Title (en)
    DOUBLE PIPE HEAT EXCHANGER AND METHOD OF MANUFACTURING THE SAME

Title (de)
    DOPPELROHRWÄRMETAUSCHER UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
    ECHANGEUR THERMIQUE A TUYAU DOUBLE ET SON PROCEDE DE FABRICATION

Publication
    EP 1840495 A4 20080528 (EN)

Application
    EP 05704232 A 20050121

Priority
    JP 2005001179 W 20050121

Abstract (en)
    [origin: EP1840495A1] A double pipe heat exchanger that can be produced easily and can be used as a part of piping by bending the whole body, wherein an inner pipe 1 is configured so that: a plurality of balloon-shaped bulges 3 communicating with one another and extending from the center toward the radial directions in a cross section orthogonal to the axis line thereof may be formed; the outer circumference of the bulges 3 may be bent into the shape of waves in an axial cross section; and the top portions 9 of the waves may touch the inner surface of an outer pipe 2. Then in the state, the whole body including the inner pipe 1 and the outer pipe 2 is bent by applying external force.

IPC 8 full level
    F28F 1/42 (2006.01); **F28D 7/10** (2006.01)

CPC (source: EP US)
    F28D 7/106 (2013.01 - EP US); **F28F 1/06** (2013.01 - EP US); **F28F 1/08** (2013.01 - EP US); Y10T 29/49361 (2015.01 - EP US)

Citation (search report)
- [Y] JP 2002013882 A 20020118 - MATSUSHITA REFRIGERATION
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- [A] US 4437513 A 19840320 - CASTIGLIONI JOSEPH [US], et al
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    DE102010047092A1; EP2351978A3; WO2010124871A3

Designated contracting state (EPC)
    CZ DE IT

DOCDB simple family (publication)
    EP 1840495 A1 20071003; **EP 1840495 A4 20080528**; **EP 1840495 B1 20100303**; CN 100510599 C 20090708; CN 101103243 A 20080109; DE 602005019787 D1 20100415; US 2008141665 A1 20080619; WO 2006077657 A1 20060727

DOCDB simple family (application)
    EP 05704232 A 20050121; CN 200580046959 A 20050121; DE 602005019787 T 20050121; JP 2005001179 W 20050121; US 79519305 A 20050121