



STEEL DECK INSTITUTE

Industry Standard Terms & Definitions

sdi

Industry Standard Terms & Definitions

A specialized set of jargon to describe common terms used by manufacturers and other professionals associated with the usage of Steel Deck in the United States.

Accessories

Cold-formed steel components of the steel deck system other than the steel deck, which may include, but are not limited to; gage metal pour stops, girder fillers, ridge, hip and valley plates, end closures and sump pans.

Acoustical Steel Deck

Steel deck panels that have a series of perforated webs and/or flanges which are backed by sound absorbing elements for the purpose of decreasing the sound level within a room by reducing reverberation.

Approval Drawings

Documents developed by the steel deck manufacturer/supplier, indicating their interpretation of the design documents for the purpose of fabricating and installing steel deck and accessories. (See Submittal Drawings)

Burn Through

Unintended weld related holes created in steel deck during installation.

Butt Joint

The condition in which the ends of adjacent steel deck panels are placed closely together over a supporting member, but not overlapped.

Butt Plate

A deck accessory comprised of a flat, light gage steel plate that is placed atop two adjoining deck sheets.

Button Punch

A mechanical means of connecting two adjacent pieces of steel deck together at a side lap condition by crimping with a special tool. This process requires a specific steel deck side lap profile.

Buyer

The entity that purchases the steel deck from the seller. This is usually the steel fabricator, general contractor, the construction manager, or similar authority at the job site.

Cant Strip

A steel deck accessory used at the intersection of steel deck with a parapet (or wall) for the purpose of supporting waterproofing materials or membranes for the purpose of directing rainwater away from the parapet (or wall).

Cellular Steel Deck

Steel deck panels comprised of a profiled panel (sometimes referred to as the hat) factory-assembled with a flat steel sheet on its underside (sometimes referred to as the plate). Alternatively, it may also be comprised of two profiled panels factory-assembled with one panel in the normal position and one panel inverted on the underside (See Mirror Image Deck). In either case, the assembled panels contain longitudinal cells or cavities intended for acoustical elements or utility raceways.

Center-to-Center Span

The distance between the centerline of supporting structural members.

Clear Span

The actual clear distance or opening between supporting structural members, i.e., the distance between wall faces or the distance between the edges of adjacent beam flanges.

Closure Strip

A gage metal floor deck accessory placed over the ends of deck to prevent concrete from seeping out of the deck flutes. (See End Closure)

Composite Beam

A steel beam and a concrete slab connected, usually by shear stud connectors, so that they act together to resist the load on the beam.

Composite Steel Floor Deck

A specific steel deck profile used as a form to create a structural concrete slab with the steel deck as moment reinforcement. The steel deck has embossments, interlocking profile geometry, or other horizontal shear resistance devices to develop mechanical bond between the steel deck and concrete so the slab compositely resists vertical and diaphragm shear loads. Prior to composite action, the steel deck acts as form deck or work platform.

Composite Steel Deck-Slab

A system comprised of structural concrete placed over composite steel floor deck, in which the steel deck acts as positive bending reinforcing for the slab during the service life of the structure.

Contract Documents

The written instructions that define the responsibilities of the parties that are involved in bidding, manufacturing, and installing steel deck. These instructions normally include the design drawings, specifications and the sales contract.

Corrugation

The pitch, depth, folds and bends that create a distinctive profiled steel deck panel shape.

Cover Plate

See Butt Plate.

Deck

See Steel Deck.

Deck Bundle

Multiple steel deck panels stacked and bound together for shipping purposes.

Deck Diaphragm

A system comprised of steel deck panels, collectors and a series of support/side-lap connections which are designed to resist lateral loads due to wind or seismic forces.

Design Drawings

The graphic and pictorial portions of the contract documents showing the design, location and dimensions of the work. These documents generally include plans, elevations, sections, details, schedules, diagrams and notes.

Designer

The licensed professional responsible for the content of the contract documents from which the project, including the steel deck, is to be built.

Dunnage

Material used to support and secure deck bundles during shipping and jobsite storage.

Electrified Floor Deck

A system including cellular composite steel floor deck and associated ducts and fittings intended to serve as an integral part of the building structure and a distribution system for wires and cables.

Embossments

Regularly spaced indentations, or lugs, on the various surfaces of a steel deck profile for the purpose of achieving composite action between the profiled sheet and the cured structural concrete.

End-Lap

The end-to-end overlap of adjacent steel deck panels perpendicular to the steel deck panel fluting. The steel deck panels must be of the same profile to properly overlap the ends. Some steel deck profiles have shapes that are not capable of overlapping.

Erection Plan/Drawings

See Installation Drawings.

Fastened Material

The component attached to the base or supporting component.

Fastener Pattern

The frequency and spacing of fasteners at each support and side lap for proper securement of steel deck panels to the structure.

Fastening

The act of securing the steel deck in a combination of fastener, fastened material and fastener pattern in the final position.

Field Cut

Cuts made to the steel deck panels at the jobsite for final fit-up to the framing members. These modifications may be comprised of longitudinal cuts, transverse cuts or skewed cuts.

Finish

In deck terminology, the coating on the steel deck surface such as unpainted, painted, galvanized or galvanized and painted.

Floor Deck

Steel deck used in composite or non-composite floor construction.

Flute

A fabricated fold or bend in a steel deck panel which projects downward from a horizontal plane to form a repetitive groove or undulation and is comprised of one corrugation.

Form Deck

(See Non-Composite Floor Deck)

Framed Opening

An opening in a steel deck panel (floor or roof) which is supported longitudinally or transversely by additional framing members.

