workpiece to form a coating film, so it is difficult to separate the areas where the coating film is deposited from those where the coating film is not deposited. Therefore, it is necessary to mask the areas on the workpiece where the coating film is not to be deposited beforehand. For example, when the workpiece has openings, the openings need to be masked to prevent them from being filled with the coating film. However, using masking tape is time-consuming and it is difficult to precisely adjust the extent of the masking.

[0005]

In view of these problems, it is an object of the present disclosure to provide a fixture that enables easy masking when forming a coating film on the surface of a workpiece by thermal spraying.

SOLUTION TO PROBLEM

[0005a]

An aspect of the invention is defined in the independent claim. Some optional features of the invention are defined in the dependent claims.

[0006]

A disclosed masking fixture includes an insertion portion fitted into an opening of a workpiece, a covering portion above the insertion portion covering the opening of the workpiece, and an eave portion above the covering portion projecting outwards from an outer edge of the covering portion.

[0007]

In an embodiment of the present disclosure, the eave portion is preferably located higher than a top surface of the workpiece when the insertion portion is fitted into the opening of the workpiece. The eave portion may include a protruding portion at an upper side. The eave portion may have a cross-sectional taper shape.

[0008]

In an embodiment of the present disclosure, the masking fixture is preferably made of resin.

ADVANTAGEOUS EFFECTS

[0009]

According to an embodiment of the present disclosure, the masking fixture, which has the eave portion at the upper part and is fixed by inserting it into the opening of the workpiece, simplifies the masking process and improves productivity.

BRIEF DESCRIPTION OF DRAWINGS

[0010]

FIG. 1A is a plan view of a masking fixture according to an embodiment of the present disclosure.

FIG. 1B is a cross-sectional view of a masking fixture according to an embodiment of the present disclosure.

FIG. 2A is a plan view of a masking fixture attached to a workpiece according to an embodiment of the present disclosure.

FIG. 2B is a cross-sectional view of a masking fixture attached to a workpiece according to an embodiment of the present disclosure.

FIG. 3A is a plan view of a masking fixture attached to a workpiece according to an embodiment of the present disclosure.

FIG. 3B is a partial cross-sectional view of a workpiece with a masking fixture attached when the masking fixture according to an embodiment of the present disclosure is attached to the workpiece.

FIG. 4 is a partial cross-sectional view of a workpiece attached to a masking fixture according to an embodiment of the present disclosure.

DESCRIPTION OF EMBODIMENTS

[0011]

CLAIMS

1. A masking fixture for use in thermal spraying, comprising:

an insertion portion (102) adapted to be fitted into an opening (202) of a workpiece (200);

a covering portion (104) above the insertion portion (102) and adapted to cover the opening (202) of the workpiece (200); and

an eave portion (106) above the covering portion (104) and projecting outwards from an outer end of the covering portion (104),

wherein when the insertion portion (102) is fitted into the opening (202) of the workpiece (200), the eave portion (106) is located at a predetermined height (T1) above a top surface of the workpiece (200), such that the eave portion (106) allows a molten or softened material from the thermal spraying to come around a bottom edge of the eave portion (106) and form a coating film (204) on the top surface of the workpiece (200) underneath the eave portion (106), and the coating film (204) formed underneath the eave portion (106) gradually becomes thinner towards an inner region from an area overlapping an outer edge of the eave portion (106).

2. The masking fixture according to claim 1, wherein the eave portion (106) has a protrusion length (P1) defined by $P1 = 1/2(D3 - D2)$, where D3 is an external diameter of the eaves portion (106) and D2 is an external diameter of the covering portion (104).

3. The masking fixture according to claim 1, wherein the eave portion (106) is located higher than a top surface of the workpiece (200) when the insertion portion (102) is fitted into the opening (202) of the

workpiece (200).

4. The masking fixture according to claim 1, wherein the eave portion (106) includes a protruding portion (108) at an upper side.

5. The masking fixture according to claim 1, wherein a cross-sectional shape an end portion of the eave portion (106) has a tapered shape configured to control an amount of the molten or softened material that comes around a bottom edge of the eave portion (106).

6. The masking fixture according to any one of claims 1 to 4, wherein the insertion portion (102), the covering portion (104) and the eave portion (106) are made of resin,

wherein the resin is heat-resistant to the thermal spraying and facilitates removal of a coating film formed by the thermal spraying.