THE ANALYSIS OF THE PARTICULARITIES OF FLEXIBLE DIES AND OF THE OPTIONS TO ENSURE QUALITY IN FLEXO DIE CUTTING

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Rezumat. *În tiparul flexografic, ștanțarea face parte din categoria operațiilor de finisare a produsului tipărit în vederea obținerii de produse finite pliabile, etichete autocolante, cutii. De interes în prezentul studiu este ștanțarea cu ansamblul ștanță flexibilă – cilindru magnetic – contracilindru. Au fost analizate posibilitățile de asigurare a calității ștanței și a procesului de ștanțare, prin remedierea neconformităților și defectelor ștanței.*

Abstract. *In flexographic printing, die cutting is classified among the operations needed to finish the printed product into pliable end-products, self-adhesive labels, boxes. For the present study, die cutting with the flexible die – magnetic cylinder – anvil ensemble is of interest. The following were analysed: the possibilities for ensuring the quality of the die cut and of the die cutting process, by remedying die cut nonconformities and defects.*

Keywords: flexible dies, flexo die cutting, flexo die cutting problems, flexible die defects, die cutting errors.

1. Introduction

In flexographic printing, the presses have a modular design, making it possible to include extra die cutting elements and die stations. The finished product determines the production method and, implicitly, the die cutting method [1]. Three types of die cutting are possible:

a) top-bottom die cutting: the material is cut from the front, resulting in self-adhesive labels, perforated and/or cut-out products;

b) bottom-top die cutting: the linear cut of the material, from the opposite side of the material. This type of die cutting is frequently followed by top-bottom die cutting, in order to get self-adhesives with partially adherent areas, perforated products and/or cut-out products;

c) simultaneous up and down die cutting entails cutting the face and the opposite side of the material following different contours, in order to make special use self-adhesives; the contours are cut at the same time as the detachment of the product from the empty printing areas/waste areas and there is the possibility to fold the products made from fine cardboard.

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