CLAIMS

What is claimed is:

1. A process of modifying a passage in a component, the process including:

inserting a first material into the passage ;

blocking at least one end of the passage;

inserting an elongated member into the passage through the first material to compress the first material in the passage;

heat treating the passage, the first material, and the elongated member to form a solid interior in the component; and

machining through the solid interior to form a modified passage in the component.

2. The process according to claim 1, wherein the first material includes a braze material.

3. The process according to claim 2, wherein the braze material is a mixture of high melt material and low melt material.

4. The process according to claim 2, wherein inserting the braze material includes inserting the braze material into the passage from a positive displacement braze applicator.

5. The process according to claim 2, wherein inserting the braze material includes inserting the braze material into the passage by applying negative pressure to the passage to pull braze material into the passage.

6. The process according to claim 5, wherein inserting the braze material further includes inserting the braze material into the passage from a positive displacement braze

applicator.

7. The process according to claim 2, further including monitoring the inserting of braze material into the passage.

8. The process according to claim 1, wherein the blocking at least one end of the passage includes completely blocking one end of the passage with a first member.

9. The process according to claim 8, wherein the blocking at least one end of the passage includes partially blocking a second end of the passage with a second member, the second member including a hole.

10. The process according to claim 9, wherein inserting the elongated member into the passage includes inserting the elongated member through the hole of the second member until the elongated member abuts the first member .

11. The process according to claim 1, wherein heat treating the passage, the first material, and the elongated member includes a thermal brazing cycle.

12. The process according to claim 1, wherein machining through the solid interior includes drilling a hole to form the modified passage in the component.

13. The process according to claim 1, further including conforming at least one end of the modified passage to a component surface.

14. The process according to claim 1, wherein the component includes a turbomachine component.

15. The process according to claim 14, wherein the turbomachine component includes at least one of combustion liners, transition pieces, shrouds, turbine nozzles and turbine buckets,

and the passage includes a cooling passage in the turbomachine.

16. A process of modifying a passage in a component, the process including:

inserting a first material into the passage;

completely blocking a first end of the passage with a first member;

partially blocking a second end of the passage with a second member, the second member including a hole;

inserting an elongated member through the hole of the second member until the elongated member compresses and abuts the first member;

heat treating the passage, the first material, and the elongated member to form a solid interior in the component; and

machining through the solid interior to form a modified passage in the component.

17. The process according to claim 16, wherein the first material includes a braze material.

18. The process according to claim 17, wherein inserting the braze material into the passage includes inserting the braze material by applying negative pressure to the passage to pull braze material into the passage and further inserting the braze material into the passage from a positive displacement braze applicator.

19. The process according to claim 16, wherein the component includes turbomachine component including at least one of combustion liners, transition pieces, shrouds, turbine nozzles and turbine buckets, and the passage includes a cooling passage in the turbomachine component.

20. A process of modifying a cooling passage in a shroud of a turbomachine component, the process including:

inserting a braze into the cooling passage;

blocking at least one end of the cooling passage;

inserting a rod into the cooling passage through the braze to compress the braze in the passage;

heat treating the cooling passage, the braze, and the rod in a thermal brazing cycle to form a solid braze interior in the shroud; and

machining through the solid braze interior to form a modified cooling passage in the shroud; and

wherein inserting the braze into the cooling passage includes inserting the braze by applying negative pressure to the passage to pull braze into the passage and further inserting the braze into the passage from a positive displacement braze applicator.