Optical Color Sorting in Wheat Cleaning

IAOM
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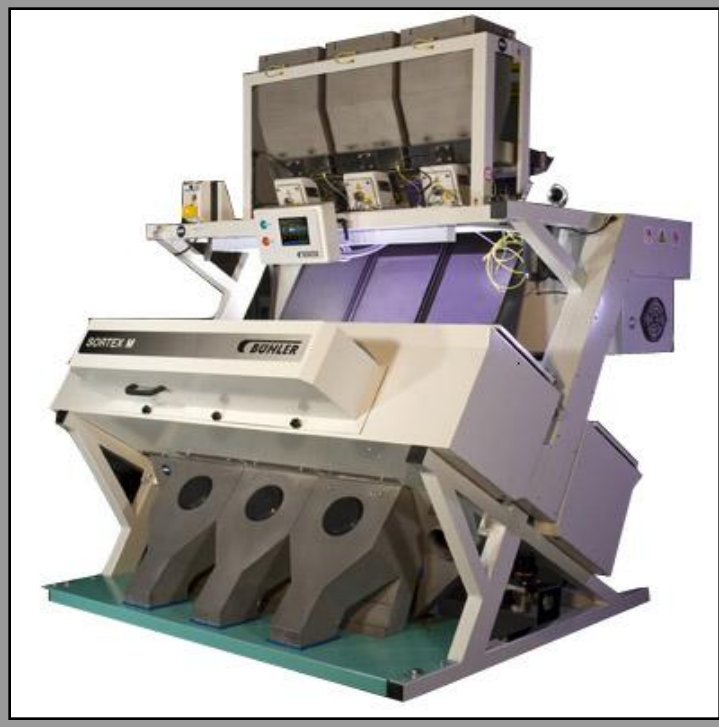


Sortex MSOC the future standard cleaning solution in mills.

Application

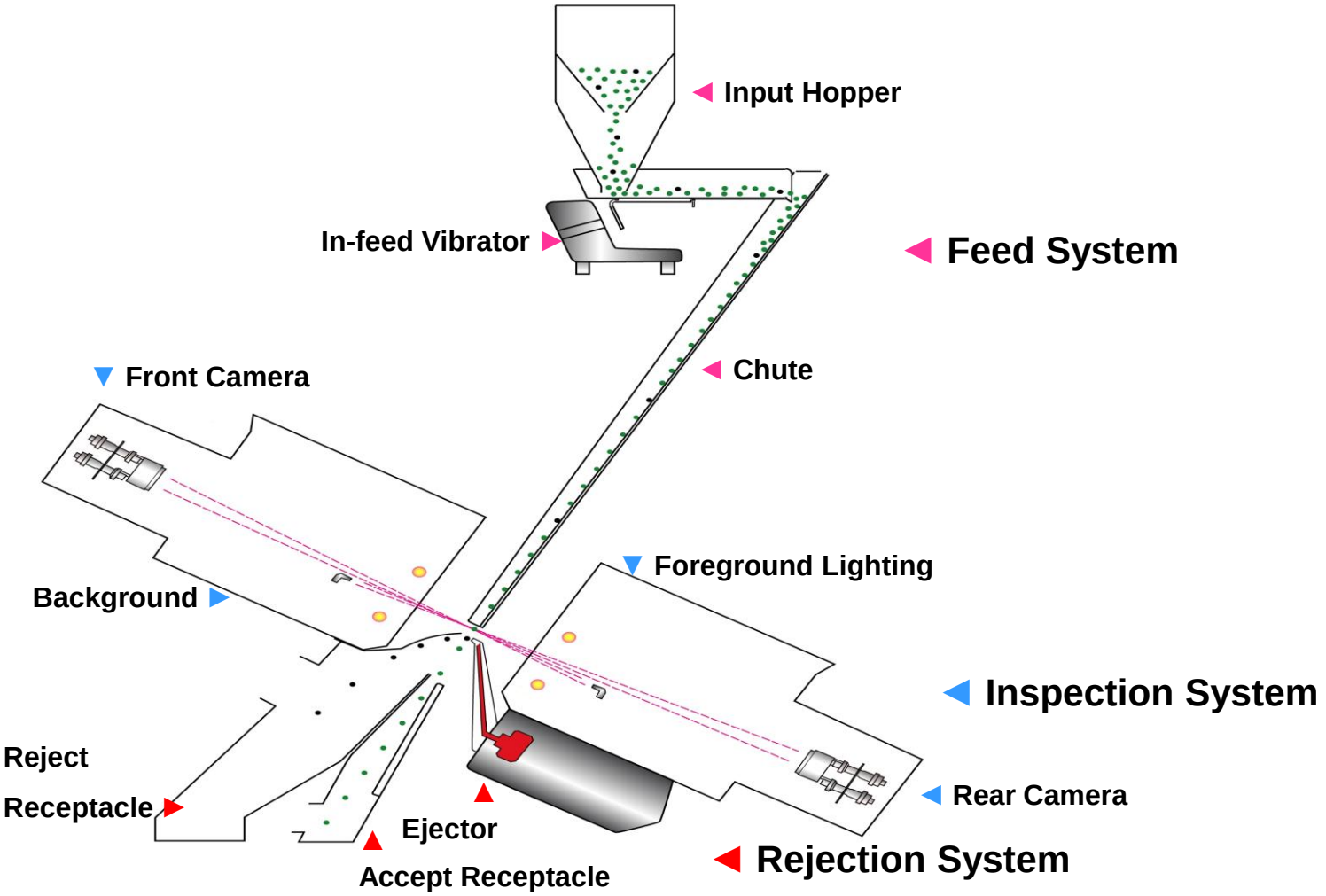
- Advanced cleaning solution to replace Trieur

