AIS
VISION SYSTEMS

Quality control on beverage lines

Machine vision for real-time inspection of glass and plastic bottles: cap, liquid level, label and marking.



- Cap, mouth and liquid level
- Labels, codes and markings
- Glass and plastic bottles and large containers

Water, juice, wine and cava

At AIS Vision Systems, we help beverage producers ensure the quality of their containers and labelling, with real-time inspection of glass and plastic bottles.



Water bottles on the conveyor.

Containers

- Glass and PET bottles
- Large containers with handles
- Screw cap, tamper band and capsule
- Labels, neck labels and printed markings



Juice



Wine



Cava



Large containers

What we inspect on each pack

We detect defects affecting quality, safety and brand image in real time. Each area of the bottle has its own system.



1

Cap and mouth

Presence, position and integrity of the closure and tamper band, with AIS Hopper.

2

Liquid level

Fill level of each bottle compared with the reference, with AIS Hopper.

3

Marking and reading

OCR reading of batch, expiry date and other printed text, with OPTICAIS.

4

Label and finish

Label position, condition, codes and information, through 360°, with AIS REV 360.

From closure to fill level

AIS Hopper inspects the cap, mouth and liquid level of each glass, PET or derivative container and rejects defective units.



Cap defects



Tilted cap



High cork



Fill level



Inspection head above the conveyor and screen showing the three cap views.

Equipment

Cameras	Three colour cameras; optional fourth overhead camera
Software	Deep learning
Inspection	Through 360°, without orienting the container
Throughput	Up to 30,000 units/hour, depending on format and inspections
Design	Versatile, with height adjustment to suit the product reference

Options

- Progressive or impact rejection
- Rejected-product accumulation area
- Conveyors
- Product centring device
- Reading of laser or ink markings
- TrazAIS: traceability and serialisation

More checks in the same system

The same AIS Hopper head inspects the tethered cap, printed batch and, on large containers, the handle. Each result is displayed on the station screen.



Tethered cap



Batch presence and reading



Handle presence and orientation



Torn capsule



AIS Hopper on a bottled-water line.

On the line

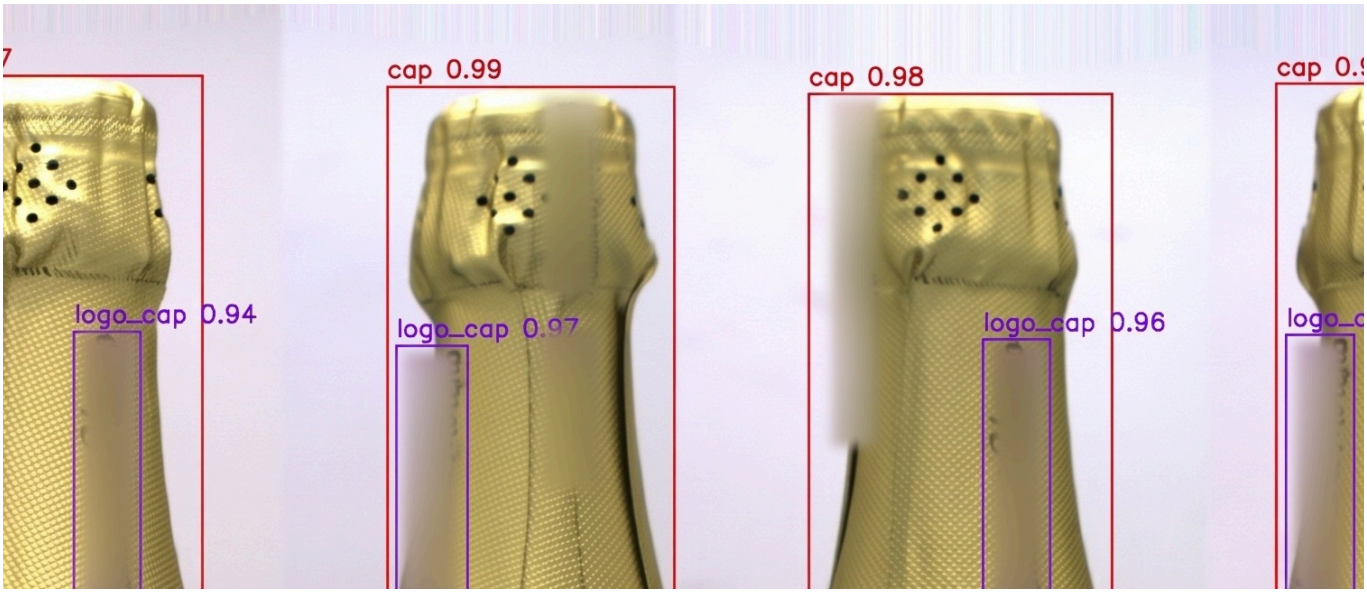
Head	Above the conveyor
Screen	On an articulated arm beside the line
Rejection	Automatic rejection of defective units



