

panel of the first subset and each hot side panel of the second subset may be selectively positioned on the combustion liner based on local temperatures. In addition, the hot side panels may be structured for interchangeable positioning in both an axial direction and a circumferential direction based on the local temperatures.

In other embodiments, a third subset of the plurality of hot side panels may be formed of a third material different from the first material and the second material, wherein each hot side panel of the first, second and third subsets are selectively positioned on the combustion liner based on the local temperatures.

In still other embodiments, a fourth subset of the plurality of hot side panels may be formed of a fourth material different from the first material, the second material and the third material, wherein each hot side panel of the first, second, third and fourth subsets are selectively positioned on the combustion liner based on the local temperatures.

Each hot side panel may be coupled to a single node of the support structure. In some embodiments, each hot side panel may be coupled to the single node at a center of the hot side panel. Each cold side panel may be coupled to a single node of the support structure. In some embodiments, each cold side panel may be coupled to the single node at a center of the cold side panel.

Each hot side panel and each cold side panel may be the same size and shape.

In some embodiments, a number of dog bone connectors may be structured to secure a corresponding number of adjacent structural elements to one of the nodes. The plurality of structural elements and the plurality of nodes may be configured in a self-locking arrangement.

Each structural element of the plurality of structural elements may be triangular in shape.

Other embodiments may include a paneled combustion liner, including a support structure having a plurality of structural elements and a plurality of nodes, wherein each node of the plurality of nodes is structured to couple together a group of structural elements of the plurality of structural elements; and a plurality of thermal barrier panels, wherein each thermal barrier panel of the plurality of thermal barrier panels has an N-gon shape and is coupled to a hot side of the support structure at one of the plurality of nodes, and wherein each thermal barrier panel is arranged in juxtaposition on all sides to adjacent thermal barrier panels to shield the support structure from hot combustion gases inside the combustion liner.

Still other embodiments may include an interchangeable thermal barrier panel for a paneled combustion liner, wherein the interchangeable thermal barrier panel has an N-gon shape and is structured to attach to a combustion liner support structure in juxtaposition to a plurality of others of the interchangeable thermal barrier panels, wherein the combustion liner is structured to support a plurality of juxtaposed interchangeable thermal barrier panels, and wherein the plurality of juxtaposed interchangeable thermal barrier panels are arranged to prevent hot combustion gases from reaching the support structure. In some embodiments, N is 6.

The interchangeable thermal barrier panel may be structured to attach to the paneled combustion liner at a single location on the interchangeable thermal barrier panel.

Yet other embodiments may include a gas turbine engine. The gas turbine engine may include a compressor; a turbine; and a combustor fluidly disposed between the compressor and the turbine, the combustor including a combustion liner. The combustion liner may include a support structure having a plurality of structural elements and a plurality of nodes, wherein each node of the plurality of nodes is structured to

couple together a group of structural elements of the plurality of structural elements; a plurality of hot side panels having a first common shape coupled to a hot side of the support structure, each hot side panel of the plurality of hot side panels being coupled to one of the plurality of nodes; and a plurality of cold side panels having a second common shape coupled to a cold side of the support structure, each cold side panel of the plurality of cold side panels being coupled to one of the plurality of nodes.

Still other embodiments may include a gas turbine engine. The gas turbine engine may include a compressor; a turbine; and a combustor fluidly disposed between the compressor and the turbine, the combustor including a combustion liner. The combustion liner may include a support structure having a plurality of structural elements and a plurality of nodes, wherein each node of plurality of nodes is structured to couple together a group of structural elements of the plurality of structural elements; and a plurality of thermal barrier panels, wherein each thermal barrier panel of the plurality of thermal barrier panels has an N-gon shape and is coupled to a hot side of the support structure at one of the plurality of nodes, and wherein each thermal barrier panel is arranged in juxtaposition on all sides to adjacent thermal barrier panels to shield the support structure from hot combustion gases adjacent to the combustion liner.

Yet still other embodiments may include a gas turbine engine. The gas turbine engine may include a compressor; a turbine; and a combustor fluidly disposed between the compressor and the turbine, the combustor including a combustion liner. The combustion liner may include means for providing structural support for the combustion liner; means for shielding the means for providing structural support from hot combustion gases in the combustor; and means for attaching the means for shielding to the means for providing structural support.

While the invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not to be limited to the disclosed embodiment(s), but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims, which scope is to be accorded the broadest interpretation so as to encompass all such modifications and equivalent structures as permitted under the law. Furthermore it should be understood that while the use of the word preferable, preferably, or preferred in the description above indicates that feature so described may be more desirable, it nonetheless may not be necessary and any embodiment lacking the same may be contemplated as within the scope of the invention, that scope being defined by the claims that follow. In reading the claims it is intended that when words such as "a," "an," "at least one" and "at least a portion" are used, there is no intention to limit the claim to only one item unless specifically stated to the contrary in the claim. Further, when the language "at least a portion" and/or "a portion" is used the item may include a portion and/or the entire item unless specifically stated to the contrary.

What is claimed is:

1. A paneled combustion liner, comprising:

a support structure of the combustion liner, wherein said support structure has having a plurality of structural elements and a plurality of nodes, each node said plurality of nodes being structured to couple together a group of structural elements of said plurality of structural elements;

a plurality of hot side panels, wherein each hot side panel of said plurality of hot side panels has a common shape;