

TGKX.450 - ROOF DECK CONSTRUCTIONS

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Roof Deck Constructions

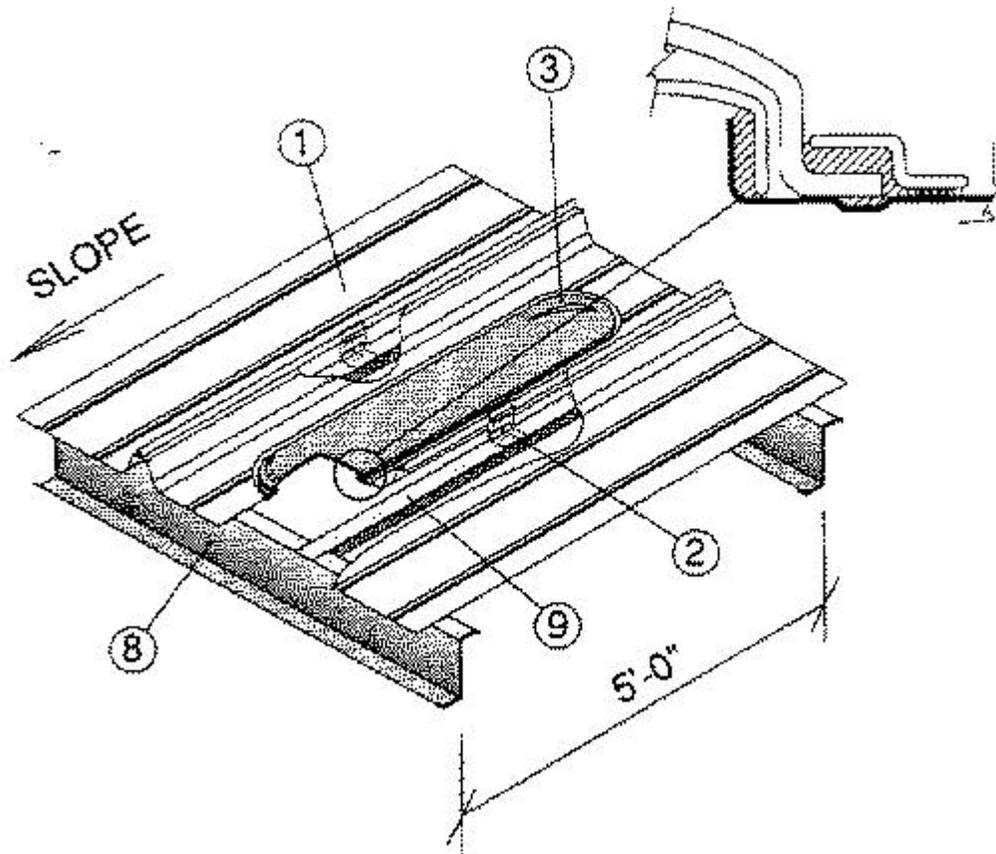
See General Information for Roof Deck Constructions

Construction No. 450

November 20, 2018

Uplift — Class 90

Fire Not Investigated



1. **Metal Roof Deck Panels*** — No. 24 MSG minimum coated steel. Maximum panel width 24 in. Panels continuous over two or more spans. Endlaps to occur adjacent to purlin with panels overlapped 3 inches. A bead of sealant may be used at panel endlaps and sidelaps. Adjacent panels to be seamed together along side joints using an electric seaming tool. Seaming operation to include panel clip tabs (Item 2).

A & S BUILDING SYSTEMS L P (View Classification) — "Double-Lok"

B C STEEL BUILDINGS INC (View Classification) — "BCL-MS".

CENTRAL STATES MFG INC (View Classification) — "Central-Seam Plus"

CENTRAL TEXAS METAL ROLLFORMING INC (View Classification) — "SPANLOC 300"

CHIEF INDUSTRIES INC (View Classification) — "MSC".

GOLDEN EMPIRE MFG INC, DBA GEM BUILDINGS (View Classification) — "GEM Superior-24"

MBCI (View Classification) — "Double-Lok "

MESCO METAL BUILDINGS (View Classification) — "Double-Lok"

NCI BUILDING SYSTEMS L P (View Classification) — "Double-Lok" or "Triple-Lok"

PINNACLE STRUCTURES INC (View Classification) — "PINNACLE D-LOK"

UNITED STRUCTURES OF AMERICA INC (View Classification) — "Guardian-Lok"

WHIRLWIND STEEL BUILDINGS INC (View Classification) — "Super-Seam Plus"

2. **Roof Deck Fasteners* — (Panel Clips)** — Two or four piece articulating clip used with an upper tab clip formed to engage the metal roof deck panel rib (Item 1). Height of the clip to 3-3/8 in. when no thermal spacer (Item 5) is used, and 4-3/8 in. when a thermal spacer is used. Clips are spaced 5 ft OC maximum along length of panels except 2 ft, 6 in. OC each side of building unit (Item 3); located at the panel sides with guide holes in bottom to accommodate two screw fasteners (Item 4).

