

Title (en)

Image forming method and apparatus using an intermediate.

Title (de)

Bilderzeugungsverfahren und Apparat unter Verwendung eines Zwischenbildträgers.

Title (fr)

Méthode et appareil de formation d'images utilisant un porteur intermédiaire.

Publication

EP 0557858 A1 19930901

Application

EP 93102383 A 19930216

Priority

- US 84366492 A 19920228
- US 84366692 A 19920228

Abstract (en)

Small particle toner images carried on an image member (1) are transferred to a thermally conductive intermediate member (20) by heating the intermediate member in the presence of an electrical field urging transfer. The intermediate (20) is heated to a temperature sufficient to sinter the toner particles at least when they touch the intermediate and other toner particles, but insufficient to damage the image member (1) or cause the toner to stick to the image member. The toner image is transferred from the intermediate (20) to a receiving sheet (10), which step can include sufficient heat and pressure to fix the image to the receiving sheet. An image forming apparatus includes a source (33) of at least one intermediate sheet (20) which is preferably both thermally and electrically conductive. Toner images are transferred from one or more image members (1) to the intermediate sheet (20) under conditions of raised temperature and preferably with the assistance of an electric field. The toner image on the intermediate sheet (20) is then overlaid with a receiving sheet (10) and a combination of heat and pressure transfers and fuses the toner image to the receiving sheet (10) in a single step, preferably while the sheets move at full machine speed. The sheets may then be slowed down or stopped, but are maintained together until cool at which point they are separated and the intermediate sheet (20) fed back to the source (33) of intermediate sheets. The image forming apparatus is particularly useful in creating multicolor toner images with small toners. <IMAGE>

IPC 1-7

G03G 15/16

IPC 8 full level

G03G 15/01 (2006.01); **G03G 15/16** (2006.01); **G03G 15/20** (2006.01)

CPC (source: EP)

G03G 15/0131 (2013.01); **G03G 15/161** (2013.01)

Citation (search report)

- [AD] WO 9103771 A1 19910321 - EASTMAN KODAK CO [US]
- [AD] US 4992833 A 19910212 - DERIMIGGIO JOHN E [US]
- [A] US 4935788 A 19900619 - FANTUZZO JOSEPH [US], et al
- [AP] US 5171653 A 19921215 - JUGLE DON B [US], et al
- [AD] PATENT ABSTRACTS OF JAPAN vol. 13, no. 460 (P-946)18 October 1989 & JP-A-01 179 181 (CANON) 17 July 1989

Cited by

EP1014219A3; EP0775948A1; EP0871082A1; US6052551A; US6155726A; EP0800114A3; US6183933B1

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