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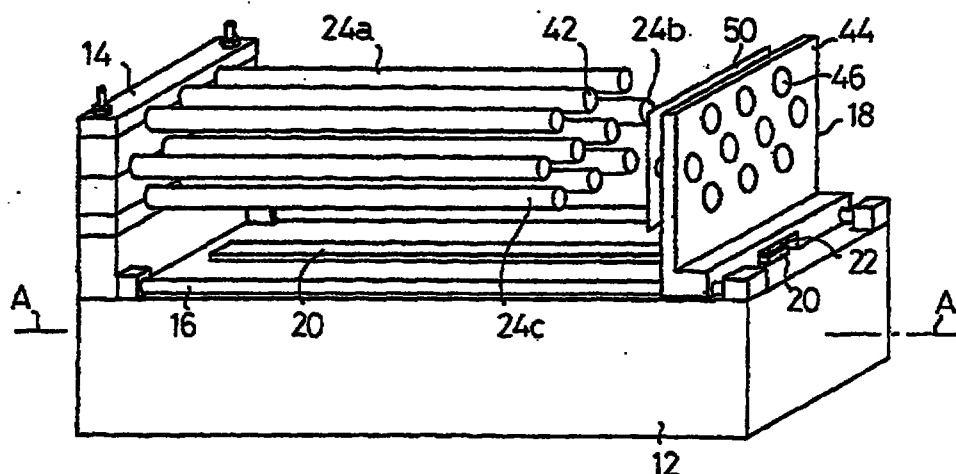
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(54) Title: TUBE FINNING MACHINE AND METHOD AND PRODUCT

(57) Abstract

A heat exchange unit for a heat exchanger is taught which includes a first tube (24a, 24b, 24c; 124; 224) with an outer surface and extended surface members (50; 150; 250) located at axially spaced positions along the outer surface, the members each having a tube engagement surface (28; 158; 258); the members are each located at predetermined axial positions. Also there is taught a heat exchange fin block (101; 201) which includes a heat exchange unit with a second tube interconnected to the first tube by the extended



surface members, the extended surface members being tube fins at predetermined axial spacings. Also disclosed is a tube finning machine (10; 100) for the manufacture of a heat exchange unit which includes a base (12; 112), clamping means (14) mounted to the base, carrier means (18; 144) movable relative to the base, and drive means (20, 22; 120, 122) for moving the carrier means; the clamping means can clamp a portion of the first tube, and the carrier means can transport at least one fin (50; 150; 250) to an axially predetermined position adjacent said portion. Also disclosed is a method of finning a tube (24a, 24b, 24c; 124; 224) which includes supporting the tube so that it has a free end (42), positioning a carrier means (18; 144) at a start position, presenting a fin (50; 150; 250) to the carrier means with a pre-set angular orientation, locating the fin upon the carrier means whilst the carrier means is at the start position, moving the carrier means so as to drive the fin over the free end of the tube and thereafter a predetermined distance along the tube, returning the carrier means without the fin to said start position, and repeating the cycle by presenting another fin to said carrier means with the pre-set angular orientation but with the carrier means having a smaller predetermined distance.