

**HEAT EXCHANGER AND AIR-CONDITIONING APPARATUS HAVING THE
SAME**

[Name of Document] ABSTRACT

5 [Abstract]

It is an objective to achieve suppressing progress of electrolytic corrosion (galvanic corrosion) by aluminum or an aluminum alloy caused by diffusion of copper ions to a connection pipe formed of aluminum or an aluminum alloy. The copper ions are diffused through water having condensed and staying in a small gap between the thermally insulating material and the connection pipe.

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In a gas pipe 30 and a liquid pipe 40 of a connection pipe unit 20, connection portions 37 and 47, in which aluminum pipes 31 and 41 (first refrigerant pipes: refrigerant pipes formed of aluminum or an aluminum alloy) and copper pipes 32 and 42 (second refrigerant pipes: refrigerant pipes formed of copper or a copper alloy) are respectively connected to each other, are disposed in fall portions of the aluminum pipes 31 and 41. The connection pipe unit 20 is covered with a thermally insulating material 60. An anti-corrosion treatment is applied to the aluminum pipes 31 and 41 covered with the thermally insulating material 60.

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20 [Selected Figure] Fig. 2