PATENT CLAIMS

1. An activation unit (1) for munition-free explosive masses or explosive bodies (3), characterized by an ejection tube (2) and high-power heating elements (4) which are fitted in the ejection tube (2) and in each case consist of at least one heating wire (6) which, for its part, is supplied with electric current by a regulation unit.

2. The activation unit as claimed in claim 1, characterized in that each heating wire (6) is held in a casing (7).

3. The activation unit as claimed in claim 2, characterized in that the casing (7) is a highly temperature-resistant steel with a high CrNi content.

4. The activation unit as claimed in one of claims 1 to 3, characterized in that the respective heating wire (6) is embedded at least in a material which minimizes heat loss.

5. The activation unit as claimed in claim 4, characterized in that the material is a ceramic inlay (8).

6. The activation unit as claimed in one of claims 1 to 5, characterized in that the heating elements (4) are held in the ceramics (8) for mechanical strain relief in a metal structure of the ejection tube (2), wherein the metal structure corresponds to the respective external shape of the explosive body (3).

7. The activation unit (1', 1'') for munition-free explosive masses or explosive bodies (3), characterized by an ejection tube (2' ,2'') and heating elements (10,

10') which are longitudinally routed at least partially through the ejection tube (2', 2'') in the ejection tube (2', 2'') and comprise heating wire (14), which is sheathed (11) with CrNi steel, and contact plates (13) which are soldered onto said heating wire.

8. The activation unit as claimed in claim 7, characterized in that the heating elements (10) are routed along through the entire length of the ejection tube (2').

9. The activation unit as claimed in claim 7 or 8, characterized in that the ejection tube (2', 2'') has a thermal insulation means (15), for example formed by one/several ceramic inlay(s).

10. The activation unit as claimed in claim 9, characterized in that the thermal insulation means (15) is incorporated on the inner surface of the ejection tube (2', 2'') between the sheathed heating wires (14) and the ejection tube (2', 2'').

What is claimed is:

1. An activation unit for munition-free explosive masses or explosive bodies, wherein the activation unit comprises:

(a) an ejection tube;

(b) an ignition tube disposed within the ejection tube, wherein the ignition tube comprises a plurality of high-power heating elements that are fitted in the ejection tube, and each heating element comprises at least one heating wire, wherein the plurality of high-power heating elements are arranged geometrically separately from one another and radially around a circumference of the ignition tube; and

(c) a regulation unit connected to supply each heating wire with electric current.

2. The activation unit as claimed in claim 1, each heating wire is held in a casing.

3. The activation unit as claimed in claim 2, wherein the casing comprises a highly temperature-resistant CrNi steel.

4. The activation unit as claimed in claim 1, wherein each respective heating wire is embedded at least in a material that minimizes heat loss.

5. The activation unit as claimed in claim 4, wherein the material is a ceramic inlay.

6. The activation unit as claimed in claim 1, wherein the plurality of heating elements is held in ceramics for mechanical strain relief in a metal structure of the ejection tube, wherein the metal structure corresponds to a respective external shape of an explosive body.

7. The activation unit as claimed in claim 2, wherein each respective heating wire is embedded at least in a material that minimizes heat loss.

8. The activation unit as claimed in claim 7, wherein the material is a ceramic inlay.

9. The activation unit as claimed in claim 3, wherein each respective heating wire is embedded at least in a material that minimizes heat loss.

10. The activation unit as claimed in claim 9, wherein the material is a ceramic inlay.

11. An activation unit for munition-free explosive masses or explosive bodies, wherein the activation unit comprises:

(a) an ejection tube;

(b) an ignition tube disposed within the ejection tube, wherein the ignition tube comprises a plurality of high-power heating elements that are fitted in the ejection tube, and each heating element comprises at least one heating wire, wherein the plurality of high-power heating elements are arranged geometrically separately from one another and radially around a circumference of the ignition tube; and

(c) a regulation unit connected to supply each heating wire with electric current so that each heating wire heats to >600.degree. C. and so that the plurality of high-power heating elements ignite approximately 80% surface area of a munition-free explosive mass or explosive body ejected through the ignition tube, wherein each heating wire is held in a casing that comprises a highly temperature-resistant CrNi steel, and each heating wire is embedded in a material that minimizes heat loss, wherein the material is a ceramic inlay.