A graphite product fabrication method includes the steps of (1) using a press mold to mold graphite into a graphite blank, (2) processing the graphite blank to set the shape of the graphite blank, and (3) covering the surface of the graphite blank with a layer of metal coating.
Step 1

MOLDING GRAPHITE INTO GRAPHITE BLANK SUBJECT TO PREDETERMIND SHAPE

Step 2

EMploying high pressure processing process to set the shape of graphite blank

Step 3

ELECTROPLATING THE SURFACE OF GRAPHITE BLANK WITH COPPER

FIG. 4
GRAPHITE PRODUCT AND ITS FABRICATION METHOD

BACKGROUND OF THE INVENTION

(a) Field of the Invention

The present invention relates to a graphite product. The invention relates also to a method of fabricating a graphite product.

(b) Description of the Prior Art

Following fast development of electronic technology, graphite is being intensively used in different electronic devices. Conventional graphite products are made by: press-molding graphite into the designed shape and then processing the shaped graphite with a high temperature processing process, for example, baking. A graphite product, for example, a heat sink or terminal for electric connector made according to the aforesaid conventional graphite product fabrication method is still not satisfactory in function. Conventional graphite products are not durable in use because they tend to disperse graphite powder dust. Further, the color of conventional graphite products fades quickly.

Therefore, it is desirable to provide a graphite fabrication method that eliminates the aforesaid problems.

SUMMARY OF THE INVENTION

The present invention has been accomplished under the circumstances in view. It is the main object of the present invention to provide a graphite product, which prevents dispersion of graphite powder dust, thereby providing a nice outer looking. It is another object of the present invention to provide a graphite product fabrication method, which is practical to make a graphite product that prevents dispersion of graphite powder dust.

According to the present invention, the graphite fabrication method includes the steps of (1) using a press mold to mold graphite into a graphite blank, (2) processing the graphite blank to set the shape of the graphite blank, and (3) covering the surface of the graphite blank with a layer of metal coating. A graphite product according to the present invention comprises a graphite body and a layer of metal coating covered on the surface of the graphite body. The layer of metal coating prevents dispersion of graphite powder dust.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an oblique top elevation of a heat sink made according to the present invention.

FIG. 2 is an oblique bottom elevation of the heat sink shown in FIG. 1.

FIG. 3 is a schematic drawing showing an electric connector made according to the present invention and connected to a matching electric connector.

FIG. 4 is a graphite product manufacturing flow chart.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1 and 2, a graphite product in accordance with a first embodiment of the present invention is a heat sink. The heat sink has a graphite body 1 and a metal coating (not shown) on the surface of the graphite body 1. The graphite body 1 has a flat base 10 and a plurality of radiating fins 11 arranged at the top side of the flat base 10. The bottom surface of the graphite body 1 is a heat transferring surface 12 for transferring heat from an electronic or semiconductor device. The other surface of the graphite body 1 forms a heat dissipation surface 13 adapted to dissipate heat into the outside open air. According to this embodiment, the metal coating is covered on the heat dissipation surface 13 (It is workable that the metal coating covers the whole surface of the graphite body 1). The metal coating can be formed of copper, gold, or aluminum. According to this embodiment, the metal coating is formed of copper and covered on the heat dissipation surface 13 of the graphite body 1 by electroplating. The metal coating enhances the heat dissipation power of the graphite body 1 and prohibits dispersion of graphite powder dust, thereby maintaining the nice outer looking of the heat sink.

FIG. 3 shows an electric connector constructed in accordance with a second embodiment of the present invention and connected to a matching electric connector (or an electronic apparatus). The electric connector comprises an electrically insulative housing 2, and a plurality of conducting terminals 21 mounted in the housing 2. The conducting terminals 21 are made out of graphite and peripherally covered with a layer of copper coating. The conducting terminals 21 have a cylindrical shape, and are kept in contact with respective conducting terminals 31 of a matching electric connector (or electronic apparatus). The copper coating coated on the surface of each conducting terminal 21 enhances the conductivity and prevents dispersion of graphite powder dust, thereby maintaining the nice outer looking of the respective conducting terminal.

Referring to FIG. 4, a graphite product fabrication method in accordance with the present invention includes the steps of (1) using a mold to mold graphite into a graphite blank, (2) processing the graphite blank with a high pressure processing process to set the shape of the graphite blank, and (3) electroplating the surface of the graphite blank with a layer of copper coating.

Although particular embodiments of the invention have been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

What is claimed is:

1. A graphite product fabrication method comprising the steps of (1) using a mold to mold graphite into a graphite blank, (2) processing said graphite blank to set the shape of said graphite blank, and (3) covering the surface of said graphite blank with a layer of metal coating.

2. The graphite product fabrication method as claimed in claim 1, wherein a high pressure and high temperature processing process is employed during step (2) to set the shape of said graphite blank.

3. The graphite product fabrication method as claimed in claim 1, wherein said layer of metal coating is formed of a metal material having a high heat transfer coefficient.
4. The graphite product fabrication method as claimed in claim 1, wherein said layer of metal coating is formed of a metal material having a high conducting power.

5. The graphite product fabrication method as claimed in claim 1, wherein said layer of metal coating is formed of copper.

6. The graphite product fabrication method as claimed in claim 1, wherein said layer of metal coating is covered on the surface of said graphite blank by electroplating.

7. A graphite product comprising a graphite body and a metal coating covered on the surface of said graphite body.

8. The graphite product as claimed in claim 7, wherein said layer of metal coating is formed of a metal material having a high heat transfer coefficient.

9. The graphite product as claimed in claim 7, wherein said layer of metal coating is formed of copper.

10. The graphite product as claimed in claim 7, wherein said layer of metal coating is covered on the surface of said graphite body by electroplating.

* * * * *