PressAssess Version 2

Developed by:

Vistron GmbH, Symbotics Ltd,

Technology Coaching BvbA



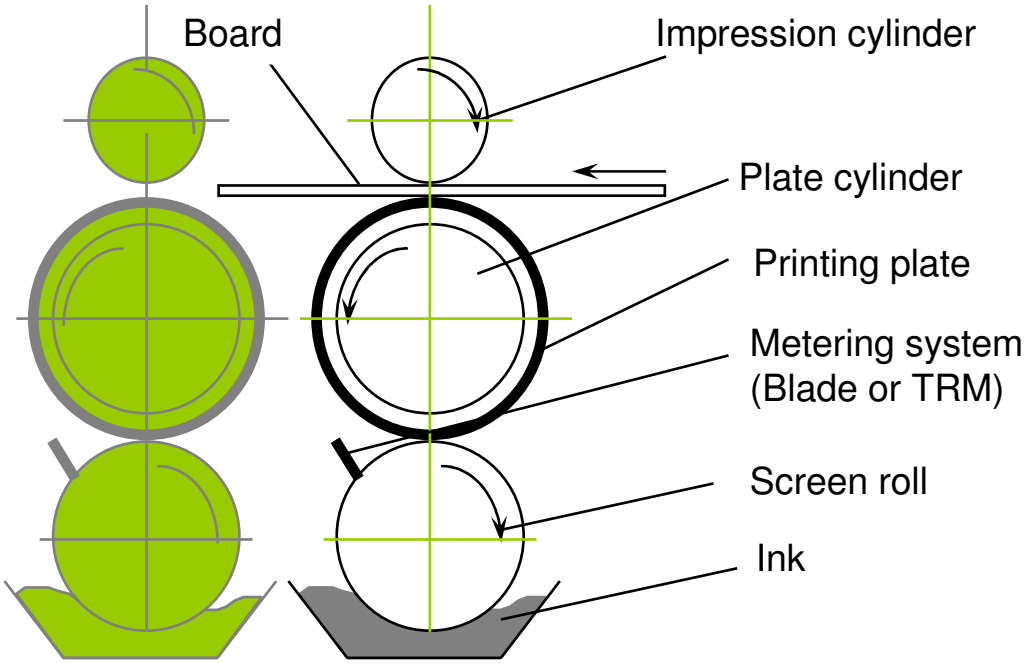
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Presentation Content

- Introduction;
- Quality elements Printing (and conversion);
- PressAssess Equipment List;
- PressAssess Test Procedure;
- PressAssess Evaluation (Demo);
- Elements of complete conversion machine evaluation;
- Remarks;
- Conclusion.

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What is Printing?



Printing is:

Getting the right amount
of the right ink
in the right place
on the right paper
against the right costs



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The 5 Print Quality Elements

1. **Register variation:**
   - Colour To Colour;
   - Print to Die Cut;
2. **Colour variation:**
   - Printed colour;
   - Substrate colour;
3. **Cleanliness. Defects e.g.: dust;**
4. **Edge Sharpness. Edge from un printed to printed area: Bar-Code, Dots;**
5. **Mottling. Fine structures in full tone area.**

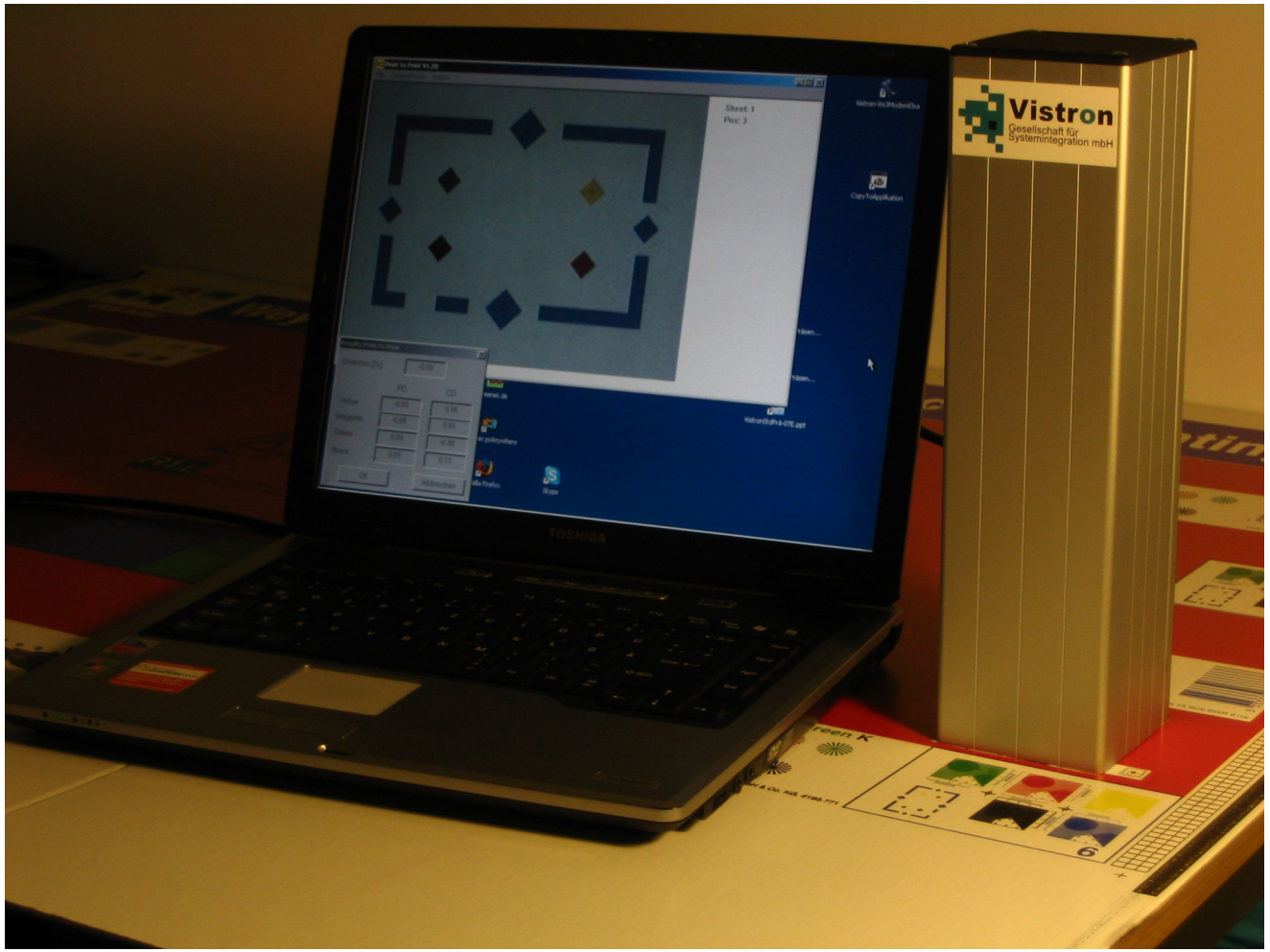
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PressAssess Equipment list 1

