Claims

1. Method for coating a catalyst support body, comprising:
providing the catalyst support body as well as slurry located within a pan;
introducing an open input end of the catalyst support body into the slurry; and subsequently,
directing an amount of the slurry though the input end and into the inside of the catalyst support body; wherein
at least a part of the circumference of the input end is covered with an impermeable sealing element during the step of directing the amount of slurry through the open end, thereby preventing contact between slurry and a circumferential outer surface of the catalyst support body distinct from the input end and applying slurry through the input end to an inner surface of the catalyst support body.

2. Method of claim 1, further comprising the step of introducing the input end of the catalyst support body into the sealing element before the step of introducing the input end into the slurry or initial to the step of introducing the input end into the slurry.

3. Method of one of the preceding claims wherein the input end of the catalyst support body is pressed onto the sealing element or is circumferentially enclosed by sealing element, when the input end, together with the sealing element, is immersed within the slurry located in the pan.

4. Method of one of the preceding claims wherein the sealing element and the input end are separated from each other after the step of directing slurry has been completed or upon completing the step of directing slurry through the input end and upon or after the input end and the sealing element have been removed from the slurry located in the pan.

5. Method of one of the preceding claims wherein the step of directing an amount of slurry comprises: applying a pressure difference between the input end of the catalyst support body and an output end of the catalyst support body, the output end being in fluidic connection with the input end via a plurality of channels, whereby the pressure difference is adapted to cause the amount of slurry to flow from the input end, through an inner opening of the sealing element and to the output end.

6. Method of one of the preceding claims wherein the step of introducing comprises releasably holding the catalyst support body by a loading platform and reducing a

distance between the loading platform holding the catalyst support body and the pan thereby immersing the input end of the catalyst support body into the slurry located within the pan; wherein the method further comprises covering the circumference of the input end with the sealing element, the sealing element being connected to a sealing holder, wherein the sealing holder presses the sealing element onto the circumference of the input end before and during the steps of introducing the input end and directing an amount of the slurry through the input end; the sealing holder separating the sealing element from the input end after the step of directing has been completed and contact between the input and the slurry located within the pan has ended.

7. Loading platform assembly comprising a loading platform adapted for releasably holding a catalyst support body, and a cover mechanism having a sealing holder and a ring shaped sealing element attached to the sealing holder, the cover mechanism further comprising a first lifting mechanism connected to the sealing holder, wherein the first lifting mechanism provides a moving direction for the sealing holder along a longitudinal axis of the sealing element relative to the loading platform.

8. Coating station for applying an amount of slurry to the inside of a catalyst support body comprising the loading platform of claim 7, further comprising a pan, in which slurry is located, the coating station having a second lifting mechanism providing a relative moving direction between the pan and the loading platform for immersing and removing an open input end of the catalyst support body held by the loading platform into and from the slurry located in the pan, wherein the first lifting mechanism is connected with the second lifting mechanism by a mechanical or electrical synchronization device.

9. Coating station of claim 8, wherein the first lifting mechanism connected to the sealing holder comprises an individual actuator, which is adapted to be controlled separately from any actuators of the pan or of the loading platform.

10. Coating station of claim 8 or 9, wherein the sealing element is in the shape of a ovoid, circular or polygonal ring and comprises a lip extending along the circumference of the sealing element, the lip being inclined and extending in a direction away from the loading platform, wherein the lip is adapted to contact a complete circumference of an outer surface of the catalyst support body at the input end of the catalyst support body.

11. Coating station of one of claims 8 - 10, further comprising a movable vacuum hood adapted to sealingly contact the loading platform on an upper side of the loading platform and to apply vacuum to a volume enclosed by the hood and the upper side of the loading platform, wherein the second lifting mechanism is connected to the pan for controllably moving the pan towards a lower side of the loading platform and away from the lower side of the loading platform along the relative moving direction between pan and loading platform.

12. Coating station of one of claims 8 - 11 , wherein the synchronization device is adapted to coordinate the movements of the first lifting mechanism and the second lifting mechanism, to inhibit any further approach resulting from actuation of the second lifting mechanism between the pan and the loading platform beyond a predefined distance in the case that the first lifting mechanism does not provide a sealing contact between the sealing element and the catalyst support body held by the loading platform, and to initiate an approaching movement of the sealing element towards the input end if the second lifting mechanism is actuated, to reduce the distance between the pan and the loading platform in the case that the first lifting mechanism does not provide a sealing contact between the sealing element and the catalyst support body held by the loading platform.

13. Coating station of one of claims 8 - 12, wherein the second lifting mechanism is adapted for moving the pan from and towards the loading platform along a lifting direction, wherein the loading platform is fixedly positioned with regard to movements along the lifting direction and is pivotally supported with a rotational axis parallel to the lifting direction.

14. Coating station of one of claims 8 - 13, wherein the material of the sealing element an elastic material, preferably silicone, rubber or an elastic polymer.

15. Coating station of one of claims 8 - 14, wherein the sealing element extends in a radial direction toward the centre of the ring shape in a direction inclined to the plane, in which the outer circumference of the sealing element extends, the sealing element tapering towards the centre of the ring shape.

