Claims

1. A coating arrangement, comprising:
an electron beam gun for providing an electron beam;
a beam trap for trapping the electron beam;
a transport device configured to transport one or more workpieces to be coated along a transport path;
a crucible, wherein the beam trap is disposed below the electron beam gun and above the transport path, and vertically over the crucible;
a control device for driving the electron beam gun and/or the beam trap,
wherein the control device is configured to switch over the driving between a plurality of configurations, of which:
in a first configuration, the electron beam is directed onto the beam trap; and
in a second configuration, the electron beam is directed past the beam trap towards the crucible.

2. The coating arrangement as claimed in claim 1, wherein the beam trap comprises a heat exchanger and/or remains in a solid state of matter up to a temperature, wherein the temperature is greater than 1000°C.

3. The coating arrangement as claimed in claim 1, wherein an angle-related averaged spatial power density provided by the electron beam is greater in the second configuration than in the first configuration.

4. The coating arrangement as claimed in claim 1, wherein, in the first configuration, the electron beam irradiates a surface of the beam trap, wherein an angle of incidence of the electron beam with respect to the surface is greater than 45°.

5. The coating arrangement as claimed in claim 1, furthermore comprising:
wherein the crucible comprises a cavity for receiving a coating material to be evaporated, wherein the cavity of the crucible is open in the direction of the beam trap.

6. The coating arrangement as claimed in claim 1,
wherein the control device is furthermore configured, in the first configuration, to provide the transporting by means of the transport device; and
the second configuration, to interrupt and/or to block the transporting by means of the transport device.

7. The coating arrangement as claimed in claim 1, furthermore comprising:
a carrier comprising one or more than one workpiece receptacle region for receiving at least one workpiece to be coated.

8. The coating arrangement as claimed in claim 1, furthermore comprising:
an additional electron beam gun, and
an energy supply for supplying both the electron beam gun and the additional electron beam gun with electrical energy,
wherein the energy supply comprises exactly one high-voltage transformer, which provides the electrical energy.

9. The coating arrangement as claimed in claim 1, wherein the beam trap includes a ceramic, or a nickel- or cobalt-based metal alloy.

10. The coating arrangement as claimed in claim 1, wherein the beam trap includes a coating.

11. The coating arrangement as claimed in claim 1, wherein the control device is furthermore configured, in at least one of the first or second configuration, to control a temperature of one or more than one workpiece to be coated by driving the electron beam gun and/or the beam trap.

12. The coating arrangement as claimed in claim 1, wherein the electron beam scans the beam trap in the first configuration.

13. The coating arrangement as claimed in claim 1, further comprising:
a coating material disposed in the crucible, wherein at least one surface of the beam trap comprises:
the coating material, or
at least one chemical composition substantially identical to that of the coating material, or
at least the same material type as the coating material.

14. The coating arrangement as claimed in claim 1, wherein the first configuration is configured to indirectly heat a workpiece to be coated by the beam trap being irradiated by the electron beam.