- Printing Machine;
- PressAssess Test Form;
- PressAssess Cutting Die (Optional);
- Ink;
- Board;
- Vistron Camera;
- Spectrophotometer;
- Sample bottles;
- Reference printer (Ink supplier).

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PressAssess Equipment list 2



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PressAssess Test Procedure

Time	Topic
30	Introduction, Machine Data Collection
45	Set-Up Printer and Die cutter
15	Print samples at 90% of maximum speed.
15	Measure and calculate print register offset
30	Print Samples, using station 1, 2, 3, 4 and 5 at 90% of maximum speed. Mark 10 consecutive printed samples for: ➢Colour to colour register; ➢Lead edge to first colour; ➢Colour variation.
15	Take wet samples of ink for printing on banded screen roll at ink supplier to determine wet ink film thickness transferred.
15	Print and die cut samples (Switch of black print station)
15	Measure and calculate die cut register offset
15	Print and die cut samples at 90% of maximum speed. Mark 10 consecutive printed samples for: ➢Print to die cut register;
15	Move Black print plate to station 6 and change colour to black
15	Print samples at 90% of maximum speed.
15	Measure and calculate print register offset
15	Print Samples using station 4 and 6 at 90% of maximum speed Mark 10 consecutive printed samples for: ➢Colour to colour register; ➢Lead edge to first colour; ➢Colour variation;
15	Take wet samples of ink for printing on banded screen roll at ink supplier to determine wet ink film thickness transferred.

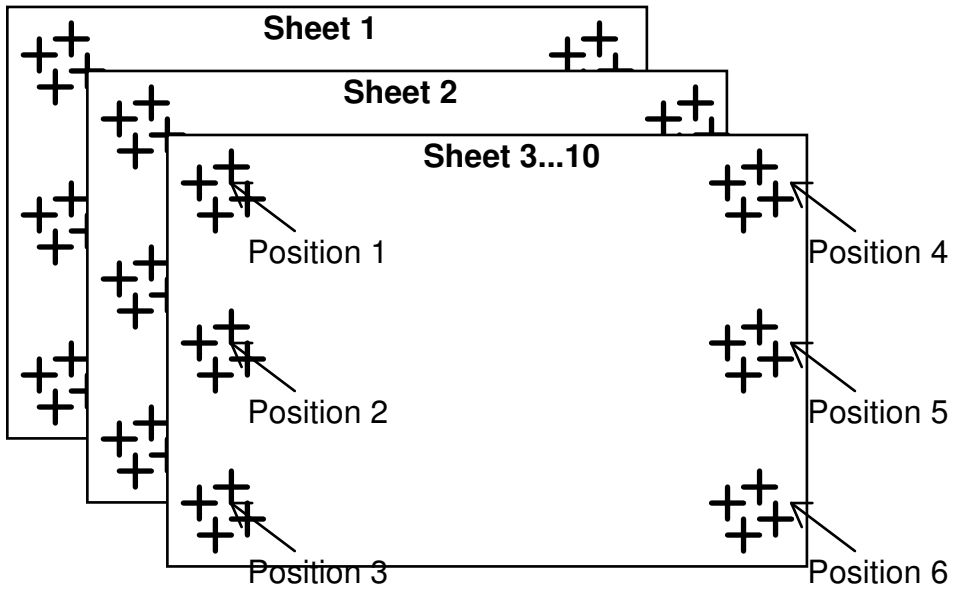
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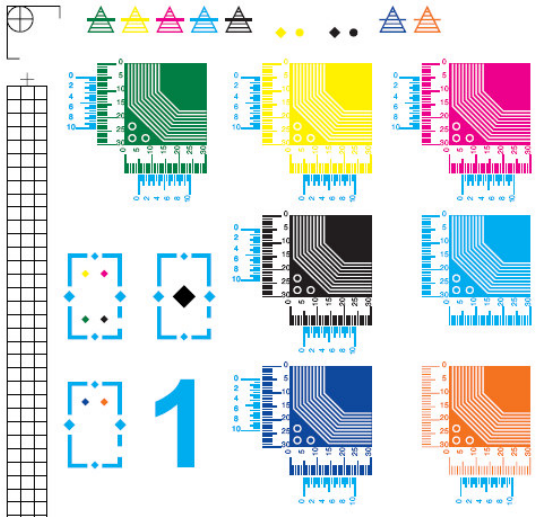
PressAssess Evaluation

- Data Collection
- Colour to Colour Register;
- Print to Die Cut Register;
- Centreline values;
- Feed to First Colour;
- Colour variation;
- Ink Film Thickness;
- Results Table;
- Results Mapping.