Features

- Higher cleaning accuracy results in fewer good kernels in rejected material
- Lower energy consumption compared with mechanical cleaning systems (Trieur)
- Constant operational performance

MSOC M3

The color sorter selectively rejects impurities with color deviations.

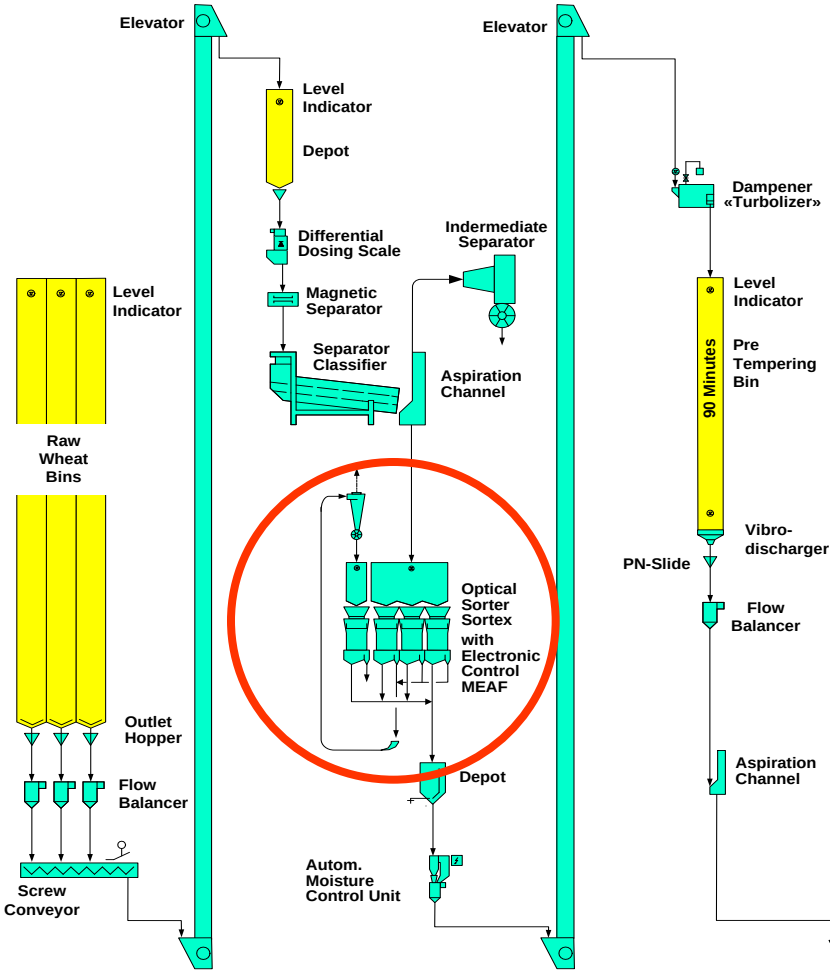


The color sorter MSOC is equipped with two visible monochromatic cameras for either a dark/dark or dark/light sort.

Dark defects
- Foreign seeds
- Diseased kernels
- Discolored germs
- Ergot
- Dark stones
- Wood

Light defects
- Broken kernels
- Fusarium
- Untrashed wheat
- Light colored stones

