PRINT INSPECTION FOR METAL PACKAGING

100% inline inspection for coating & printing

ISRA VISION

Part of Atlas Copco Group

100% inline inspection for coating and printing (offset or digital printing)

Faster and more reliable than the human eye

Monitoring throughout the entire printing process

Increasing the amount of saleable material

Avoiding waste from the earliest possible point in time

INSPECTION FOR COATED & PRINTED METAL SHEETS

ISRA VISION is your partner when it comes to finding solutions for inspection of coated and printed metal sheets. As a globally active machine vision company, we focus on providing customized solutions with modern high-performance cameras, lighting systems tailored to the respective application and intelligent software solutions and algorithms. Our experience in a wide range of industrial segments gives us comprehensive expertise in this context.

Metal packaging is in high demand globally, serving to an array of industries spanning food and nonfood tins and containers, decorative cans, cosmetic containers as well as crown caps and lids. As a result of this diverse product mix, ensuring top-tier quality throughout the production process is imperitive. Defects in coating or print can compromise the integrity of the product, rendering it unsellable.

We consider ourselves your partner to support with the right inspection solutions throughout the entire production process. Our state-of-the-art inline printing and coating inspection systems provide the the quality control and ensure that every aspect of the process meets strict standards and your customers' specifications.

In a process as demanding as printing on sheet metal, where the precision of print quality, coating application and material integrity is of the utmost importance, even the smallest deviation can have a profound impact. Color deviations, printing errors, contamination or material defects can significantly affect the quality of the end-product.

At ISRA VISION, we recognize these challenges and design our inspection systems to overcome them. Our solutions guarantee 100% quality control and process optimization, even at the highest production speeds. Whether in offset or digital printing, our versatile systems offer a wide range of applications and ensure that every product meets the high demands of today's markets.

Learn more:

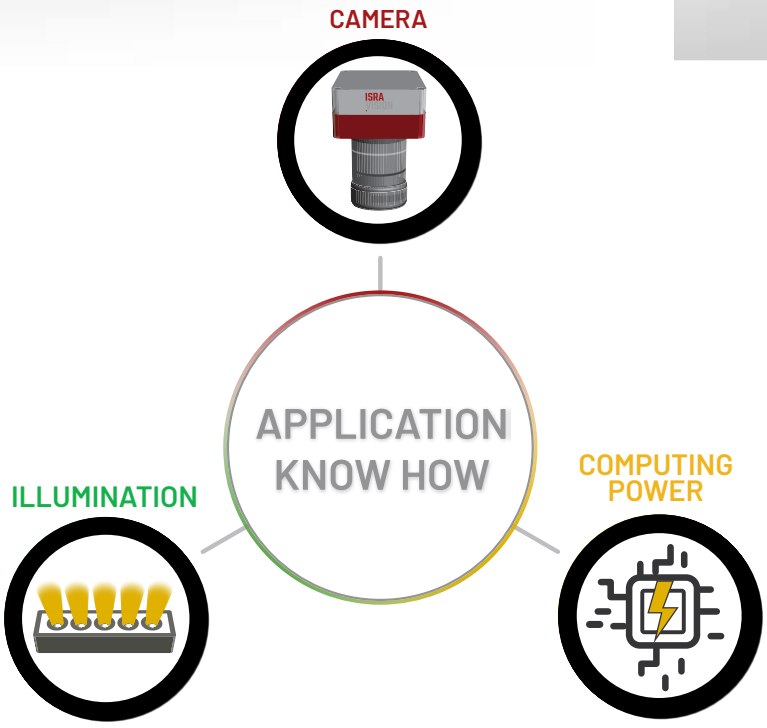
The strength of ISRA VISION:

- In-house production of high-performance cameras
- Intelligent illumination solutions
- Sophisticated & application-oriented software features