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Data Collection

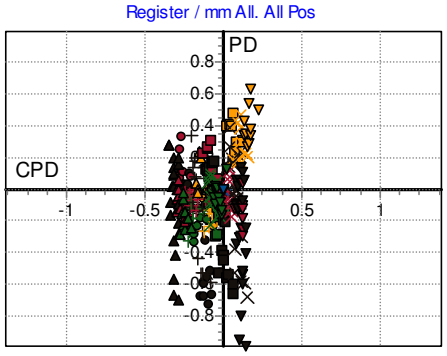




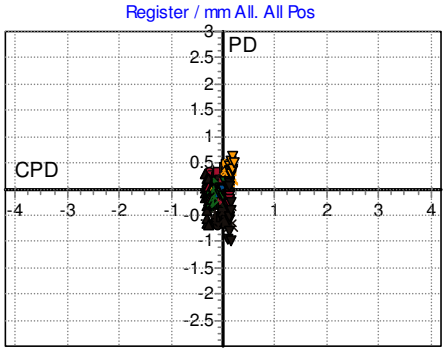
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Colour to Colour Register

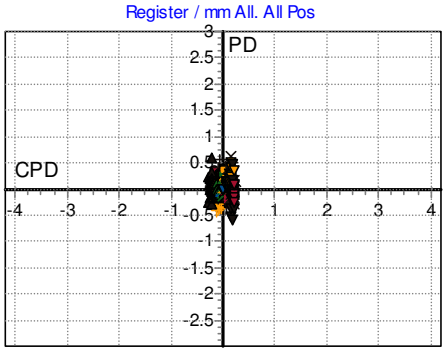
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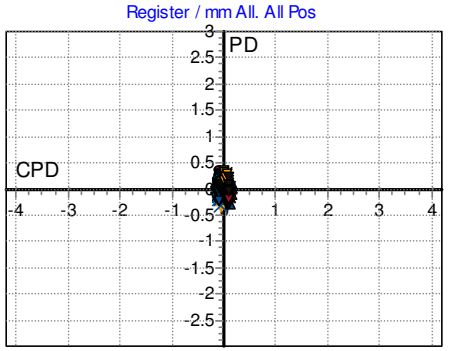
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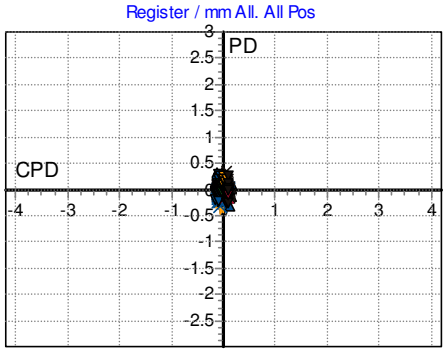
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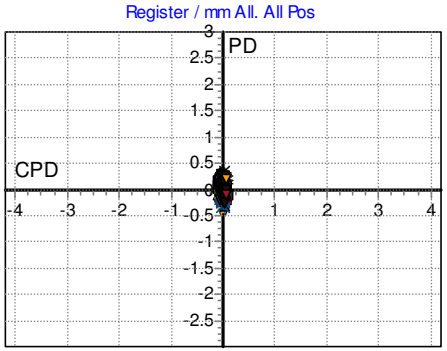
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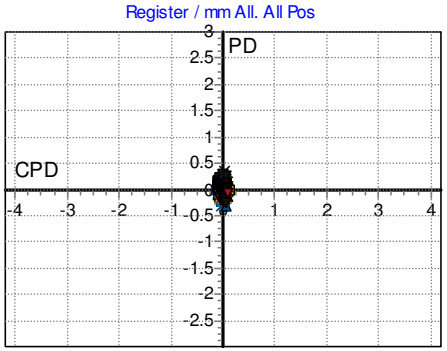
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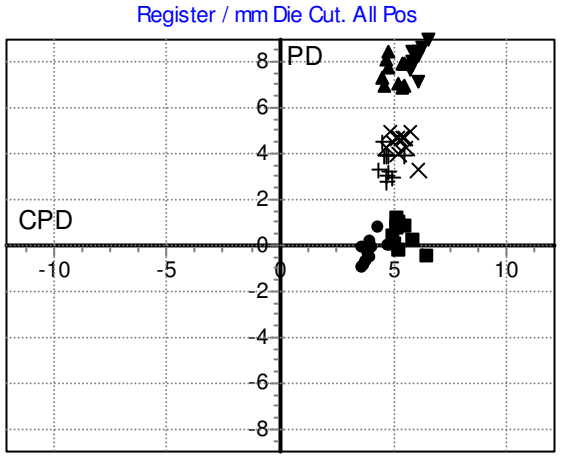
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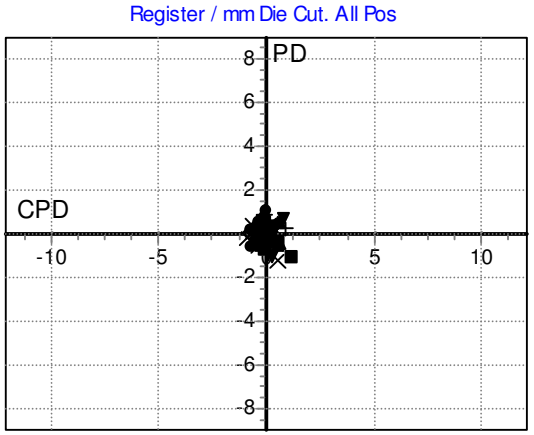
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Print to Die Cut Register