Classification screen: three views of each cap, session counters and latest detections.

Label and finish under control

AIS REV 360 combines several side views of each bottle to verify labels, codes and finish around its entire perimeter; each element is located in the four views.



Capsule, medallion and neck label



AIS REV 360 STANDARD, with its conveyor and inspection screen.

All-round inspection

Position	360° labels: missing, double, inverted or tilted labels
Condition	Tears, wrinkles, folds, stains and lifting
Codes	Code and marking verification, and relationships between labels
Software	Rosepetal, with deep learning

Options

- Progressive or impact rejection
- Reading of laser or ink markings
- TrazAIS: traceability and serialisation

Every label defect in view

AIS REV 360 inspects the position and condition of the label and capsule around the entire perimeter of each bottle.



Missing label



Double label



Inverted label



Lifting



Wrinkles



Stains



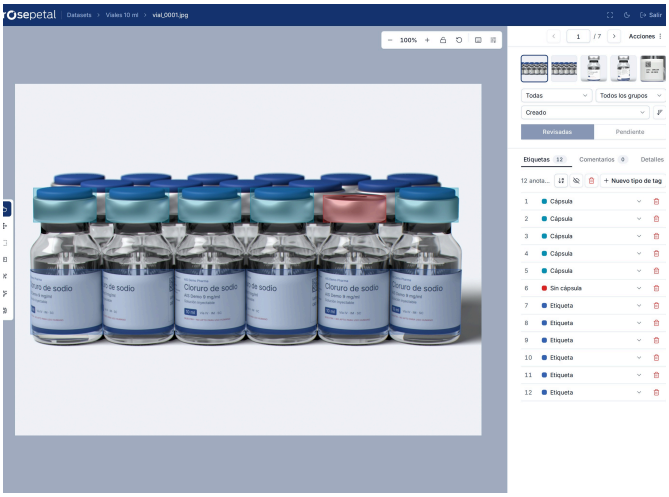
Wrinkled capsule



Correct capsule



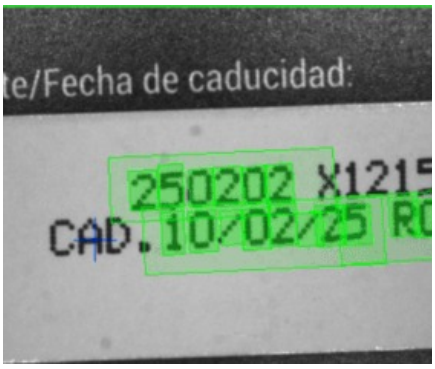
On the line



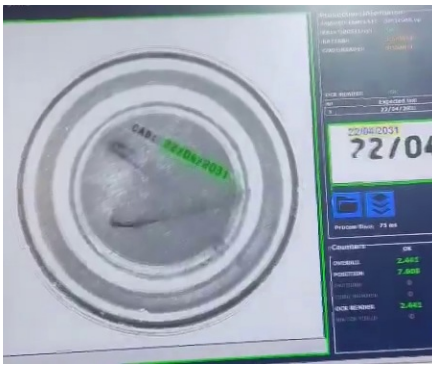
Rosepetal software

Marking reading and verification

OPTICAIS reads the batch, expiry date and printed codes in real time and compares them with the product-reference data.



Batch and expiry date



Date on the lid



Damaged barcode



The camera above the container path.