Solutions for

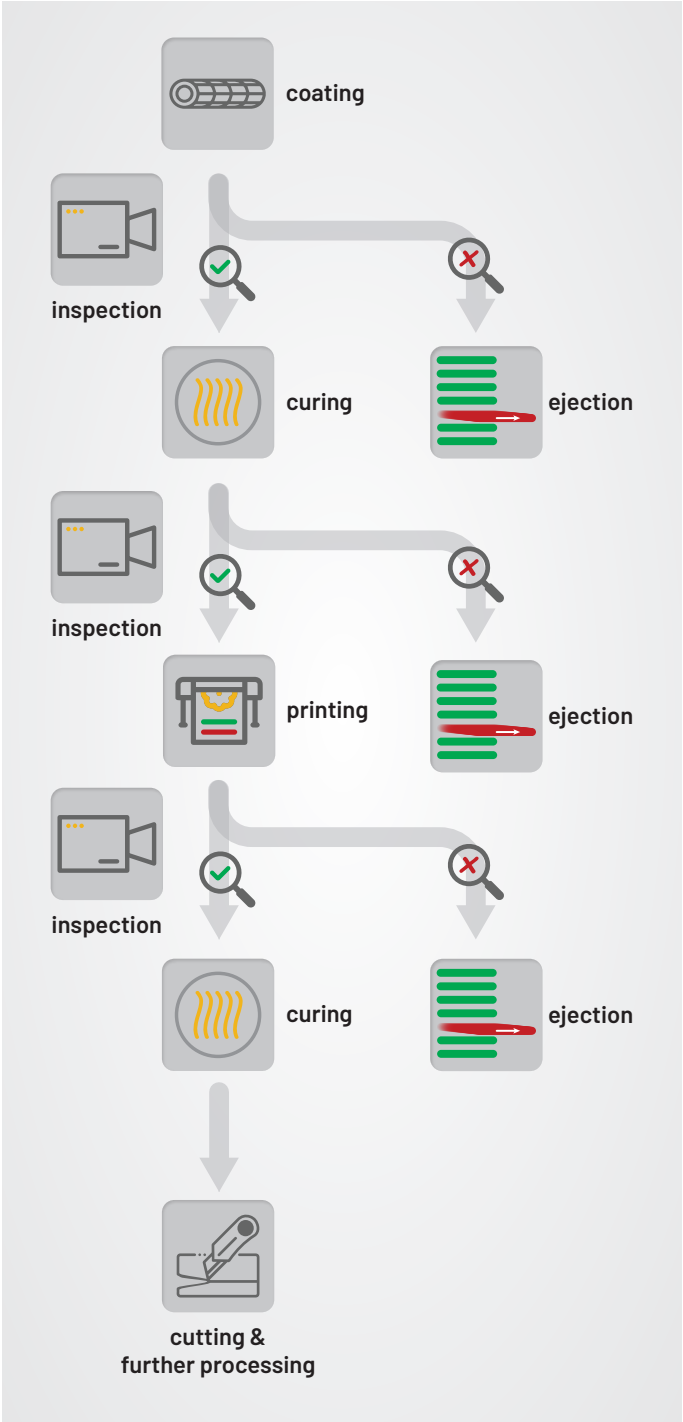
Coated metal sheets

Printed metal sheets



INSPECTION FOR COATED & PRINTED METAL SHEETS

Inspection throughout the production process



We accompany you and your product through the entire production process. The raw materials may already have been inspected by ISRA VISION during production. This gives you the full experience and expertise of machine vision. Whether for your coating or the subsequent printing process: we have a solution for you that starts with make-ready and leads to saleable printed material as well as supporting the ejection of defective sheets.

- Start with 100% inline inspection during coating, both before and after the curing oven.
- Get support when setting up the printing process: Check the print image by comparing it with a customer PDF, cross-checking the print image, and color matching at the ink marks to prevent over- or under-inking.
- Check the print image for sporadic or recurring defects and have them classified as tolerable defects or rejects. This allows you to increase the saleable production quantity.
- Defective sheets can be sorted out directly. This means that they do not end up in downstream work steps where they incur further costs. Reporting tools provide you with comprehensive quality statistics on your production.
- Thanks to production analysis software platforms such as EPROMI, you can statistically evaluate the quality of your printing process utilizing an increased level of data and information. This allows you to discover hidden cost-saving potential.

Learn more:


100% natural product
PRODUCT OF THE YEAR
BEST
CANNED
TOMATOES

- 100% inline inspection for each individual sheet at maximum coating line speed
- Easy to operate. Intuitive set-up procedure for new jobs or use of existing job files possible
- Detection of faulty sheets at the earliest possible stage of your metal decorating process
- Coating inspection ensures the best conditions for a subsequent print run
- Preventing waste at the earliest process stage

INSPECTION FOR COATED & PRINTED METAL SHEETS

Defect-free coating

When coating metal sheets, unsaleable materials, low throughput and high material waste can lead to considerable production costs. A decisive measure to reduce costs is therefore to process only perfectly coated sheets into the printing press. Our CoatSTAR inline inspection system plays a decisive role here by detecting defective sheets as early as the raw material preparation stage and removing them from production.

During the entire production process, CoatSTAR automatically records data on coating quality, dimensional accuracy and the quality of the weld seams. This information can be used both for internal process analysis and as proof of quality for the customer. Through the targeted detection of defects, CoatSTAR helps to reduce waste and increase the sustainability of the production process. CoatSTAR meets the highest quality standards and is characterized by its modularity, making it suitable for any machine.

Constant monitoring of coating quality, dimensional accuracy and weld seams at a glance

Extended compensation of sheet movements to prevent false alarms

Multiple ejection parameters per quality level possible

Learn more:

Challenges

The coating process can easily result in upside-down or scrolled sheets. This can lead to subsequent problems during further processing.