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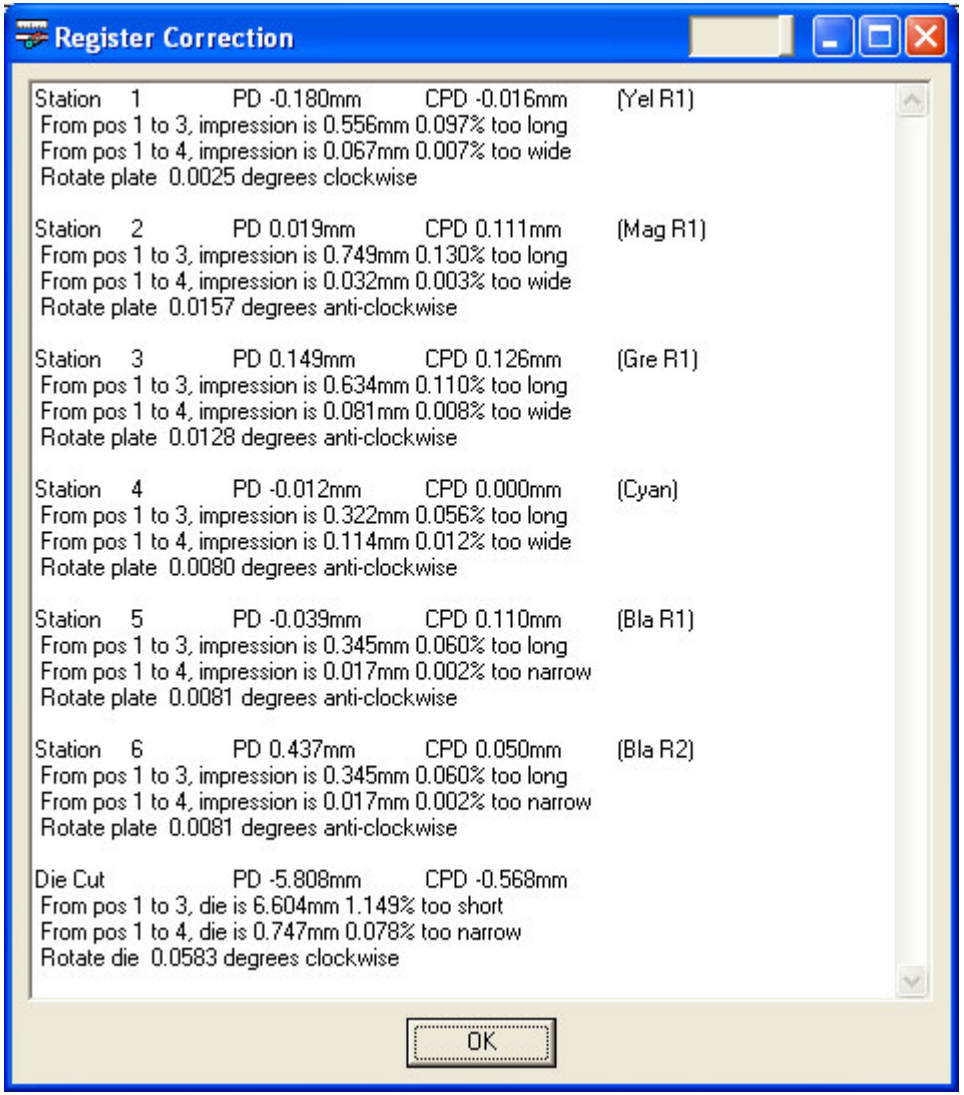


Corrected



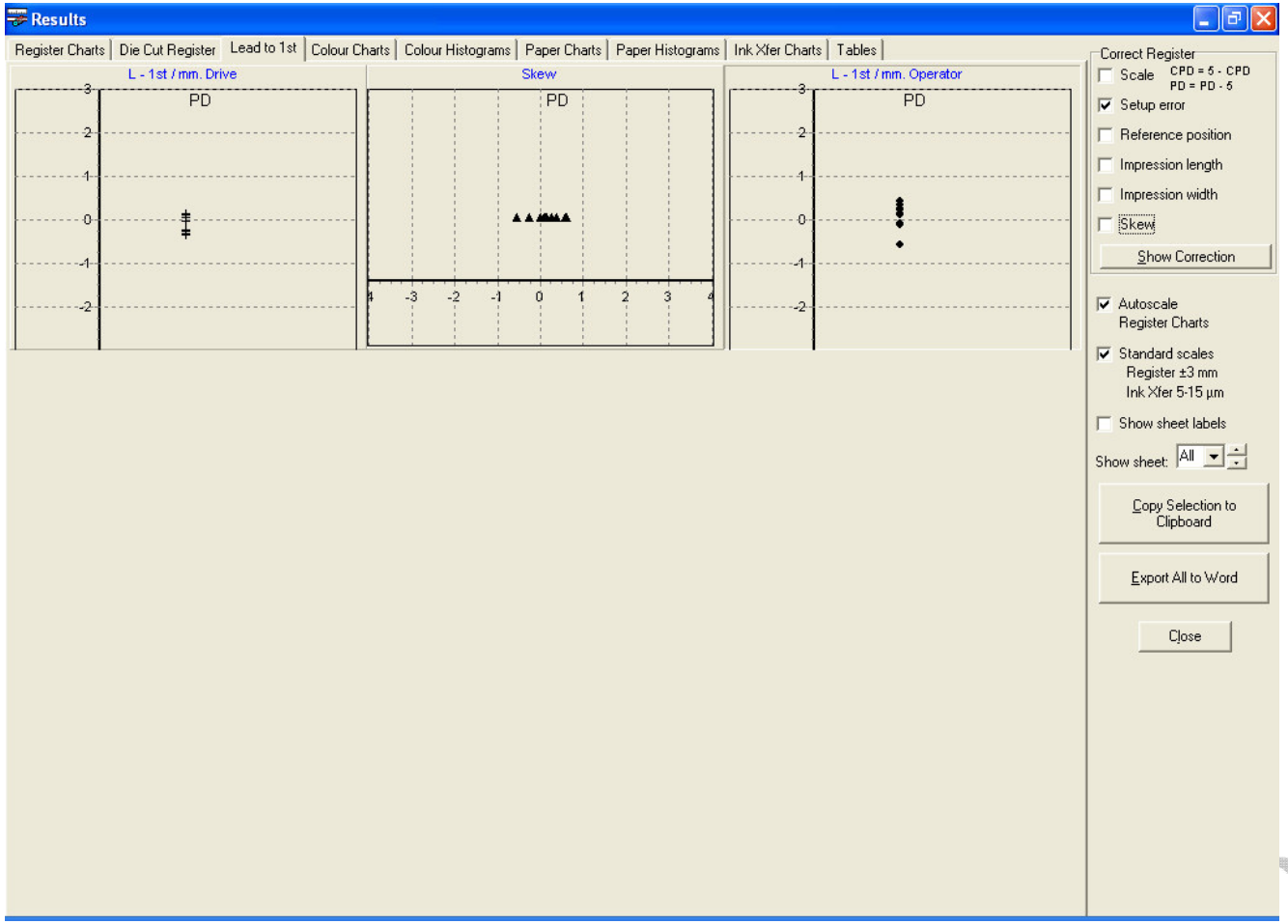
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Centreline values



