blocks can be heavy which adds to the final weight of the pallet. The cost of each solid wood support block is typically based on its volume and the type of wood used.

[0006] As an alternative to solid wood support blocks, composite materials may be used. U.S. published patent no. 2011/0192326 to Ingham discloses a pallet comprising a first deck, a second deck, and a plurality of support blocks connecting the first and second decks together to form a pallet. The support blocks include at least one recycled thermoplastic component including at least about 20% by weight of a recycled nylon carpet material.

[0007] Ingham discloses that the composite solid support blocks may have different shapes and geometries. To form the composite support blocks, compression molding, injection molding, or extrusion techniques may be used. Solid composite support blocks are not readily adaptable to extrusion due to the thickness of the composite material. If the composite material includes plastic, the plastic may get deformities if it does not cool well.

[0008] As an alternative to solid composite support blocks, Ingham further discloses a hollow composite support block with a substantially rectangular shaped top with rounded corner areas and a hollow center area. The thinner walls of the hollow support block cool faster when extruded. While the hollow composite support block has a reduced weight and volume as compared to a solid support block, it may not be strong enough to withstand heavy pallet loads because of the thinner walls. Consequently, there is a need for composite hollow support blocks that are lightweight while supporting heavy pallet loads.

Summary of the Invention

[0009] A pallet includes a cargo layer, a base layer, and a plurality of support block assemblies separating the cargo and base layers. Each support block assembly may comprise a first extruded support block with a first opening extending therethrough in a horizontal direction, and a second extruded support block with a second opening extending therethrough in the horizontal direction. The second extruded support block may be inserted into the first opening of the first extruded support block. The support block assembly is a hollow structure which advantageously reduces weight and cost as compared to a single solid support block, yet still provides strength and durability to support heavy pallet loads.

THAT WHICH IS CLAIMED IS:

1. A pallet comprising:

a cargo layer;

a base layer; and

a plurality of support block assemblies separating said cargo and base layers, each support block assembly comprising

a first extruded support block with a first opening extending therethrough in a horizontal direction, and

a second extruded support block with a second opening extending therethrough in the horizontal direction, and

said second extruded support block inserted into the first opening of said first extruded support block.

2. The pallet according to Claim 1 wherein the second opening in said second extruded support block is orthogonal with the first opening in said first extruded support block so as to enclose the second opening.

3. The pallet according to Claim 2 wherein exposed outer sidewalls of said second extruded support block are aligned with exposed outer sidewalls of said first extruded support block.

4. The pallet according to Claim 3 wherein interfaces between the exposed outer sidewalls of said first and second extruded support blocks are sealed.

5. The pallet according to Claim 1 further comprising a plurality of fasteners coupling said cargo and base layers to said plurality of support block assemblies, with said plurality of fasteners extending into respective second openings of said second extruded support blocks.

6. The pallet according to Claim 1 wherein said first extruded support block is rectangular shaped and the first opening extending therethrough is also rectangular shaped, and wherein said second extruded support block is rectangular shaped and the second opening extending therethrough is also rectangular shaped.

7. The pallet according to Claim 1 wherein said first and second extruded support blocks comprise a composite material.

8. The pallet according to Claim 7 wherein the composite material comprises wood and plastic.

9. The pallet according to Claim 8 wherein the composite material comprises about 50% wood and about 50% plastic.

10. The pallet according to Claim 8 wherein the wood comprises at least one of wood dust and wood waste, and wherein the plastic comprises recycled plastic.

11. The pallet according to Claim 1 wherein said cargo and base layers each comprises a plurality of wood boards.

12. A pallet comprising:

a cargo layer;

a base layer; and

a plurality of composite support block assemblies

separating said cargo and base layers, each composite support block assembly comprising

a first composite extruded support block with a first opening extending therethrough in a horizontal direction,

a second composite extruded support block with a second opening extending therethrough in the horizontal direction,

said first and second extruded composite support blocks

comprising a composite material comprising wood and plastic, and

said second composite extruded support block inserted into the first opening of said first composite extruded support block, with the second opening being orthogonal to the first opening in said first composite extruded support block so as to enclose the second opening.

13. The pallet according to Claim 12 wherein exposed outer sidewalls of said second composite extruded support block are aligned with exposed outer sidewalls of said first composite extruded support block.

14. The pallet according to Claim 13 wherein interfaces between the exposed outer sidewalls of said first and second composite extruded support blocks are sealed.

15. The pallet according to Claim 12 further comprising a plurality of fasteners coupling said cargo and base layers to said plurality of composite support block assemblies, with said plurality of fastener extending into respective second openings of said second composite extruded support blocks.

16. The pallet according to Claim 12 wherein the composite material comprises about 50% wood and about 50% plastic.

17. The pallet according to Claim 12 wherein the wood comprises at least one of wood dust and wood waste, and wherein the plastic comprises recycled plastic.

18. A method for making a pallet comprising:

providing a cargo layer and a base layer;

forming a plurality of support block assemblies

separating the cargo and base layers, forming each support block assembly comprising

forming a first extruded support block with a first opening extending therethrough in a horizontal direction, and

forming a second extruded support block with a second opening extending therethrough in the horizontal direction, and

inserting the second extruded support block into the first opening of the first extruded support block; and

coupling the cargo and base layers to the plurality of support assemblies.

19. The method according to Claim 18 wherein the second opening in the second extruded support block is orthogonal with the first opening in the first extruded support block so as to enclose the second opening.

20. The method according to Claim 19 wherein exposed outer sidewalls of the second extruded support block are aligned with exposed outer sidewalls of the first extruded support block.