**Claims**

1. Method for coating a catalyst support body, comprising:
providing the catalyst support body as well as slurry located within a pan;
introducing an open input end of the catalyst support body into the slurry; and, subsequently,
directing an amount of the slurry though the input end and into the inside of the catalyst support body;
wherein
the circumferential edge of the input end is covered with an impermeable ring shaped sealing element during the step of directing the amount of slurry through the open input end, thereby preventing contact between slurry and a circumferential outer surface of the catalyst support body distinct from the input end and applying slurry through the input end to an inner surface of the catalyst support body, wherein the inner circumference of the ring shaped sealing element is smaller than the cross-section of the input end of the catalyst support body and
the outer circumference of the sealing element encloses a cross-section greater than the cross-section of the input end.

2. Method of claim 1, further comprising the step of introducing the input end of the catalyst support body into the sealing element before the step of introducing the input end into the slurry or initial to the step of introducing the input end into the slurry.

3. Method of one of the preceding claims wherein the input end of the catalyst support body is pressed onto the sealing element or is circumferentially enclosed by sealing element, when the input end, together with the sealing element, is immersed within the slurry located in the pan.

4. Method of one of the preceding claims wherein the sealing element and the input end are separated from each other after the step of directing slurry has been completed or upon completing the step of directing slurry through the input end and upon or after the input end and the sealing element have been removed from the slurry located in the pan.

5. Method of one of the preceding claims wherein the step of directing an amount of slurry comprises: applying a pressure difference between the input end of the catalyst support body and an output end of the catalyst support body, the output end being in fluidic connection with the input end via a plurality of channels, whereby the pressure difference is adapted to cause the amount of slurry to flow from the input end, through an inner opening of the sealing element and to the output end.

6. Method of one of the preceding claims wherein the step of introducing comprises releasably holding the catalyst support body by a loading platform and reducing a distance between the loading platform holding the catalyst support body and the pan thereby immersing the input end of the catalyst support body into the slurry located within the pan; wherein the method further comprises covering the circumference of the input end with the sealing element, the sealing element being connected to a sealing holder, wherein the sealing holder presses the sealing element onto the circumference of the input end before and during the steps of introducing the input end and directing an amount of the slurry

through the input end; the sealing holder separating the sealing element from the input end after the step of directing has been completed and contact between the input and the slurry located within the pan has ended.

7. Loading platform assembly comprising a loading platform adapted for releasably holding a catalyst support body, and a cover mechanism having a sealing holder and a ring shaped sealing element attached to the sealing holder, the cover mechanism further comprising a first lifting mechanism connected to the sealing holder, wherein the first lifting mechanism provides a moving direction for the sealing holder along a longitudinal axis of the sealing element relative to the loading platform, wherein the ring shaped sealing element is adapted to cover a circumferential edge of an open input end of the catalyst support body, wherein the inner circumference of the ring shaped sealing element is configured to be smaller than the cross-section of the input end of the catalyst support body and the outer circumference of the sealing element is configured to enclose a cross-section greater than the cross-section of the input end.

8. Coating station for applying an amount of slurry to the inside of a catalyst support body comprising the loading platform of claim 7, further comprising a pan, in which slurry is located, the coating station having a second lifting mechanism providing a relative moving direction between the pan and the loading platform for immersing and removing an open input end of the catalyst support body held by the loading platform into and from the slurry located in the pan, wherein the first lifting mechanism is connected with the second lifting mechanism by a mechanical or electrical synchronization device.

9. Coating station of claim 8, wherein the first lifting mechanism connected to the sealing holder comprises an individual actuator, which is adapted to be controlled separately from any actuators of the pan or of the loading platform.

10. Coating station of claim 8 or 9, wherein the sealing element is in the shape of a ovoid, circular or polygonal ring and comprises a lip extending along the circumference of the sealing element, the lip being inclined and extending in a direction away from the loading platform, wherein the lip is adapted to contact a complete circumference of an outer surface of the catalyst support body at the input end of the catalyst support body.

11. Coating station of one of claims 8 - 10, further comprising a movable vacuum hood adapted to sealingly contact the loading platform on an upper side of the loading platform and to apply vacuum to a volume enclosed by the hood and the upper side of the loading platform, wherein the second lifting mechanism is connected to the pan for controllably moving the pan towards a lower side of the loading platform and away from the lower side of the loading platform along the relative moving direction between pan and loading platform.

12. Coating station of one of claims 8 - 11, wherein the synchronization device is adapted to coordinate the movements of the first lifting mechanism and the second lifting mechanism, to inhibit

any further approach resulting from actuation of the second lifting mechanism between the pan and the loading platform beyond a predefined distance in the case that the first lifting mechanism does not provide a sealing contact between the sealing element and the catalyst support body held by the loading platform, and to initiate an approaching movement of the sealing element towards the input *end if the second lifting mechanism is actuated, to reduce the distance between the pan and the loading* platform in the case that the first lifting mechanism does not provide a sealing contact between the sealing element and the catalyst support body held by the loading platform.

13. Coating station of one of claims 8 - 12, wherein the second lifting mechanism is adapted for moving the pan from and towards the loading platform along a lifting direction, wherein the loading platform is fixedly positioned with regard to movements along the lifting direction and is pivotally supported with a rotational axis parallel to the lifting direction.

14. Coating station of one of claims 8 - 13, wherein the material of the sealing element an elastic material, preferably silicone, rubber or an elastic polymer.

15. Coating station of one of claims 8 - 14, wherein the sealing element extends in a radial direction toward the centre of the ring shape in a direction inclined to the plane, in which the outer circumference of the sealing element extends, the sealing element tapering towards the centre of the ring shape.