CLAIMS

1. A gas turbine engine rotor stack comprising:

a rotor disk including:

a web extending from a rim radially inward to a bore, and

a spacer integral with and extending generally axially from the rim, the spacer including:

a flow path surface adjacent to an end wall of the rim,

an inner surface spaced radially inwardly from the flow path surface and extending between first and second axial locations, the flow path surface configured to seal relative to a fixed stage of vanes,

a fillet interconnecting the inner surface and the web, the inner surface tangent to the fillet at the first axial location, and the second axial location axially aligning beneath the vanes and surrounded by the inner surface,

the spacer having first and second radial thicknesses respectively disposed at the first and second axial locations, the first radial thickness smaller than the second radial thickness, and

the spacer tapering axially from the first axial location to the second axial location.

2. The rotor stack according to claim 1, comprising a circumferential array of blades integrally mounted to the end wall.

3. The rotor stack according to claim 2, wherein the web and bore are integral with and axially aligned with the blades.

4. The rotor stack according to claim 1, wherein the spacer includes a recess filled with a rub strip that provides the flow path surface, the rub strip adjacent to tips of the vanes.

5. The rotor stack according to claim 1, wherein the spacer includes an axial end with an annular notch, and an adjacent rotor disk engages the annular notch.

6. The rotor stack according to claim 1, wherein the rim includes an annular groove on a side opposite the spacer, and a hub engages the annular groove and is secured to a shaft.

7. The rotor stack according to claim 1, wherein the one of the first and second thicknesses is in a range of 50%-95% of the other of the first and second thicknesses.

8. The rotor stack according to claim 7, wherein the range is 75%-95%.

9. The rotor stack according to claim 7, wherein the first and second axial locations are spaced an axial length from one another, wherein the length is 3-5 times the greater of the first and second thicknesses.

10. A gas turbine engine comprising:

a turbine section;

a compressor section arranged upstream from the turbine section, the compressor section includes a stack with an integrally bladed rotor disk, the rotor disk arranged axially adjacent to a fixed stage of vanes, the rotor disk including:

a web extending from a rim radially inward to a bore, and

a spacer integral with and extending generally axially from the rim, the spacer including:

a flow path surface adjacent to an end wall of the rim,

an inner surface spaced radially inwardly from the flow path surface and extending between first and second axial locations, the flow path surface configured to seal relative to a fixed stage of vanes,

a fillet interconnecting the inner surface and the web, the inner surface tangent to the fillet at the first axial location, and the second axial location axially aligning beneath the vanes and surrounded by the inner surface,

the spacer having first and second radial thicknesses respectively disposed at the first and second axial locations, the first radial thickness smaller than the second radial thickness, and

the spacer tapering axially from the first axial location to the second axial location.

11. The engine according to claim 10, wherein the compressor section includes a low pressure compressor and a high pressure compressor arranged downstream from the low pressure compressor, the rotor disk arranged in the high pressure compressor.

12. The engine according to claim 11, wherein the stack includes multiple rotating stages, the rotor disk provides a last rotating stage in the stack, and a hub engages the rim and is secured to a shaft.

13. The engine according to claim 10, wherein the web and bore are integral with and axially aligned with the blades.

14. The engine according to claim 10, wherein the spacer includes a recess filled with a rub strip that provides the flow path surface, the rub strip adjacent to tips of the vanes.

15. The engine according to claim 10, wherein the spacer includes an axial end with an annular notch, and an adjacent rotor disk engages the annular notch.

16. The engine according to claim 10, wherein the one of the first and second thicknesses is in a range of 50%-95% of the other of the first and second thicknesses.

17. The engine according to claim 16, wherein the range is 75%-95%.

18. The engine according to claim 16, wherein the first and second axial locations are spaced an axial length from one another, wherein the length is 3-5 times the greater of the first and second thicknesses.