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(54) Title: BLOCK FEEDING OF SOLID PAINT ONTO A CONTINUOUSLY MOVING METAL STRIP

(57) Abstract

Typically, pre-painted steel strip has been produced in a steel finishing mill by applying it as a solvent-free melted liquid to a hot steel strip substrate, known as melt deposition. Melt deposition rate has been effected by controlling the contact pressure between the solid paint and the hot steel strip substrate, while maintaining constant all the other parameters affecting the deposition rate. The difficulty of accurately controlling all of these parameters has in turn made it difficult to obtain a consistently low and constant deposition rate in the production of thin paint coats of uniform thickness. This problem has been overcome by feeding a solid body of paint onto an endless belt conveyor (9), incorporating a substantially planar belt flight (11),

a head pulley (12) and turn round means adjacent to the contact point of the paint block (15) and the moving steel strip (5) and consisting of a stationary guide (13) and an idler pulley (14). The turn round means is so constructed that the direction of the belt movement after the turn is at least parallel to that of the continuously moving strip (5) and preferably at an angle away from it. The head pulley (12) is preferably coated with a high friction material such as natural rubber. The planar belt flight (11) is adapted to support a file of at least one and preferably two blocks (15) of solvent-free paint composition, which becomes bonded to the pliable, durable heat-resistant material of the belt. In its simplest form, the flight (11) may slide upon a supporting table with the stationary guide of the turn round being the edge of the table. Alternatively, the paint blocks (15) may be fed vertically downwards between two belt conveyors moving in mutually opposite directions.

