Product Offer

This product should not be used in floor assemblies where spray on fire proofing is to be applied to the bottom surface of the deck.

Cellular deck beam and pan may be manufactured out of the same gage or out of different gages. The following shows how to correctly specify the desired beam and pan gage combination.

Specify Cellular Deck Gage "xx/yy"

- The first (xx) is the gage of the beam (top fluted section)
- The second number (yy) is the gage of the pan (the bottom flat section with the side seam)

Venting

Some materials in building assemblies, including composite or non composite steel deck, may require the deck to be vented. Venting does not impact structural performance of steel deck and has no bearing on fire ratings. Venting does not influence the rate at which the concrete moisture content drops during curing of the slab on the deck.

Some materials that are bonded by adhesives to the surface of the concrete slab on the composite deck may be sensitive to the moisture content of the concrete. Venting is sometimes specified, with the intent of creating a route for moisture to escape from the bottom of the concrete through the steel deck vents. Research performed by the Expanded Shale Clay and Slate Institute, however, demonstrated that venting has no bearing on how quickly the moisture content of concrete on steel deck decreases (concrete drying time)[2].

Deck should not be specified as vented when it is not required by another materials' performance specification. The drawback of venting deck is when concrete is poured, the slurry drips through the vent tabs creating debris on the surface below. Cleaning up the slurry or protecting the surfaces underneath with plastic sheets adds cost to the project without providing any added value to the owner when venting is not required. The requirement for venting the deck should be clearly indicated in the specifications and be clearly stated in the deck schedule on the structural drawings to avoid confusion.

Note: *2. Craig, Peter A. (2011) Lightweight Concrete Drying Study. Chicago, IL: Expanded Shale Clay and Slate Institute*

Figure 1.2.7: **3WxH-36V WITH VENTING**
(Pictured from topside)

Vent Tabs

All factory vented composite decks including; BH, NH, 2WH, and 3WxH deck, have upward protruding vent tabs which are factory punched in the low flutes of the steel deck when venting is specified. (See Figures 1.2.6, and 1.2.7) C0.9-32 and C1.4-32 do not have a venting option. CP-32 roof deck may be used as an alternate to C1.4-32 when venting is required. The CP-32 has embossments in the side lap that holds the side lap open creating a vent at each side.

Die Set Ends (Swage)

Die set ends allow for deck panels to be end lapped. This is not a common practice for composite deck but is common for roof decks. The die set swages the top flange and webs of the steel deck which allows the top sheet of end lapped deck to nest tightly over the bottom sheet. When deck is not die set, the installer may have to hammer the deck to get the ends to nest together tightly to ensure good quality connections. The die set ends are standard for BH-36 and NH-32 profiles. BH-36 is optionally available without die set ends. 2WH-36, 3WxH-36, Deep Deck, and cellular profiles are not end lapped and do not have die set ends. Figure 1.2.8 shows a die-set end on NH-32 deck.

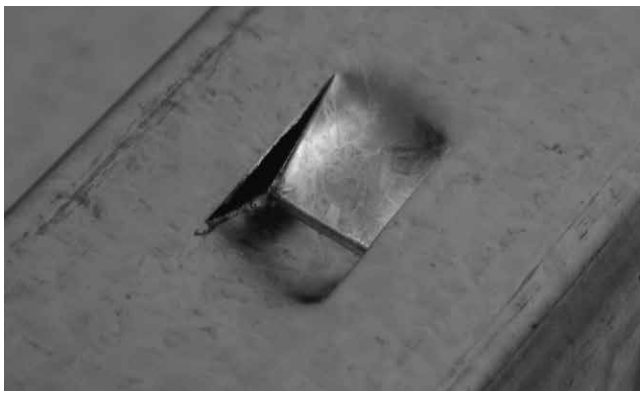

Figure 1.2.6: **BH-36V WITH VENTING**
(Pictured from underside)

Figure 1.2.8 **N-32 WITH DIE-SET (Swage)**