

ABSTRACT

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HEAT TRANSFER SURFACE

The present invention relates to a heat transfer surface comprising a layer of carbon, to a heating element or condenser comprising said heat transfer surface, to a method of applying said heat transfer surface, and to a method
10 for carrying out dropwise condensation employing said heat transfer surface.

The carbon layer employed in the present invention is tetrahedral amorphous carbon and/or diamond-like carbon.

15 In addition, the carbon layer may be a composite (eg. an alloy) of the above carbon sources with another component such as nickel, chromium or Teflon®.

The heat transfer surface of the present invention permits dropwise condensation rather than film wise condensation to proceed. The surface also
20 exhibits improved resistance to fouling such as scale build-up caused by hard water.

The heat transfer surface of the present invention has particular application in kettles, washing machines, dishwashers and condensers.

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Figure 1

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