Our Solution

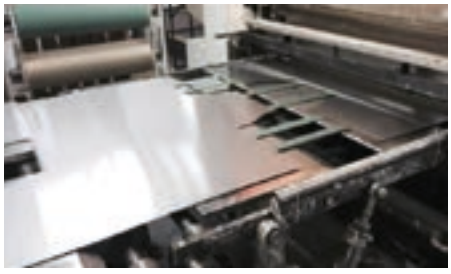
CoatSTAR is equipped with software that recognizes misaligned sheets and informs the operator with an alarm.

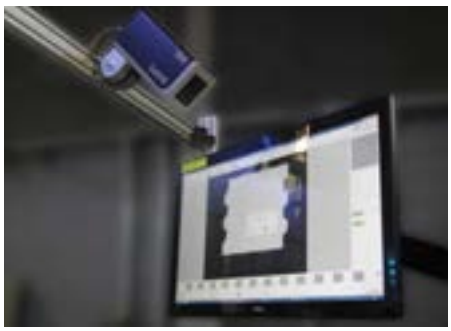
Typcial Defects:

- Scratches
- Paint splashes
- Holes
- Particles
- Inclusions
- Lack of coating application
- Contamination of the weld seams

Technical Data

- Max. resolution 170µm
- Max. Speed 12,000 sheets / h
- Max. Format 1350 x 2000 mm (WxH)
- Required installation space 200 x 200 x 1400 mm (WxHxD)
- Can be used before and after drying
- Digital I/O interface for e.g. discharge, feeder stop, horn, traffic light, etc.
- Remote maintenance access and reporting via TCP/IP





INSPECTION FOR COATED & PRINTED METAL SHEETS

Keep the quality of your printed metal sheets at highest level

Printing on metal sheets is a demanding process that places high expectations on print quality, coating, and material integrity. Potential sources of defects such as color deviations, printing errors, impurities, edge or material defects can significantly affect the quality of the end product. Achieving high product quality at high production speeds is particularly challenging.

Our DecoSTAR and DecoSTAR EVO inline print inspection solutions ensure reliable quality control for metal printing on steel and aluminum sheets. These flexible and easy-to-install systems can be used for tinplate or aluminum as well as for high-gloss or matt designs on any type of machine. DecoSTAR EVO can be used flexibly in both offset and digital printing.

Comparison of the future print image with a PDF approved by the customer (Golden Master) to detect errors on the printing plates or incorrectly inserted plates

The inspection systems automatically detect the color marks and compare them to detect over- or under-inking. In this way, color deviations are detected before they become critical.

A smart machine interface allows to eject defective material and to stop the feeder in case of repetitive defects.

See Video:

- Offset & digital print inspection with the same system
- Best resolution for detection capabilities (resolution, color, etc.)
- High form factor with a high degree of freedom to adapt to any machine on the market
- High efficiency and long-life LED lighting for years of maintenance-free operation
- Versatile use: for tinplate or aluminum, high-gloss or matte motifs on all machine types
- Reduce waste and increase yield

Typcial Defects:

- Scratches
- Hickeys
- Splashes
- Streaks
- Register defects
- Missing print
- Color deviations
- Toning & smearing
- Doubling
- Contamination of the weld seams

Technical Data

- Max. Resolution 85µm
- Max. Speed 10.000 sheets / h
- Max. Format 1350 x 2000 mm (WxH)
- Required installation space 400 x 400 x 1400 mm (WxHxD)
- Can be used before and after drying
- Digital I/O interface for e.g. ejection, feeder stop, horn, traffic light, etc.
- Remote maintenance access and reporting via TCP/IP

INSPECTION FOR COATED & PRINTED METAL SHEETS

Ejection & reporting

Defective coated or printed sheets can be recycled immediately after printing. Thanks to the defect classification carried out by the inspection system during the decorating process, it is possible to differentiate exactly which goods are still saleable and which need to be recycled. This prevents waste from entering downstream work processes, where it has to be laboriously and expensively removed.

The inspection systems therefore make a significant contribution to cost savings. Reporting tools provide information on quality data such as the number of defective sheets, the number of defective sheets per pallet and even a defect gallery. They also check the machine speed and provide automatic advance information on upcoming maintenance requirements.

Learn more:

PRODUCTION ANALYTICS

One solution for all data driven applications

With the EPROMI production analysis software, ISRA VISION offers a software platform that allows you to check the system status of all production lines at a glance or analyze production data in detail. With the quality management system, you can analyze historical data, monitor current inspection data in real-time and identify future trends in your production process.

Dashboards allow you to compare production lines and product data onsite or remotely, providing key insights for optimization. This enables you to make informed professional decisions along your value chain to increase the product quality as well as profitability. You can continuously track the progress of optimization measures and present them with visualized advanced reports.

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Global contacts: