

ABSTRACT

The present invention relates to the field of fluid heat transfer, and discloses a heat transfer enhancement pipe as well as a cracking furnace and an atmospheric and vacuum heating furnace including the same. The heat transfer enhancement pipe (1) includes a pipe body (10) of tubular shape having an inlet (100) for entering of a fluid and an outlet (101) for said fluid to flow out; internal wall of the pipe body (10) is provided with a fin (11) protruding towards interior of the pipe body (10), wherein the fin (11) has one or more fin sections extending spirally in the axial direction of the pipe body (10), and each fin section has a first end surface facing the inlet (100) and a second end surface facing the outlet (101), at least one of the first end surface and the second end surface of at least one of the rib sections is formed as a transition surface along spirally extending direction. The heat transfer enhancement pipe can reduce thermal stress of itself, thereby increasing service life of the heat transfer enhancement pipe.

Fig. 1