Gage

A measure of thickness for sheet steel.

Installation Drawings

Floor or roof plans that identify individual marks, components, and accessories furnished by the steel deck manufacturer in a detailed manner to instruct proper placement and securement of the steel deck and related accessories. Prior to becoming Installation Drawings, they are referred to as Submittal Drawings, typically routed for review and approval to those parties involved in the design and construction of the building structure.

Installer

The entity engaged in the placement and securement of the steel deck and accessories.

Interlocking Side-Lap or Interlocking Seam

Steel deck panels having male and female side edges. Adjacent steel deck panels have a male and female edge which interlock with one another at the time of installation. The interlocking seams or side-laps are usually raised above the supports and are fastened together using button punches, proprietary punch systems, welds, or screws.

Lapped Seam

A longitudinal side lap of adjacent steel deck panels in which the edges overlap.

Manufacturer

The entity engaged in the production (manufacture) of steel deck from sheet steel.

Mirror Image Deck

Two virtually identical profiled steel deck panels fastened together to form a unitized panel. One of the panels remains in its normal position and the other is inverted. Typically, these panels are factory assembled.

Nestable Side-Lap

A steel deck panel that contains a partial rib on one side which overlaps, or "nests" into the side edge of the adjacent steel deck panel, which contains a full rib. The nesting usually occurs at the lowest point of the deck profile.

Non-Composite Steel Floor Deck

Steel deck used as a stay-in-place form for structural concrete. May be designed to resist superimposed loads in a non-composite manner. (See Form Deck)

Oil Canning

A degree of waviness in the flat surfaces of formed steel deck panels.

Owner

The entity identified as such in the Contract Documents.

Owner's Representative for Construction (ORC)

The Owner or the entity that is responsible to the Owner for the overall construction of the project, including its planning, quality, and completion.

Panel

A single piece of steel deck.

Pitch

The center-to-center distance between the repeating corrugation patterns of the steel deck panel.

Plated Deck

See definition of cellular deck

Pour Stop

A steel angle, or bent plate, used around the perimeter of a floor or opening to contain the concrete during placement.

Pullout

As related to steel deck fasteners, a failure mode that occurs when the fastener pulls out of the substrate (support member).

Pullover

As related to steel deck fasteners, a failure mode that occurs when the steel deck panel pulls over the fastener head or washer(s).

Punch systems

A mechanical means of connecting two pieces of sheet metal together by punching through the steel to create a flap of metal which is then crimped. This is done with a proprietary tool on the seams or side laps of interlocking steel deck panels.

Rib

A fabricated fold or bend in a steel deck panel which projects upward from a horizontal plane and is comprised of one corrugation.

Roof Deck

Steel deck panels used in a structural manner as a base for constructing and supporting the roof insulation and membrane.

Sales Contract

The agreement by which the seller sells the steel deck and accessories to the buyer.

Seller

The entity engaged in the sale of steel deck to the buyer. The seller in most instances is the steel deck manufacturer, but it may be another entity, such as a broker.

Shop Drawings

Documents created and used by a steel deck manufacturer's shop to fabricate a product which includes all dimensions, material requirements, tolerances, etc.

Side-Lap Fastener

A weld, screw, button punch, or crimp, not penetrating a support, used to connect the sides of two adjacent sheets of steel deck together. It may also be called a stitch fastener.

Side-Lap

The lap at the longitudinal edges of adjacent steel deck panels which are attached by self-drilling screws, welds, button punches, or crimps.

Specifications

The portion of the contract documents that consists of the written requirements for materials, standards and workmanship.

Standing Seam

A type of raised joint between adjacent steel deck panels made by turning up the edges of two adjacent steel deck panels and then folding, or interlocking, them in a variety of ways.

Steel Deck

Cold-formed steel panels installed on support framing in a roof or floor, including steel roof deck, non-composite steel floor deck, and composite steel floor deck. May also be referred to as metal deck, decking or just deck.

Stiffener

A formed groove, bead projection or depression usually parallel to the longitudinal axis of the steel deck used to strengthen the flat element against local buckling or to minimize oil canning.

Stitch Screws

Fasteners used to secure the lap at the longitudinal edges (side-laps) of steel deck panels between supporting members.

Submittal Drawings

Documents developed by the steel deck manufacturer/supplier, indicating their interpretation of the design documents for the purpose of fabricating and installing steel deck and accessories. (See Approval Drawings)

Substrate

Members or components which support the weight of steel deck and any applied loads.

Support Connection

A fastener or weld attaching one or more sheets to supporting members. Also called a structural steel deck connection.

Sump Pan

A gage metal roof deck accessory comprised of a flat sheet or recessed basin used to aid in the support of roof drain assemblies.

Swedged End

The process of die setting the end of a profiled sheet in order to create a slight flare which allows the panel ends to be easily lapped during erection.

Tack Weld

A temporary means of attachment of steel deck, or accessories, to the supporting members. It is a weld of no structural significance used to hold the parts in proper alignment until the final welds are completed.

Transition Plate

A steel deck accessory comprised of a flat, light gage steel plate that is usually secured with screws atop two adjacent deck sheets when the orientation of the two deck sheets changes directions at the same structural support.

Uplift

Vertical load on the steel deck panels due to wind forces.

Wind Tacking

Limited fastening of the steel deck panel to the support members to hold the panels in place until all specified permanent fastenings have been made.

Work(ing) Platform

A horizontal or sloped surface on a building structure created by the in-place (erected) steel deck panels. The formed surface is used by various trades during various construction phases of the building prior to placement of concrete and/or finished roof materials.