

Title (en)

Metal heat-exchanger tube for cooling viscous fluids

Title (de)

Metallisches Wärmeaustauscherröhr zur Kühlung von zähen Medien

Title (fr)

Tube métallique d'un échangeur de chaleur pour refroidir des fluides visqueux

Publication

EP 0547363 B2 19970806 (DE)





Application

EP 92119096 A 19921107

Priority

DE 4141240 A 19911214

Abstract (en)

[origin: EP0547363A1] The invention relates to a metal heat-exchanger tube (1) having integral fins (2 or 3), running round on the outside and inside in the shape of a helix, for cooling viscous fluids (4), in particular oil in servo circuits of vehicles, the fluid (4) to be cooled flowing through the tube (1) and the outside thereof being cooled by air (5). A discontinuous rise in heat removal is achieved according to the invention by the following features: a.) the ratio of the external heat transfer area A_a of the tube (1)/internal heat transfer area A_i of the tube (1) is:  b.) the relationship:  holds for the clear internal diameter d_i of the tube (1), with internal diameter d_i (mm), volumetric  of the fluid (4) (m^3/h), kinematic viscosity ν (mm^2/s). 

IPC 1-7

F28F 1/42

IPC 8 full level

F28F 1/42 (2006.01)

CPC (source: EP)

F28F 1/42 (2013.01); **F28F 1/422** (2013.01)

Cited by

EP2520892A1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

EP 0547363 A1 19930623; **EP 0547363 B1 19950524**; **EP 0547363 B2 19970806**; DE 4141240 A1 19930617; DE 4141240 C2 19930930; DE 59202339 D1 19950629; ES 2074795 T3 19950916; ES 2074795 T5 19971101

DOCDB simple family (application)

EP 92119096 A 19921107; DE 4141240 A 19911214; DE 59202339 T 19921107; ES 92119096 T 19921107