CLAIMS

[1] A connecting structure for connecting a conductor made of aluminum and a coupling part with each other, the connecting structure comprising:

a coupling part provided with a set of projections having inclined sides;

a solid conductor made of aluminum having the projections pressed into a surface portion thereof, and

a set of distorted regions continuously formed along the inclined sides in the surface portion of the solid conductor for stopping cold flows of aluminum.

[2] The connecting structure according to claim 1, wherein the set of distorted regions comprises distorted regions enclosing a region in the surface portion of the solid conductor.

[3] The connecting structure according to claim 1, wherein the set of distorted regions comprises opposite distorted regions at a region in the surface portion of the solid conductor.

[4] The connecting structure according to claim 1, wherein the inclined sides have inclination angles within a range of 45 to 75 degrees.

[5] The connecting structure according to claim 1, wherein the set of distorted regions has degrees of distortion within a range of 16 to 32 %.

[6] The connecting structure according to claim 1, wherein the solid conductor comprises a single solid conductor of an aluminum electric wire, and the projections have center-to-center distances thereof within a range of 0.25 to 1.25 times a diameter of the single solid conductor.

[7] A connector for connecting a conductor made of aluminum, comprising:

a connector body;

a crimping section provided at the connector body to be crimped on a solid conductor made of alumina;

a projection bearing member fixed to the crimping section; and

a set of projections projecting from the projection bearing member, the projections having inclined sides, the projections being configured to be pressed into a surface portion of the solid conductor, to have a set of distorted regions continuously formed along the inclined sides in the surface portion for stopping cold flows of aluminum.

[8] The connector according to claim 7, wherein the projection bearing member is brazed to fix to the crimping section.

[9] The connector according to claim 7, wherein the projection bearing member is made of copper.

[10] A connector for connecting a conductor made of aluminum, comprising:

a post member comprising a crimping section to be crimped on a solid conductor made of alumina;

a set of first projections provided at the crimping section, the first projections having first inclined sides, the first projections being configured to be pressed into a first surface portion of the solid conductor, to have a set of distorted regions continuously formed along the first inclined sides in the first surface portion for stopping cold flows of aluminum;

an anchor member configured for the crimping section of the post member to be fit therein; and

a set of second projections provided at an inside of the anchor member, the second projections having second inclined sides, the second projections being configured to be pressed into a second surface portion of the solid conductor, to have a set of distorted regions continuously formed along the second inclined sides in the second surface portion for stopping cold flows of aluminum.

[11] The connector according to claim 10, wherein the crimping section of the post member is formed in a rectangular shape.

[12] The connector according to claim 10, wherein the anchor member comprises a tabular member flexed in a U shape.

[13] The connector according to claim 10, wherein the post member is made of copper.

[14] The connector according to claim 10, wherein the anchor member is made of copper.

[15] A connector for connecting a conductor made of aluminum, comprising:

a connector body; and

a pressure contact section provided at the connector body,

the pressure contact section comprising:

three or more tabular portions; and

a groove defined by edges of the tabular portions,

the edges of the tabular portions respectively comprising projections having inclined sides, the projections being configured to be pressed into a surface portion of a solid conductor made of aluminum and inserted in the groove, to have a set of distorted regions continuously formed along the inclined sides in the surface portion for stopping cold flows of aluminum.

[16] The connector according to claim 15, wherein a single tabular member is flexed to provide the three or more tabular portions.

[17] The connector according to claim 15, wherein the pressure contact section is made of copper.

CLAIMS

[1] A connecting structure for connecting a conductor made of aluminum and a coupling part with each other, the connecting structure comprising:

a coupling part provided with a set of projections having inclined sides;

a solid conductor made of aluminum having the projections pressed into a surface portion thereof, and

a set of distorted regions continuously formed along the inclined sides in the surface portion of the solid conductor for stopping cold flows of aluminum.

[2] The connecting structure according to claim 1, wherein the set of distorted regions comprises distorted regions enclosing a region in the surface portion of the solid conductor.

[3] The connecting structure according to claim 1, wherein the set of distorted regions comprises opposite distorted regions at a region in the surface portion of the solid conductor.

[4] The connecting structure according to claim 1, wherein the inclined sides have inclination angles within a range of 45 to 75 degrees.

[5] The connecting structure according to claim 1, wherein the set of distorted regions has degrees of distortion within a range of 16 to 32 %.

[6] The connecting structure according to claim 1, wherein the solid conductor comprises a single solid conductor of an aluminum electric wire, and the projections have center-to-center distances thereof within a range of 0.25 to 1.25 times a diameter of the single solid conductor.

[7] A connector for connecting a conductor made of aluminum, comprising:

a connector body;

a crimping section provided at the connector body and crimped on a solid conductor made of aluminium;

a projection bearing member fixed to the crimping section; and

a set of projections projecting from the projection bearing member, the projections having inclined sides, the projections being pressed into a surface portion of the solid conductor, with a set of distorted regions continuously formed along the inclined sides in the surface portion of the solid conductor for stopping cold flows of aluminum.

[8] The connector according to claim 7, wherein the projection bearing member is brazed to fix to the crimping section.

[9] The connector according to claim 7, wherein the projection bearing member is made of copper.

[10] A connector for connecting a conductor made of aluminum, comprising:

a post member comprising a crimping section crimped on a solid conductor made of aluminium;

a set of first projections provided at the crimping section, the first projections having first inclined sides, the first projections being pressed into a first surface portion of the solid conductor, with a set of distorted regions continuously formed along the first inclined sides in the first surface portion of the solid conductor for stopping cold flows of aluminum;

an anchor member having the crimping section of the post member fit therein; and

a set of second projections provided at an inside of the anchor member, the second projections having second inclined sides, the second projections being pressed into a second surface portion of the solid conductor, with a set of distorted regions continuously formed along the second inclined sides in the second surface portion of the solid conductor for stopping cold flows of aluminum.

[11] The connector according to claim 10, wherein the crimping section of the post member is formed in a rectangular shape.

[12] The connector according to claim 10, wherein the anchor member comprises a tabular

member flexed in a U shape.

[13] The connector according to claim 10, wherein the post member is made of copper.

[14] The connector according to claim 10, wherein the anchor member is made of copper.

[15] A connector for connecting a conductor made of aluminum, comprising:

a connector body; and

a pressure contact section provided at the connector body,

the pressure contact section comprising:

three or more tabular portions; and

a groove defined by edges of the tabular portions,

the edges of the tabular portions respectively comprising projections having inclined sides, the projections being pressed into a surface portion of a solid conductor made of aluminum and inserted in the groove, with a set of distorted regions continuously formed along the inclined sides in the surface portion of the solid conductor for stopping cold flows of aluminum.

[16] The connector according to claim 15, wherein a single tabular member is flexed to provide the three or more tabular portions.

[17] The connector according to claim 15, wherein the pressure contact section is made of copper.