

## Endenim: real-time monitoring of indigo and sodium dithionite concentrations in the dyebath

Endenim is a fully automated on-line indigo dye range process analyzer system designed specifically to address the need for accurate, high speed, and cost effective monitoring of indigo dye ranges. Endenim can be applied to both indigo rope and sheet dye ranges.

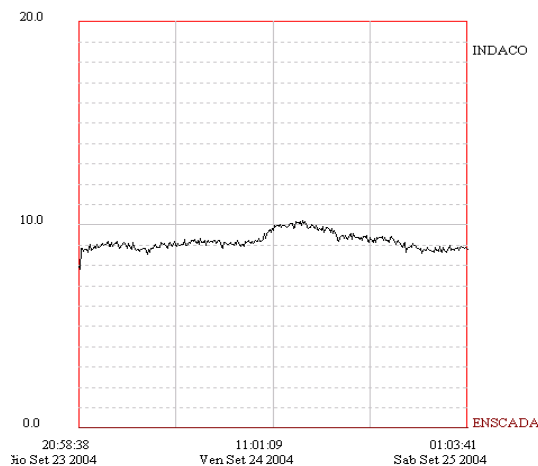


Endenim can sample a dye range, process the sample, perform analysis and display complete analytical results in a little as 5 to 7 minutes for each of the two measurements: indigo and sodium dithionite concentration.

The control software of Endenim is a custom in house designed software.

The control software let the indigo dyer to monitor the actual indigo and sodium dithionite concentrations in the dyebath.

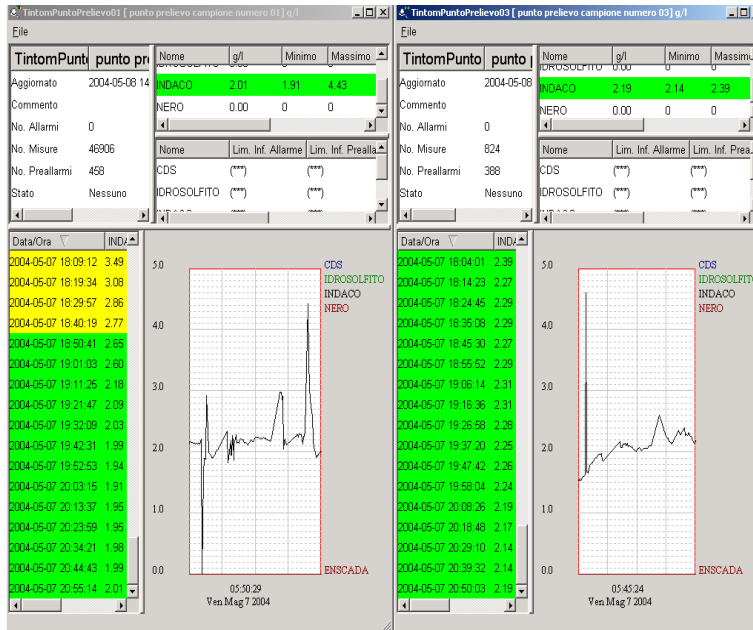
In the graph is shown a deviation of indigo concentration of about 1g/l from the set point at 9 g/l.



Indigo concentration (g/l) vs. time

## Product note

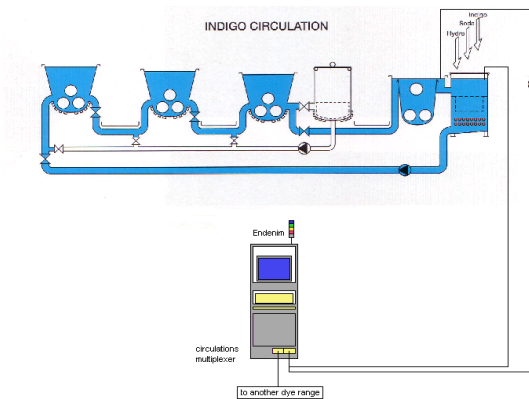
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Endenim features very precise measurement at low concentrations.

Result views of two sampling points.

Endenim is easy to use and demands low maintenance.



- Endenim is connected to the indigo dye range by means of a sampling loop connected to the circulation of the dye liquor.
- Built-in automated stream switching allows the user to analyze the indigo recirculations of two dye ranges.

## Product note


### System features :

- Chemicals analyzed: indigo dye and sodium dithionite.
- Analysis time: five to seven minutes each analysis.
- No use of analytical grade reagents.
- Indigo and sodium dithionite measurements are independent.
- Minimal routine maintenance.
- Low cost of ownership.
- Fully automatic on-line operation with minimum operator attention.
- High reliability.
- Built-in automated stream switching allows the user to analyze the indigo recirculations of two dye ranges.
- It features very precise measurement at low concentrations.

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### System benefits. The indigo dyer can:

1. quickly reach and maintain equilibrium of an indigo dyebath and produce consistently dyed yarns.
2. take pre-emptive corrective action as needed to ensure the desired final shade.
3. reduce the sodium sulfate content in the effluent going to waste treatment.
4. reduce to a minimum the manual controls of indigo and sodium dithionite.
5. produce reports of indigo and sodium dithionite concentrations.

### Contacts:


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Rev. 15-06-2009  
Printed in Italy