CLAIMS

1. A heat insulation structure for a cylindrical tube configured such that on an outer circumferential portion of a cylindrical tube in which cold fluid flows, there are provided semi-circular heat insulating members halved in a circumferential direction of the cylindrical tube with an adjacent pair of heat insulating member end portions thereof being coupled to each other via a connecting member elongate in an axial direction of the cylindrical tube, at each one of two opposed positions located in the circumferential direction of the cylindrical tube with end faces thereof being placed in abutment against each other., wherein:

at each one of the pair of heat insulating member end portions at one of the two opposed positions, as a groove-like engagement portion to which the connecting member is to be engaged, there is provided a cutaway portion formed by cutting away an inner portion of the heat insulating member end portion in the radial direction of the cylindrical tube along the circumferential direction of the cylindrical tube, the cutaway portion being provided, on the radially outer side of the cylindrical tube, with a retaining receded portion that is receded outwards in the radial direction of the cylindrical tube;

the connecting member at one of the two opposed positions includes a main body portion having a cross sectional shape engageable with the cutaway portion respectively of the pair of heat insulating member end portions and a pair of retaining protruding portions engageable with the retaining receded portion;

at each one of the pair of heat insulating member end portions at the other of the two opposed positions, as a groove-like engagement portion to which the connecting member is to be engaged, there is provided a receded portion that is receded from the end face along a tangential direction of the cylindrical tube is provided in the form of a flat face with an inner surface and an outer surface thereof disposed side by side along the radial direction of the cylindrical tube extending along the tangential direction of the cylindrical tube; and

the connecting member at the other of the two opposed positions has a cross-sectional shape provided in the form of a flat face along the inner surface and the

outer surface of the receded portion of each of the pair of heat insulating member end portions.

2. A heat insulation structure for a cylindrical tube configured such that on an outer circumferential portion of a cylindrical tube in which cold fluid flows, there are provided semi-circular heat insulating members halved in a circumferential direction of the cylindrical tube with an adjacent pair of heat insulating member end portions thereof being coupled to each other via a connecting member elongate in an axial direction of the cylindrical tube, at each one of two opposed positions located in the circumferential direction of the cylindrical tube with end faces thereof being placed in abutment against each other., wherein:

at each one of the pair of heat insulating member end portions at the two opposed positions, includes, as a groove-like engagement portion to which the connecting member is to be engaged, there is provided a cutaway portion formed by cutting away an inner portion of the heat insulating member end portion in the radial direction of the cylindrical tube along the circumferential direction of the cylindrical tube, the cutaway portion being provided, on the radially outer side of the cylindrical tube, with a retaining receded portion that is receded outwards in the radial direction of the cylindrical tube; and

the connecting member at each one of the two opposed positions includes a main body portion having a cross sectional shape engageable with the cutaway portion respectively of the pair of heat insulating member end portions and a pair of retaining protruding portions engageable with the retaining receded portion.

3. The heat insulation structure for a cylindrical tube of claim 1, wherein:

the connecting member in the form having a flat face is formed of a material capable of elastic deformation; and

at one engaging portion of a pair of engaging portions of the connecting member to be engaged to the receded portion adjacent thereto, there is formed a

slit which separates this engaging portion in the radial direction of the cylindrical tube.

4. The heat insulation structure for a cylindrical tube of claim 1, wherein:

the connecting member in the form having a flat face is formed of a material capable of elastic deformation; and

at each one of a pair of engaging portions of the connecting member to be engaged to the receded portion adjacent thereto, there is formed a slit which separates this engaging portion in the radial direction of the cylindrical tube.

5. The heat insulation structure for a cylindrical tube of any one of claims 1-4, wherein on the outer circumferential portion of the cylindrical tube, a plurality of heat insulating walls provided in a cylindrical shape and having different diameters of the halved semi-circular heat insulating members are provided to form a plurality of layers.

6. The heat insulation structure for a cylindrical tube of any one of claims 1-5, wherein:

at a position adjacent in the axial direction of the cylindrical tube to a disposing position of the semi-circular heat insulating members coupled to each other via the connecting member on the outer circumferential portion of the cylindrical tube, arc-shaped heat insulating members divided into plurality in the circumferential direction of the cylindrical tube are provided, at each one of a plurality of opposed positions in the circumferential direction of the cylindrical tube with end faces thereof being placed in abutment against each other, such that a pair of heat insulating member end portions adjacent each other are coupled to each other via a coupling member which is formed elongate along the axial direction of the cylindrical tube;

at each one of the pair of heat insulating member end portion coupled via the coupling member, as an engaging groove portion for the coupling member, a receded groove portion receded from the end face in the circumferential direction

of the cylindrical tube is formed, at an outer portion of this receded groove portion in the radial direction of the cylindrical tube, with a retaining groove portion receded to the outer side in the radial direction of the cylindrical tube; and

the coupling member includes a main body coupling portion having a cross sectional shape engageable with the receded groove portion of each one of the pair of heat insulating member end portions and a pair of retaining coupling portions engageable with the retaining groove portion.

7. The heat insulation structure for a cylindrical tube of claim 6, wherein on the outer circumferential portion of the cylindrical tube, a plurality of heat insulating walls provided in a cylindrical shape and having different diameters of a plurality of arc-shaped heat insulating members coupled to each other via the coupling member are provided to form a plurality of layers.