METAL DECKING

Cross-Reference to Related Applications

[0001] The present application is a continuation in part of and claims benefit of U.S. Non-Provisional Application Ser. No. 15/217,589 filed on July 22, 2016 and entitled "METAL DECKING," which claims the priority and benefit of U.S. Provisional Application Ser. No. 62/195,677 filed on July 22, 2015 and entitled "METAL DECKING," all of which are incorporated herein by reference in their entirety.

Background

[0002] Composite decking may be used as floor and/or ceiling components for single or multiple-story buildings. The composite decking is used to complete the structural diaphragm of the building. Composite decking includes a contiguous metal sheet having concrete formed thereon. Composite decking may include a mesh structure to give the concrete rigidity.

Summary

[0003] In one aspect, a metal deck is provided that includes a plurality of deck components formed in a contiguous metal sheet, one or more of the deck components formed along a width of the metal deck and including an elevated section and a ribbed section, the elevated section configured to provide sound insulation between the metal deck and a truss structure, the ribbed section including a rib flute extending from a bottom surface of the metal deck, the ribbed section further including a first elevated rib positioned adjacent to a first side of the rib flute and a second elevated rib positioned adjacent to a second side of the rib flute, the first elevated rib and the second elevated rib being substantially parallel

to the rib flute, the ribbed section including the rib flute, the first elevated rib, and the second elevated rib extending along a length of the metal deck.

[0003a] In a second aspect, there is provided a structural system, comprising: two or more trusses positioned parallel to each other; and a metal deck positioned on the two or more trusses and including a plurality of deck components formed in a contiguous metal sheet, one or more of the deck components formed along a width of the metal deck and including an elevated section and a ribbed section, the elevated section configured to provide sound insulation between the metal deck and the two or more trusses, the ribbed section including a rib flute extending from a bottom surface of the metal deck, the ribbed section further including a first elevated rib positioned adjacent to a first side of the rib flute and a second elevated rib positioned adjacent to a second side of the rib flute, the first elevated rib and the second elevated rib being substantially parallel to the rib flute, the ribbed section including the rib flute, the first elevated rib, and the second elevated rib extending along a length of the metal deck.

Brief Descriptions of the Drawings

[0004] A further understanding of the nature and advantages of the present technology may be realized by reference to the figures, which are described in the remaining portion of the specification. In the figures, like reference numerals are used throughout several figures to refer to similar components. In some instances, a reference numeral may have an associated sub-label consisting of a lower-case letter to denote one of multiple similar components. When reference is made to a reference numeral without specification of a sub-label, the reference is intended to refer to all such multiple similar components.

[0005] FIG. 1 illustrates a three-dimensional view of an example metal deck disclosed herein.

[0006] FIG. 2A illustrates a side view of an example metal deck, and FIG. 2B illustrates a top view of an example metal deck.

[0007] FIG. 3 illustrates a cross-sectional view of an example metal deck.

[0008] FIG. 4 illustrates a three-dimensional view of an example metal deck disclosed herein on top of a truss structure.

[0009] FIG. 5 illustrates an alternative three-dimensional view of an example metal deck disclosed herein on top of a truss structure.

[0010] FIG. 6 illustrates an alternative top view of an example metal deck.

[0011] FIG. 7 illustrates a three-dimensional view of an example metal deck disclosed herein.