CLAIMS

1. A method of restoring a throat area in a gas turbine engine, the method comprising:

controlling machining of at least one of: a first aerofoil and a second aerofoil; the machining causing an increase in a throat area defined by the first aerofoil, the second aerofoil, a first platform and a second platform, the first aerofoil and the second aerofoil being arranged to couple to the first platform and to the second platform, the first platform including a body and a coating, the first platform having a first thickness;

receiving information on the positioning of the first aerofoil, the second aerofoil, the first platform and the second platform subsequent to controlling machining;

determining the throat area using the received information; and

controlling provision of a coating to at least the first platform subsequent to controlling machining to provide the first platform with a second thickness and to bring the size of the throat area towards, or equal to, a stored optimal throat area, the second thickness being greater than the first thickness.

2. A method as claimed in claim 1, wherein the coating comprises a thermal barrier coating.

3. A method as claimed in claim 2, wherein the coating comprises yttria-stabilised zirconia.

4. A method as claimed in any of the preceding claims, wherein the coating comprises a bond coating.

5. A method as claimed in claim 4, wherein the coating comprises: platinum, or platinum aluminide, or MCrAlY, where M is one or any combination of nickel, cobalt and iron.

6. A method as claimed in any of the preceding claims, wherein the step of controlling provision of a coating provides the first platform with a coating having a thickness greater than two hundred and fifty micrometers.

7. A method as claimed in any of the preceding claims, wherein the step of controlling provision of a coating provides the first platform with a coating having a thickness greater than three hundred micrometers.

8. A method as claimed in any of the preceding claims, wherein the step of controlling provision of a coating provides the first platform with a coating having a thickness greater than four hundred micrometers.

9. A method as claimed in any of the preceding claims, further comprising controlling provision of a coating to at least one of the first aerofoil and the second aerofoil subsequent to controlling machining to reduce the throat area.

10. A method as claimed in any of the preceding claims, further comprising controlling provision of an object to the first platform, and/or the second platform, and/or the first aerofoil, and/or the second aerofoil.

11. A method as claimed in claim 10, wherein controlling provision of the object is performed prior to controlling provision of the coating, and further comprising controlling provision of the coating to the object.

12. A method as claimed in claim 10 or 11, wherein the object is provided to the first platform, or the second platform, or the first aerofoil, or the second aerofoil to cause wakes within gas flow between the first aerofoil, the second aerofoil, the first platform, and the second platform.

13. A method as claimed in any of the preceding claims, wherein the first aerofoil, the second aerofoil, the first platform, and the second platform form part of a compressor of a gas turbine engine, or form part of a turbine of a gas turbine engine.

14. A method as claimed in any of the preceding claims, wherein the first aerofoil and the second aerofoil are one of: compressor blades; nozzle guide vanes; stator vanes; and turbine blades.

15. Apparatus for restoring a throat area in a gas turbine engine, the apparatus comprising: a controller configured to perform the method as claimed in any of the preceding claims.

16. A computer program that, when read by a computer, causes performance of the method as claimed in any of claims 1 to 14.

17. A non-transitory computer readable storage medium comprising computer readable instructions that, when read by a computer, cause performance of the method as claimed in any of claims 1 to 14.