CLAIMS

1 A device (2, 102) for applying a treatment fluid to a target region of a component (4, 104), the device comprising: an application chamber (110, 112) that defines a substantially laminar application flow path (B) from an inflow region to an outflow region of the application chamber; and a distribution chamber (114, 116) that communicates with the application chamber at an interface, fluid being delivered in use from the distribution chamber to the application chamber via the interface across the full extent of the inflow region of the application chamber.

2 A device as claimed in claim 1, wherein the interface extends laterally across the full extent of the inflow region of the application chamber.

3 A device as claimed in claim 1 or 2, wherein the interface comprises a distribution element.

4 A device as claimed in any one of the preceding claims, further comprising means for application of pressure at the outflow region of the application chamber that is less than ambient pressure.

5 A device as claimed in claim 3 or claim 4, wherein the distribution element comprises a perforated wall (144) that divides the distribution chamber from the inflow region of the application chamber.

6 A device as claimed in any one of claims 3 to 5, wherein the distribution chamber is divided into two sub chambers by a second distribution element (146).

7 A device as claimed in any one of the preceding claims, wherein the lateral extent of the application chamber and laminar application flow path is defined by peripheral seals (138), operable to engage a component surface or a cooperating seal.

8 A device as claimed in any one of the preceding claims, further comprising a consolidation chamber (128, 130) that communicates with the outflow region of the application chamber via a consolidation element (148, 150).

9 A process for applying treatment fluid to a target region of a component (4, 104) surface using a treatment device (2, 102) operable to present the treatment fluid to the component surface, comprising:

introducing the treatment device to the target region of the component surface, and

drawing treatment fluid through the device, across the target region of the component surface solely under the action of reduced pressure applied at an outlet (134) of the device.

10 A process as claimed in claim 9, wherein the treatment device comprises seals (138) operable to engage the component surface under the action of the low pressure applied at the outlet.

11 A process as claimed in claim 9 or claim 10, further comprising continuously circulating the treatment fluid through the device across the target region of the component surface under the action of the low pressure for a predetermined treatment time.

12 A process as claimed in any one of claims 9 to 11, further comprising mixing the treatment fluid as it enters and/or exits the treatment device.

13 A process as claimed in any one of claims 9 to 12, further comprising monitoring the fluid as it is drawn through the device.

14 A process as claimed in any one of claims 9 to 13, further comprising monitoring the gaseous content of the fluid as it exits the device.

15 A process as claimed in any one of claims 9 to 14, further comprising applying a sealant material to the target region of the component surface before introducing the treatment device.

16 A process as claimed in any one of claims 9 to 15, further comprising removing the treatment device after a predetermined period of time and washing the target region of the component surface once the treatment device has been removed.

17 A process as claimed in any one of claims 9 to 16, wherein the treatment device is a device as claimed in any one of claims 1 to 8.

CLAIMS

1. A process for applying treatment fluid to a target region of a component (4,104) surface using a treatment device (2, 102) operable to present the treatment fluid to the component surface, comprising:

   introducing the treatment device to the target region of the component surface,

   and

   drawing treatment fluid through the device, across the target region of the component surface solely under the action of reduced pressure applied at an outlet (134) of the device

   and

   wherein the treatment device is a device for applying a treatment fluid to a target region of a component (4, 104), the device comprising: an application chamber (110, 112) that defines a substantially laminar application flow path (B) from an inflow region to an outflow region of the application chamber; and a distribution chamber (114, 116) that communicates with the application chamber at an interface, fluid being delivered in use from the distribution chamber to the application chamber via the interface across the full extent of the inflow region of the application chamber.