Equipment

Inspection	Automatic inspection of each unit
Processing	Selected fields processed in real time
Reading	Batches, dates and other text; 1D and 2D codes depending on configuration
Installation	Camera, optics and connection to suit the substrate and installation

Integration

- Fields, recipes and criteria set through the interface
- Adaptable to different industrial environments
- TrazAIS: traceability and serialisation



GlobalVision C8

Cylindrical-object inspection: C8 scans the object's entire printed surface and checks it against the criteria defined for each product reference.

Objects	Different sizes; each geometry is validated with samples
Scanning	High resolution; detail depends on the object

Each system at its point on the line

After filling and capping, AIS Hopper inspects the closure and level. After labelling, AIS REV 360 verifies the label and OPTICAIS reads the marking. C8 scans printed cylindrical objects.



On the line



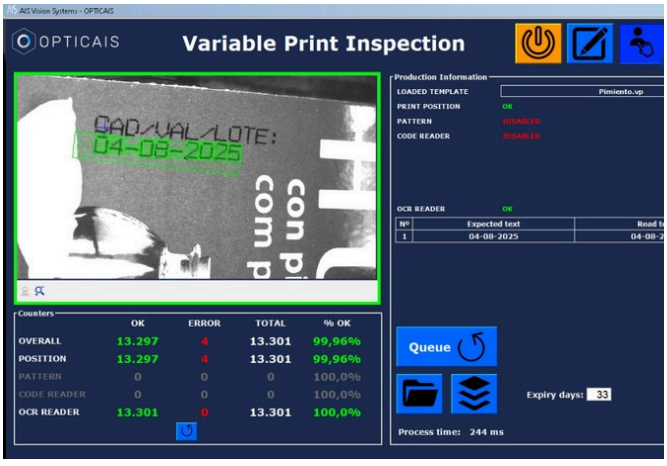
Filling



Capsule application



Labelling



Marking



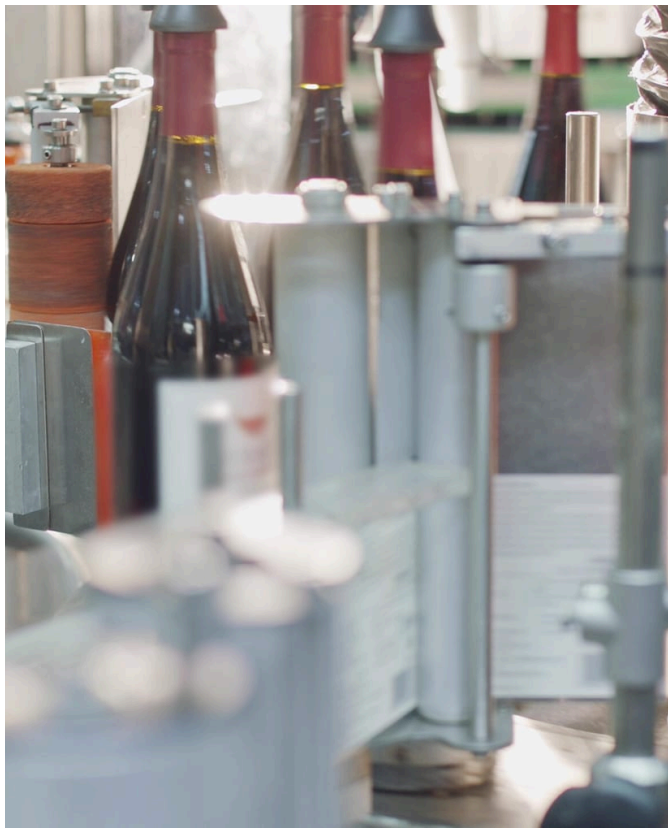
Case packing

A check at every stage of the line

From filling to labelling, each system inspects the defects its stage can cause and provides data to act on the process.



Filling and capping



Labelling and marking

- Automatic real-time inspection
- Data to improve performance and reduce errors
- Adaptable to different bottle formats
- Integration into existing lines

Four systems, one line

AIS Hopper	Cap, mouth and level, after filling and capping
AIS REV 360	360° labels and codes, after labelling
OPTICAIS	Reading of batch, expiry date and printed codes
GlobalVision C8	Scanning of printed cylindrical objects

Send us samples

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