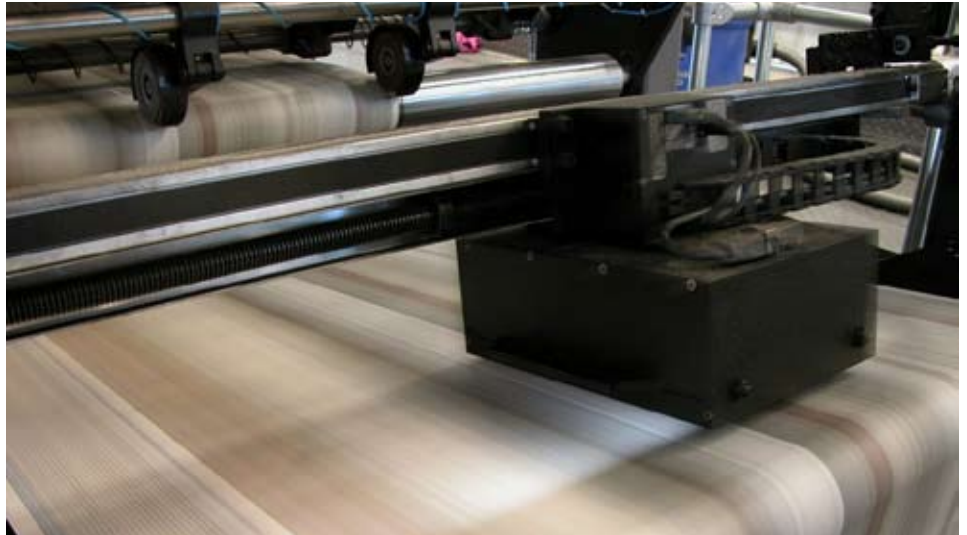


# Q.I. Press Controls: IDS

The Intelligent Density System (IDS) works without control elements. It takes individual pictures of certain areas of the running web and compares the colour values with the prepress data.



**IDS, the automatic colour measurement and control system of Q.I. Press Controls, can be used with or without colour control strips. The no-mark mode is especially suitable for newspaper applications.**

"Fifteen years ago, inline colour control was an option for heatset presses, whereas today it is standard", says Menno Jansen, Chairman of Q.I. Press Controls. "In the newspaper industry", Jansen continues, "we are still just at the beginning. But for the newspaper industry to produce in line with ISO standards and be in a position to face the challenge of the Internet, it is essential that it should supply a better and more consistent quality. If all presses were equipped with closed-loop colour controls, advertisers could be certain that the Coca-Cola red was reproduced identically, whether printing was done in Tokyo, Berlin or New York."

IDS was installed for the first time in 2007. According to the manufacturer, today there are 56 cameras (28 webs equipped with 2 cameras) in use on commercial presses and twice that number, namely 116 cameras (58 webs, or printing towers respectively) on newspaper presses.