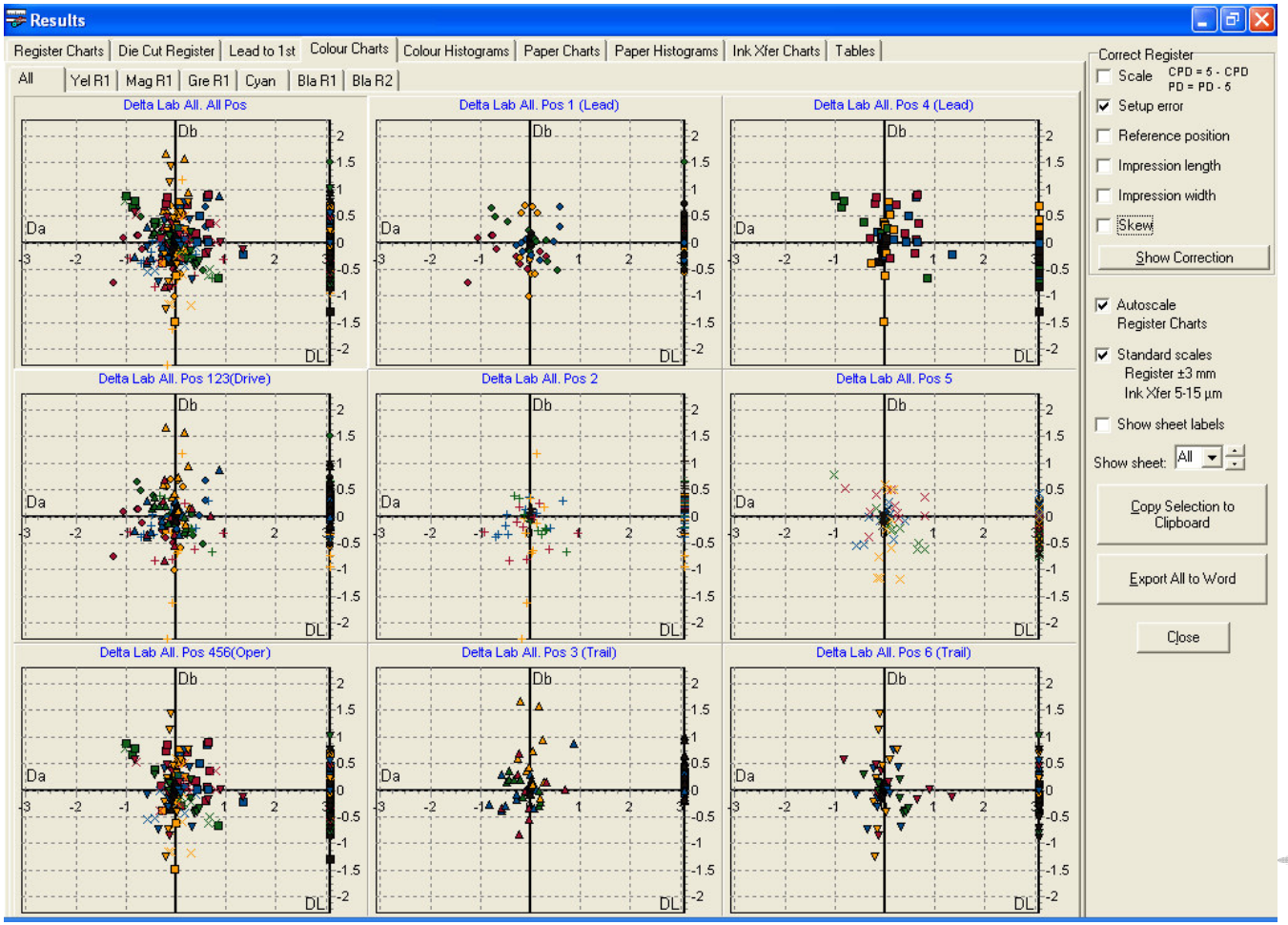
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Feed to First Colour



