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Development of Portable Gauge for Measuring the Thickness of Blankets on Blanket Cylinder of Offset Printing Machine

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Abstract

This article has the objectives to develop a dial thickness gauge on blanket cylinder of an web-offset printing machine. This is to adjust size of the blanket cylinder which causes pressure between the printing cylinder in accordance with the requirement of the printing machine. However, measuring the thickness of under sheet and the blanket sheet which wrapping and stretching around the blanket cylinder, the blanket stretches out and the thickness of blanket reduces including the thickness could not be measured while the blanket is stretching by the common thickness gauge. It is to test accuracy of the created measuring instrument and found that the deviation of measure is not over ±0.01 mm the average error rate 6.67 percent. The use of measuring instrument is tested by designing the plates with the printing quality control panel. This is to compare the printing quality between the first printing which measures the value of the rubber blanket and did not set up the distance of the blanket packing and the second printing which adjusts pressure of blanket for the equal distance of the blanket for all cylinders. The test result of the first printing showed that the mark of 4 color out of register compared with the second printing, mark of 4 color perfect register printing quality higher.

Keywords: Web-offset printing machines, Blanket cylinder, Printing cylinder, Under sheet