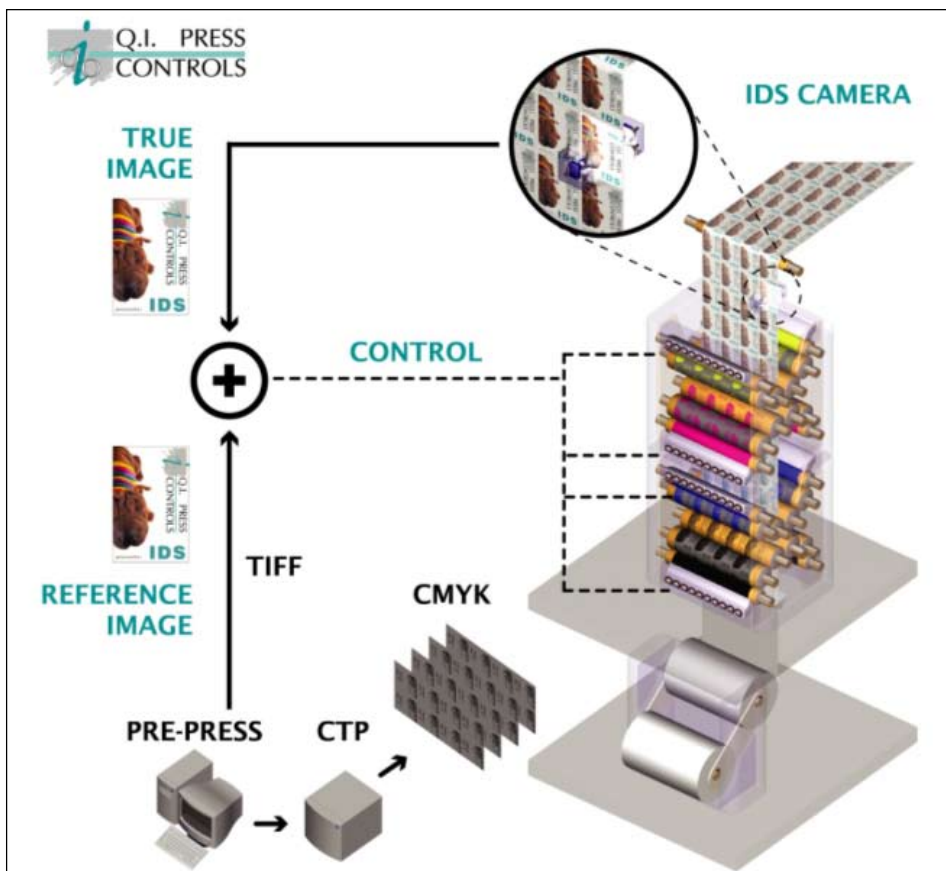
## **Measurement of selected image areas without printed colour control strips**

For the measurement, a proprietary image scanner (CCD matrix camera) is used that carries out a CIElab-based colour measurement in relevant page areas (Regions of Interest). An analysis of the prepress TIFF data files realised by the Reference Analyzing System (RAS) determines which areas are selected for measuring, which is then done without the use of marks. Any deviations in the CIElab colour values from the values measured in the printed image in relation to the reference are converted into CMYK deviations. Menno Jansen says: "Using the digital print data (TIFF data files), combined with a customer-specific ICC profile, a reference for the page image to be printed is produced that is in line with ISO standards. The many measurements in the printed image ensure a very good colour match."

## **Special features of the system and advantages for the user**

According to Q.I. Press Controls, the system includes the following special features:

- Automatic function, known to work with newsprint
- Measurement in the free-running web (low-cost, simple installation)
- Softproof display



The IDS workflow.

- Alarms indicate printing problems (wrongly mounted plates, toning, problems with the ink/water balance).
- Simple cleaning due to ink mist shield)
- Dot gain measurement in 10% steps
- Automatic selection of measurement positions
- Quality reports due to web-based IQM system.

The operating workload for the printer is minimal. The integration via PECOM and PRIME interfaces allows automatic system operation. This means, M. Jansen says, that all the printer must do is load the job in the usual way to configure the IDS automatically. To do this, he has a touch screen at his disposal. "As soon the press starts up, the cameras begin the colour control in accordance with ISO standards. The operator has the possibility to overwrite the system and give manual corrections. These new values are then maintained until the end of the run."



Example for the distribution of the so-called Regions of Interest (ROI) for the colour measurement which are automatically selected by the IDS.

## In brief

■ **System name:**  
Intelligent Density System (IDS)

■ **Manufacturer:**  
Q.I. Press Controls,  
www.qipc.com

■ **Measuring device:**  
CCD matrix camera

■ **Measuring position:**  
Image-based measurement (newspaper application) or measurement in the colour control strip (commercial application).

■ **Function:**  
One camera is used for each web side to take a series of pictures of relevant page areas in the free-running web. The system is self-configuring and is activated immediately at press start-up.

■ **Colour reference:**  
L\*a\*b\* values of high-resolution pre-press data are used for purposes of comparison.