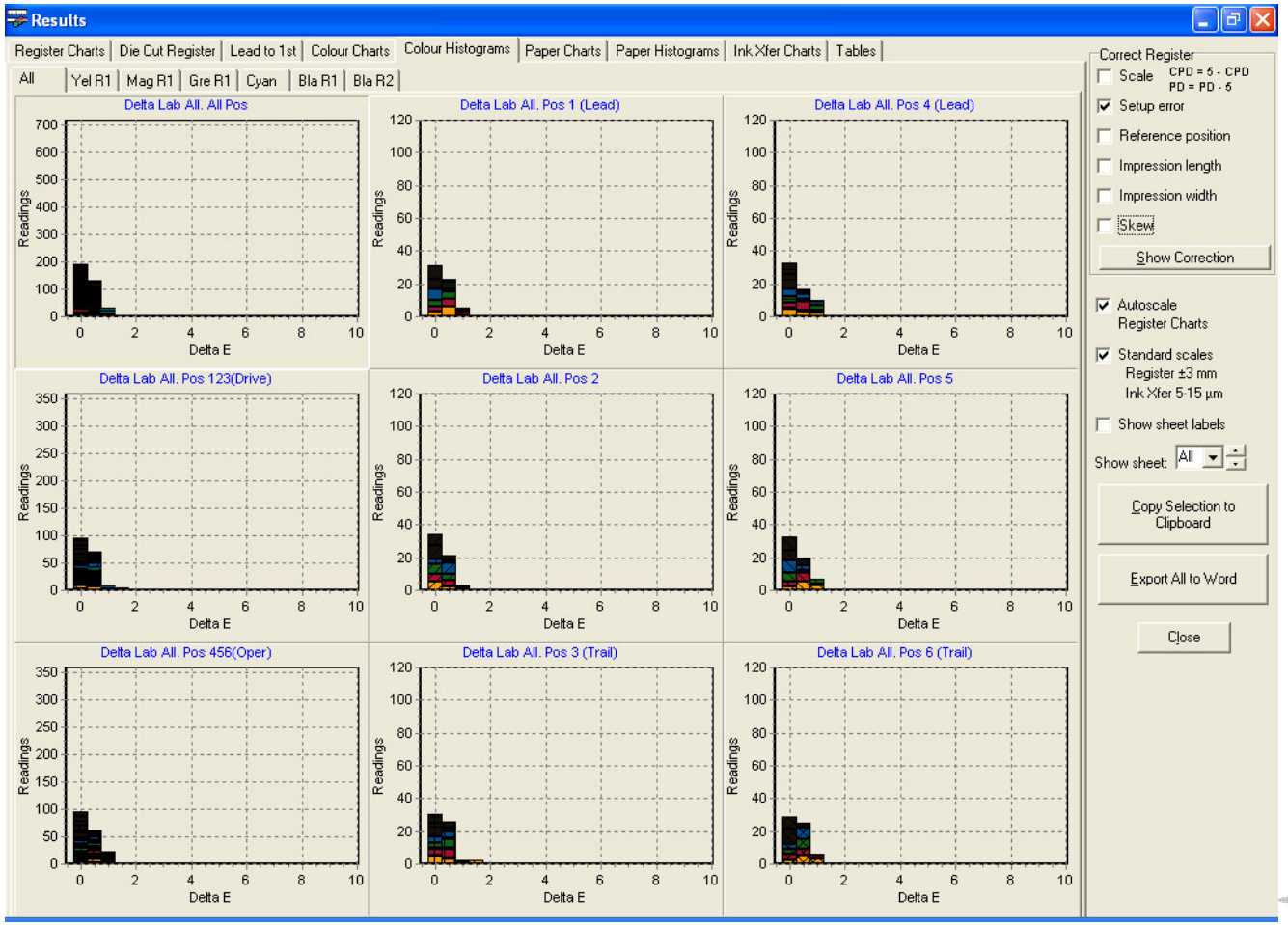
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Colour variation 1



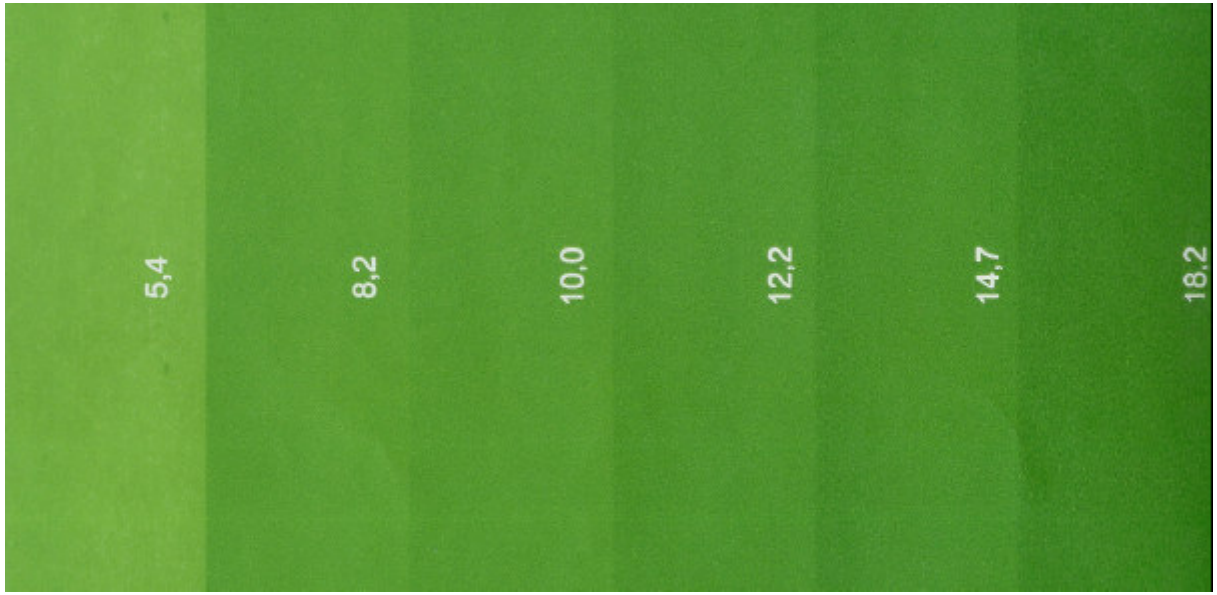
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Colour variation 2



