CLAIMS

1. A stinger for a cathodic arc vapor deposition system comprising:

a head with a contact interface;

wherein the contact interface includes an inner wall, an outer wall and an air gap between the inner wall and the outer wall; and

wherein the air gap is U-shaped in cross-section.

2. The stinger as recited in claim 1, wherein said head is manufactured of a copper alloy.

3. The stinger as recited in claim 1, wherein said head is water-cooled.

4. The stinger as recited in claim 1, wherein said head defines a first cross-sectional area, said contact interface defines a second cross-sectional area less than said first cross-sectional area.

5. The stinger as recited in claim 1, wherein said head is circular in cross-section.

6. The stinger as recited in claim 1, wherein said contact interface is operable to contact a cathode.

7. A cathodic arc vapor deposition system comprising:

a cathode;

a fixed support; and

a stinger with a contact interface to retain a cathode between said fixed support and said contact interface;

wherein the stinger includes a shaft and a head attached to the shaft;

wherein the head is in electrical contact with the cathode, and the head with the contact interface and an inner wall, an outer wall and an air gap between the inner wall and the outer wall; and

wherein the air gap is U-shaped in cross-section.

8. The system as recited in claim 7, wherein said contact interface is manufactured of a copper alloy and said fixed support is manufactured of a stainless steel with isolative layers.

9. The system as recited in claim 7, wherein said stinger is water-cooled.

10. A method involving a cathodic arc vapor deposition system comprising:

retaining a cathode with a contact interface that extends from a head of a stinger;

wherein the contact interface includes an inner wall, an outer wall and an air gap between the inner wall and the outer wall; and

wherein the air gap is U-shaped in cross-section.

11. The method as recited in claim 10, further comprising:

retaining the cathode between the contact interface and a fixed support