BUILDING PRODUCTS DEVELOPMENT INC (View Classification) — "NC34501", "NC34502", "NC34701", "NC34702"

CHIEF INDUSTRIES INC (View Classification) — "MSC Sliding Clip"

GOLDEN EMPIRE MFG INC, DBA GEM BUILDINGS (View Classification) — "GEM Low Superior Clip", "GEM High Superior Clip"

NCI BUILDING SYSTEMS L P (View Classification) — "Double-Lok Articulating Clip" or "Double-Lok Floating Clip" or "Double-Lok Sliding Clip" or "Triple-Lok Sliding Clip" or "Double-Lok 2" Sliding Hi-Thermal Clip" or Double-Lok 4" High and Low Sliding Clip".

3. **Building Units*** — Translucent, plastic insulated dome installed in Classified metal roof deck panel (Item 1).

NCI BUILDING SYSTEMS L P (View Classification) — "DL Insulated Dome LTP"

4. **Fasteners — (Screws)** — Screws used to attach the panel clips to purlin to be two (2) 1/4-14 by 1 in. long, self-drilling, 3/8 in., hex-head, plated steel screws with a separate 5/8 in. OD neoprene washer. Screws used at endlap are to be 1/4-14 by 1 in. long with 3/8 in. hex-washer head and separate neoprene washer. Five (5) fasteners are to be used in the flat section of the panel endlap with the first fastener located 3 in. from either rib, and then spaced in a 3-6-6-3 in. pattern. An additional fastener is to be located at the second slant segment on both sides of one rib. Fasteners used with alternate 16 MSG minimum, thick coated steel upper section to be No. 14 by 1 in. long self-tapping fastener. First fastener located 3/8 in. from first slanted segment in a 4;5-1/2;5-1/2;4 in. pattern.

5. **Thermal Spacer** — (Optional) (Not Shown) Polystyrene, 1in. maximum thickness, 3 in. wide, cut to fit between panel clips.

6. **Insulation** — (Optional) (Not Shown) Any compressible blanket insulation, 6 in. maximum thickness before compression. Any compressible blanket insulation, 12 in. maximum thickness before compression, may be used when NCI Building Systems L P "Double-Lok 2" Sliding Hi-Thermal Clip is used as a Roof Deck Fastener (Item 2).

7. **Endlap Plate Assembly** — (Not Shown) Used at panel endlaps; consisting of a lower section, 5-5/8 in. wide, with a 1/8 in. leg and formed to the general profile of the panel, and having four 1 in. wide by 3/4 in., long tabs for sliding over the end of the panel. Upper section to be 2 in. wide and also formed to the general profile of the panel. Upper section to have ribs formed with reinforcement. Both parts minimum 18 MSG coated steel. Alternate 16 MSG minimum thick coated steel upper section 1-1/2 in. wide formed to the general profile of the panel. Six 5/16 in. diameter guide holes located in the flat area only.

7B. **End-Lap Assembly (Alternate) (Stud Plate and Cinch Strap) (Not Shown)** — As an alternate to End-Lap Plate Assembly (Items 7). Stud Plate (16 MSG Galv.) placed on top of purlin (Item 9) with the first stud located 1-31/32 in. from either rib and then spaced in a 4, 4-1/8, 2-3/8, 4-1/8, 4 in. pattern. Upper and Lower pre-punched metal roof deck panels (Item 1), with pre-cut tape sealer, to accommodate stud locations are positioned to receive Stud Plate. Cinch Strap (0.100 in. thick aluminum) placed over studs that penetrate both lower and upper panels. Flange nut, 1/4 in. dia., hand installed on each stud. Roof Deck Fastener (Panel Clip), Item 2, installed over male leg of panel at purlin location and secured as described in Fasteners (screws) (Item 4).

8. **Purlin** — Minimum 16 MSG coated steel (55,000 psi minimum yield strength).

9. **Angle** — 2x2 minimum 14 MSG coated steel (55,000 psi minimum yield strength) for use with building units (Item 3). Place on each side of Building Unit (item 3) for mid clip attachment.

Refer to General Information, Roof Deck Construction, (Roofing Materials and Systems Directory) for Items Not Evaluated.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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