

Title (en)
IMPROVEMENTS IN INK DRYING APPARATUS

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Application
EP 86306300 A 19860814

Priority
GB 8520367 A 19850814

Abstract (en)
[origin: EP0213855A2] The invention relates to improvements in ink drying apparatus of the type in which a conveyor belt (1) on which a printed substrate may be placed passes beneath an infra red radiation emitting surface (3) to convey the substrate from one end of the radiation emitting surface (3) to the opposite end of the radiation emitting surface (3) in which the radiation emitting surface (3) comprises a plurality of discrete radiation units. In a first aspect of the invention which is applicable with particular advantage to drying plasticised inks, the radiation emitting surface (3) is arranged such that, said one end of the radiation emitting surface (3) there is situated a bank (7) of radiation units (4) arranged contiguously, the number of radiation units in the bank (7) being sufficient to heat the printed ink but to a temperature above its triggering temperature, and adjacent the bank (7) in a direction from said one end to the other a gap (8) of a length sufficient to allow the rate of temperature rise to be slowed down, and adjacent said gap (8) further radiation units (9) to maintain the temperature of the ink and substrate. A second aspect of the invention is applicable equally to water-based inks and white spirit emulsion-based inks and with this apparatus the radiation emitting surface includes at said one end a first radiation zone (4A) comprising at least one radiation unit arranged to emit infra red radiation predominantly with a wavelength of less than 3.5 μm and in the peak absorption range of the substrate, and a second radiation zone (4B) spaced from the first radiation zone (4A) in a direction from said one end of the other end, the second radiation zone (4B) including at least two discrete radiation units (10 and 11) separated by a gap (12) each unit within said second zone (4B) being arranged to emit infra red radiation predominantly of a wavelength greater than 3.5 μm and within the peak absorption range of the ink.

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Citation (search report)

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