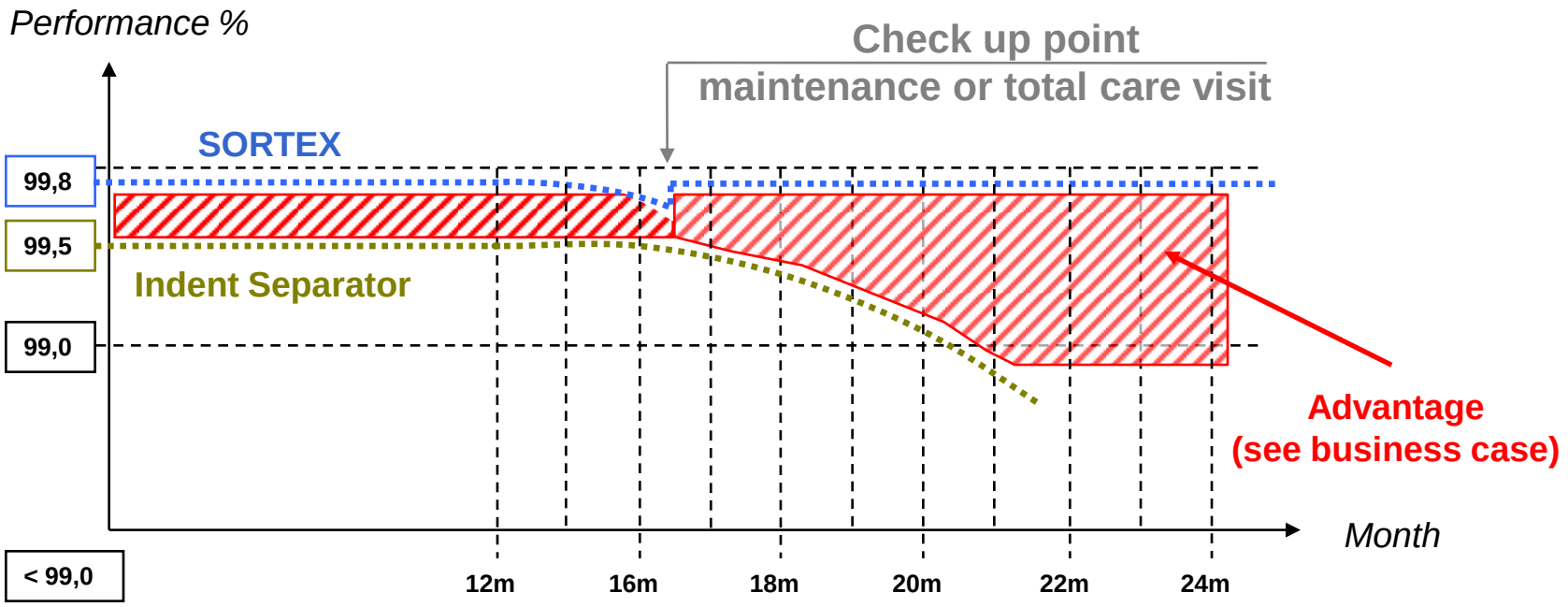
The most common application of the color sorter is the replacement of the trieur in the 1st cleaning section.



System design

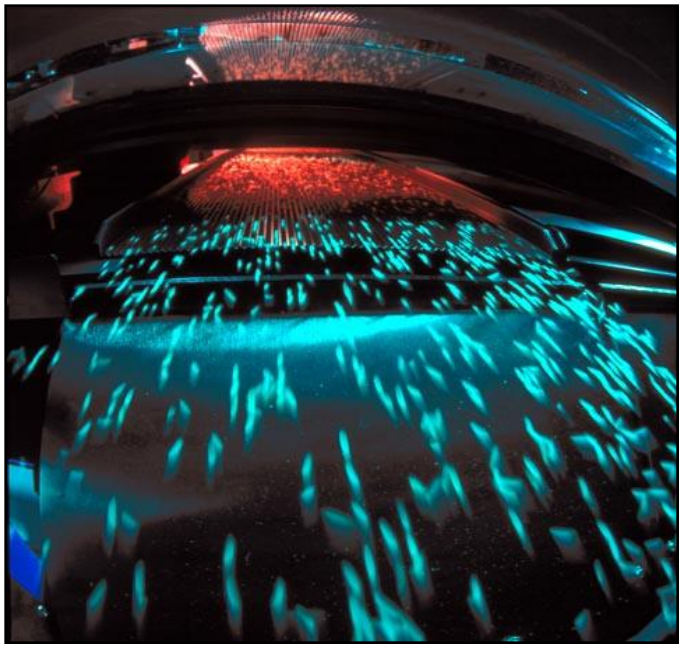
- Color sorter replaces the trieur in the 1st cleaning section
- The colour sorter allows removal of same size impurities that are different in colour
- The colour sorter can be used in conjunction with a trieur, there is however a tendency in the market that the colour sorter more and more replaces the trieur in the conventional cleaning section

The color sorter has an excellent longterm performance with little performance deterioration.



The MSOC automatically calibrates its electro-optical sensor system during operation for excellent performance stability.

- Automatic monitoring of light intensity and product brightness
- Automatic re-calibration whenever necessary to ensure consistent accept and reject
- Automatic wiper cleaning of the optical area when the light intensity has dropped due to dust-build-up



Business Case - Color Sorting vs. Trieur for 12 t/h cleaning capacity.

	Benefits with Sortex	Sortex 	Trieur 
Wheat before cleaning [t/p.a.]		80‘000 t	80‘000 t
Accurate classification [%]	Less Screenings 0.8%	1.7 %	2.5 %
Wheat after cleaning [t/p.a.]	640 t more wheat	78‘640 t	78‘000 t
Savings of Wheat with colour sorting [$/p.a.]	640 t x $ 200.- / t = **$ 128’000.-** 1)		

1) 5.5 $ per bushel wheat (27 kg)

Thank you!

Tip defects

Diseased kernels

Foreign seeds

Ergot