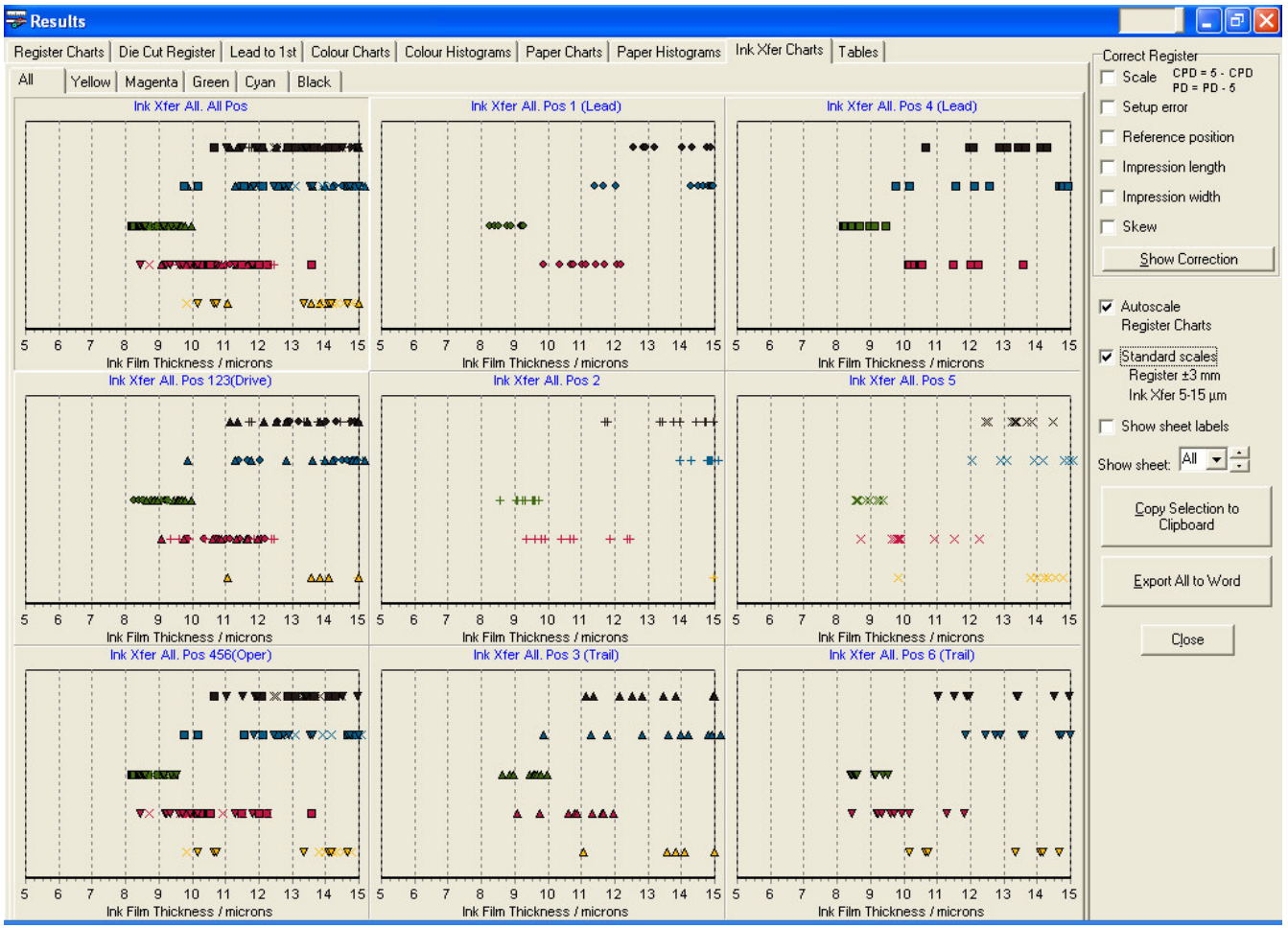
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Ink Film Thickness
Referents print



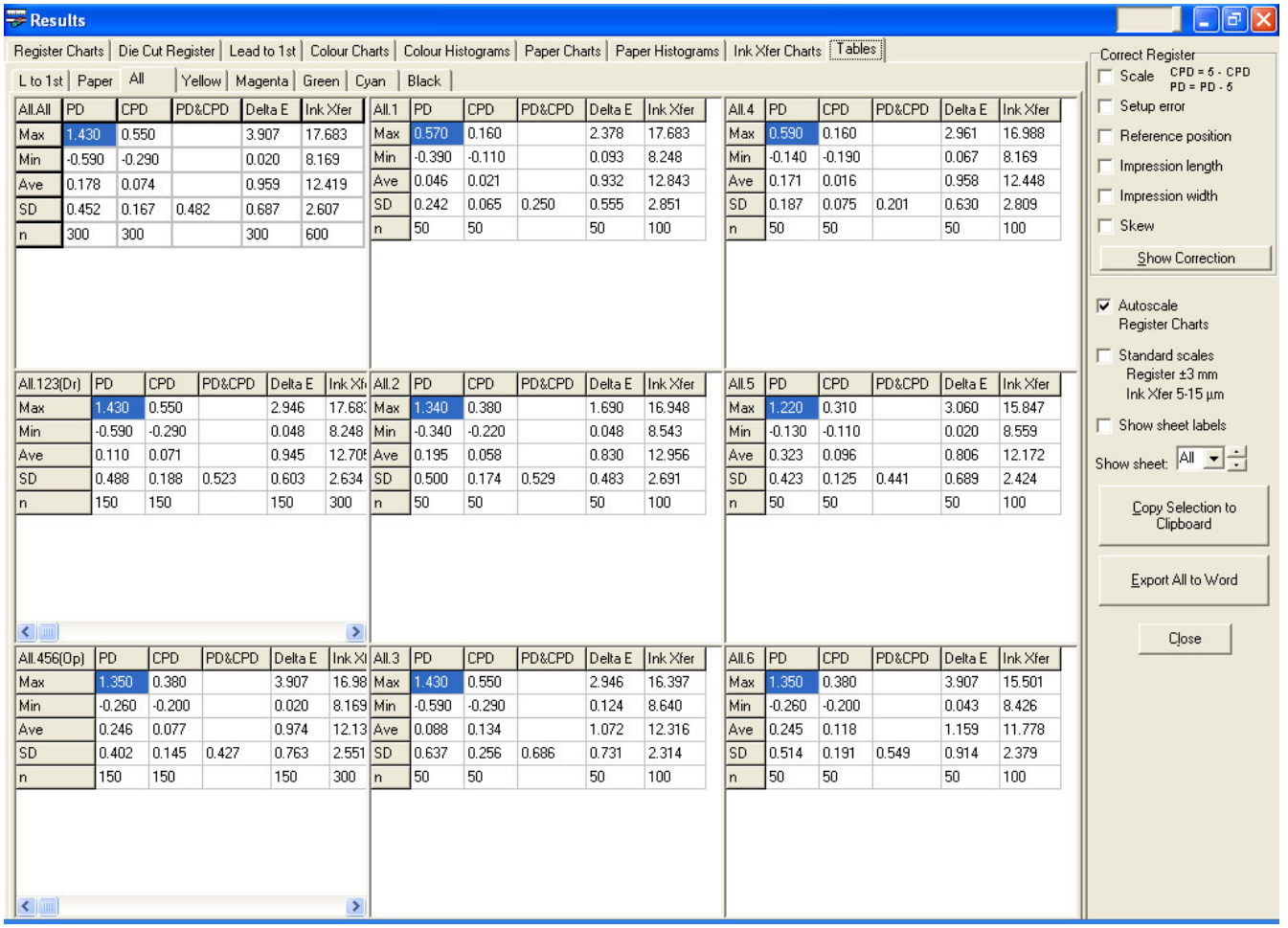
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Ink Film Thickness Evaluation



