## METHODS FOR IMPROVING PROCESS CONTROL AND CORRECTION IN FLEXOGRAPHIC PRINTING

## Dorin PIŢIGOI¹, Emilia BĂLAN²

Rezumat. Testerul de imprimabilitate este definit ca fiind un dispozitiv care aplică uniform o cantitate reproductibilă de cerneală pe un suport, în condiții bine definite, folosind un control motorizat al funcției proces specifice aplicării filmului de cerneală. Această caracteristică repetabilă a procesului de trasare poate facilita și corelarea condiției de tipar curente definită prin parametrii primari de proces specificați prin procesul de tipar, suport, cerneală, ecran, ordinea imprimării etc. Prin creșterea utilizării și funcționalității testerului de imprimabilitate, tipografii au posibilitatea de a utiliza trasările de laborator pentru controlul și corecția procesului rezultând reduceri semnificative în costuri și timpi de producție.

**Abstract.** The printability tester is defined as a device for uniformly applying a reproducible amount of ink to a substrate under specified conditions using a motorized control of the ink transfer process specific function. This repeatable print operation characteristic may also facilitate the correlation of the actual printing condition set by the primary process parameters specified by printing process, substrate, ink, screening, printing order, etc. By extending the usage and functionality of the printability tester, printers have the possibility to use laboratory test prints as means of process control and correction at a fraction of cost and time.

**Keywords:** flexographic printing, process Control, printability tester, laboratory preparation of test prints

## 1. Introduction

From different market requirements and expectations the need of reproduction quality is giving the motto "Printing the Expecting" a more meaningful relevance across production locations, printing technologies, substrate and production batches and even viewing environments. This need is pushing the flexographic printing process to become more consistent and predictable implying a higher level of the process standardization in order to ensure that the various parties involved in the flexographic printing production are able to control their part of the process in a meaningful and repeatable way. An essential component in this process is the specification of the ink set characteristics.

<sup>&</sup>lt;sup>1</sup>Mathematician, affiliation: Faculty of Engineering and Management of Technological Systems, Machine and Production Systems Department, University "Politehnica", Bucharest, Romania, (e-mail: <a href="mailto:dorinp@transilvae.ro">dorinp@transilvae.ro</a>).

<sup>&</sup>lt;sup>2</sup> Assoc. Prof., PhD Eng., Faculty of Engineering and Management of Technological Systems, Machine and Production Systems Department, University "Politehnica", Bucharest, Romania, (e-mail: emilia.balan59@yahoo.com).