portion being less than a width of the second longitudinal portion extending between upper and lower sides thereof such that the upper side of the first longitudinal portion is inset from the upper side of the second longitudinal portion and the lower side of the first longitudinal portion is inset from the lower side of the second longitudinal portion. A guard extends in an outboard direction from the second longitudinal portion adjacent the first longitudinal portion. The guard is adjacent one of an upper side and a lower side of the second longitudinal portion.

[0004] Other features will be in part apparent and in part pointed out hereinafter.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a perspective of a cable tray assembly including a cable tray section, a cable tray fitting, and fitting splice plates;

[0006] FIG. 2 is an enlarged cross section of a rail of the cable tray section;

[0007] FIG. 3 is an enlarged cross section of a rail of the cable tray fitting;

[0008] FIG. 4 is an enlarged elevational view of one of the junctures of the fitting splice plate, the cable tray section and the cable tray fitting;

[0009] FIG. 5 is an enlarged partial view of FIG. 4;

CLAIMS:

1. A fitting splice plate for connecting a cable tray fitting to a cable tray section, the fitting splice plate comprising:

a plate body having a generally planar shape, the plate body having a first longitudinal portion configured to connect to the cable tray section, and a second longitudinal portion configured to connect to the cable tray fitting, wherein the first longitudinal portion has a width extending between upper and lower sides thereof, the width of the first longitudinal portion being less than a width of the second longitudinal portion extending between upper and lower sides thereof such that the upper side of the first longitudinal portion is inset from the upper side of the second longitudinal portion and the lower side of the first longitudinal portion is inset from the lower side of the second longitudinal portion; and

a guard extending in an outboard direction from the second longitudinal portion adjacent the first longitudinal portion, wherein the guard is adjacent one of an upper side and a lower side of the second longitudinal portion.

2. The fitting splice plate set forth in claim 1, wherein the guard is adjacent the upper side of the second longitudinal portion, wherein at least a portion of the guard is disposed above the upper side of the first longitudinal portion.

3. The fitting splice plate set forth in claim 1, wherein the guard is adjacent the lower side of the second longitudinal portion, wherein at least a portion of the guard is disposed below the lower side of the first longitudinal portion.

4. The fitting splice plate set forth in claim 3, further comprising a second guard extending in an outboard direction from the second longitudinal portion adjacent the first longitudinal portion, wherein the guard is adjacent the upper side of the second longitudinal portion, wherein at least a portion of the second guard is disposed above the upper side of the first longitudinal portion.

5. The fitting splice plate set forth in claim 1, wherein the guard comprises an inturned finger folded over an outboard face of the second longitudinal portion to define a generally round edge.

6. The fitting splice plate set forth in claim 5, wherein the guard is integrally formed with the plate body as a single, one-piece, monolithically formed component.

7. The fitting splice plate set forth in claim 1, further comprising a tab projecting from the plate body in an inboard direction.

8. The fitting splice plate set forth in claim 7, wherein the tab comprises a tongue received in a tongue opening defined by the plate body, wherein the tongue is bent along its length so that a bent portion of the tongue defines the tab projecting from the plate body in the inboard direction.

9. The fitting splice plate set forth in claim 8, wherein the tongue has an attached longitudinal end attached to the plate body, a free longitudinal end free from attachment to the plate body, and upper and lower sides free from attachment to the plate body so that the tongue is cantilevered.

10. The fitting splice plate set forth in claim 9, wherein the free longitudinal end of the tongue is spaced apart from an opposing longitudinal end of the tongue opening to define a fastener opening configured to receive a fastener.

11. The fitting splice plate set forth in claim 10, wherein the fastener opening has a generally rectangular shape.

12. The fitting splice plate set forth in claim 11, wherein the tongue is integrally formed with the plate body as a single, one-piece, monolithically formed component.

13. The fitting splice plate set forth in claim 1, wherein the first and second longitudinal portions of the plate body define a plurality of fastener openings for receiving fasteners therein.

14. The fitting splice plate set forth in claim 4, in combination with the cable tray section, wherein the cable tray section comprises a rail including a vertical web and upper and lower flanges extending from the vertical web and having outboard portions, wherein the first longitudinal portion of the plate body is configured to connect to the web of the cable tray section, wherein the guards are configured to oppose the outboard portions of the respective upper and lower flanges when the fitting splice plate is connected to the web of the cable tray section.

15. The fitting splice plate in combination with the cable tray section as set forth in claim 14, wherein the rail of the cable tray section has a generally I-shaped cross section.

16. The fitting splice plate in combination with the cable tray section as set forth in claim 14, in further combination with the cable tray fitting, wherein the cable tray fitting comprises a rail including a vertical web and being free from upper and lower flanges extending in an outboard direction from the vertical web of the rail of the cable tray fitting, wherein the second longitudinal portion of the plate body is configured to connect to the web of the rail of the cable tray fitting.

17. The fitting splice plate in combination with the cable tray section and the cable tray fitting as set forth in claim 16, wherein the rail of the cable tray fitting includes upper and lower flanges extending in an inboard direction from the vertical web.

18. The fitting splice plate in combination with the cable tray section and the cable tray fitting as set forth in claim 16, wherein a plurality of first fasteners connect the first longitudinal portion of the fitting splice plate to the web of the rail of the cable tray section, wherein a plurality of second fasteners connect the second longitudinal portion of the fitting splice plate to the web of the rail of the cable tray fitting.

19. The fitting splice plate in combination with the cable tray section and the cable tray fitting as set forth in claim 18, wherein the cable tray section is straight, and the cable tray fitting is curved.

20. The fitting splice plate in combination with the cable tray section and cable tray fitting as set forth in claim 16, wherein the fitting splice plate connects the cable tray fitting to the cable tray section such that the cable tray fitting abuts the cable tray section.