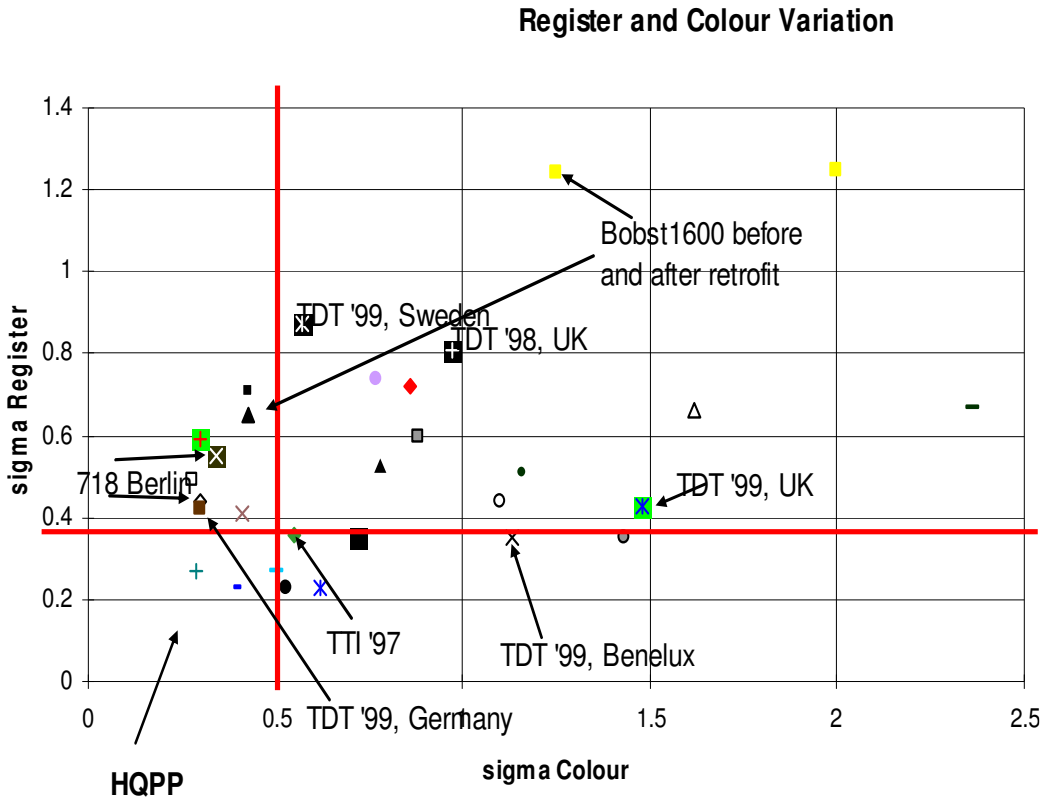
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Results Table



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Result Mapping



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Elements of complete conversion machine evaluation

- TIR Screen roll, plate cylinder and impression cylinder (Total indicated run out);
- Screen Roll IFT (Ink Film Thickness on surface screen roll);
- Lead edge to first colour register;
- Colour to colour register variation;
- Print to Die cut register variation;
- Die cut length variation;
- Scoring depth variation;
- Colour variation;
- Ink Transfer test;
- Bar code bar width gain variation;
- Ink loss and residual water during colour change;
- Folding variation.

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Remarks

- Print processes should compliment not compete with each other;
- A process can never be used as a quality reference;
- Quality elements for print are independent of the process used to print;
- Using a process as a quality reference makes any other process producing similar products inferior. This is killing the business!
- Select equipment/processes based on your customer needs not on your operator skills and get paid for it!

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Conclusion

- PressAssess provides quantitative data on the printing process;
- PressAssess can be used:
  - For machine comparisons;
  - During the purchasing/commissioning process;
  - Before and after major maintenance;
  - As part of QA procedures;
- Always perform a PressAssess test before collecting print process data used for artwork correction. The artwork correction needs to be in line with print process variability.

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