IRIS Inspection machines

"Innovative cold end inspection increasing your productivity"



13th March 2015 Glasspex 2015

Agenda overview

- 1. IRIS company background
- 2. Inovative inspection solutions
- 3. New software modules for high level inspection





1. IRIS Company Background

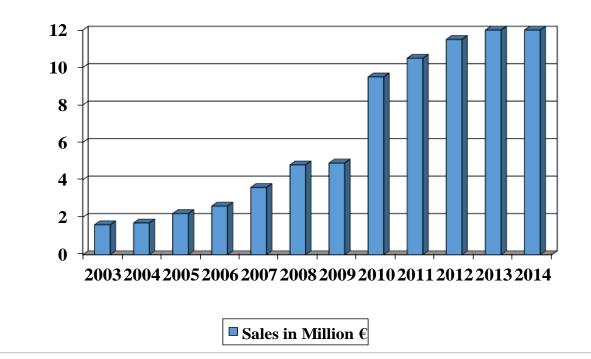
A HIGH TECH GROUP

200 people Wisetec 38 M € Branches IRIS Inspection machines С ENTRALP





IRIS's turnover over 10 years



1. IRIS Company Background 1.2 Company Turnover



1. IRIS Company Background 1.3 New Investments

HIRING

- 200 people in the Group \implies 60 in R&D
- Growing Customer service
- Growing R&D department



1. IRIS Company Background 1.3 New Investments

NEW PREMISES

- Common place for machine assembly and offices
- New training center





1. IRIS Company Background 1.4 IRIS Offices

INTERNATIONAL PRESENCE

- Beijing
- Bangkok
- Chicago
- Mexico
- Sao Paulo -> new technical center
- Network of 15 representatives worldwide



1. IRIS Company Background 1.5 New Success



55 latest generation Iris inspection machines sold since glasstec

June 2015 PROCESSING AND FINISHING TECHNOLOGY

February 03, 2015

Iris Inspection machines has received positive feedback from customers throughout the world since introducing its latest generation Evolution glass container inspection machines at glasstec exhibition last October.

To date, 55 new machines have been delivered to glassworks in Europe, the Middle East and the Americas, providing enhanced inspection precision that is easy to use and contributes positively to plant efficiency improvements.

The Evolution range now provides better performance than ever, thanks to its new PC, bigger HD touch screen (21.5in), new HD cameras and innovative software. Within its newly designed processing unit, Iris has reduced maintenance costs via the design and assembly employed.

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NEW SUCCESS

Europe

Verallia Sevilla Verallia Cognac Verallia Zorya Stölzle Wymiarki Borgonovo

Latin America

O-I Peru Verallia Brazil Estancia Verallia Brazil Sao Paolo Weathon do Brazil



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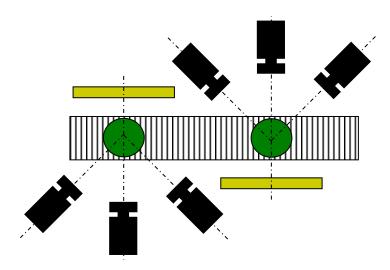
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2. Innovative Inspection Solutions Evolution 12

Sidewall inspection Sidewall stress inspection Geometry inspection



2. Inspection solutions 2.1 Evolution 12

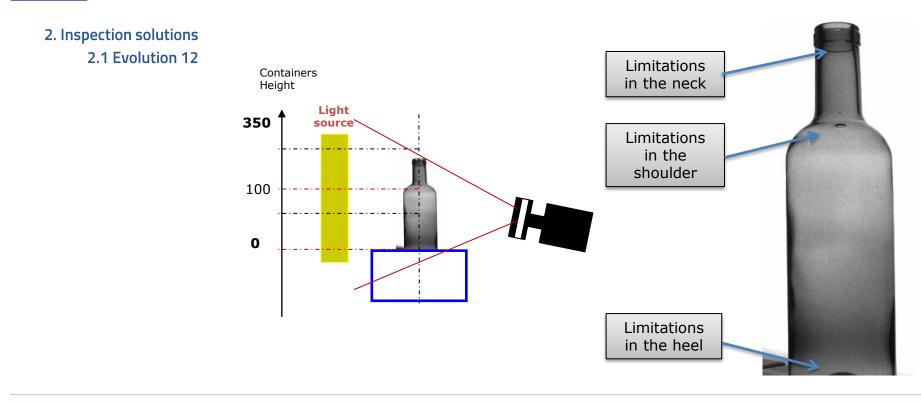


12 viewing angles

- All cameras are in a fixed position
- No mechanical and no optical adjustments.
- 360° overlapping

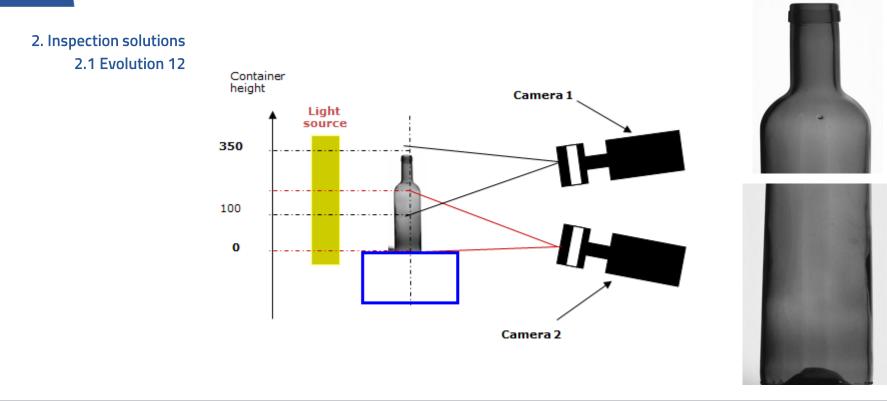


View of a wine bottle with one camera only



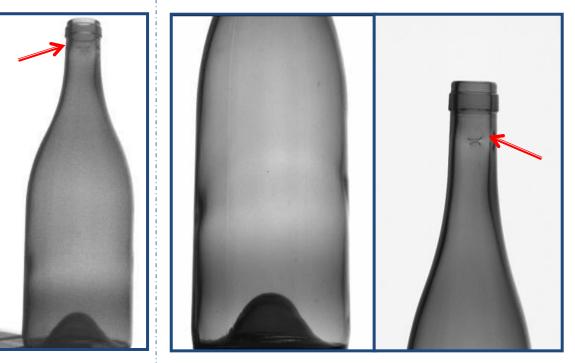


Same bottle seen with 2 cameras





2. Inspection solutions 2.1 Evolution 12



Bottle seen with 1 camera only Same bottle seen with 2 cameras



2. Inspection solutions 2.1 Evolution 12

The zones with shadows on one view are clear on the other view





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2. Innovative Inspection Solutions Evolution 5

Base Base Stress Finish Mould Number Reader

Finish, base, mould number reading and base stress inspection

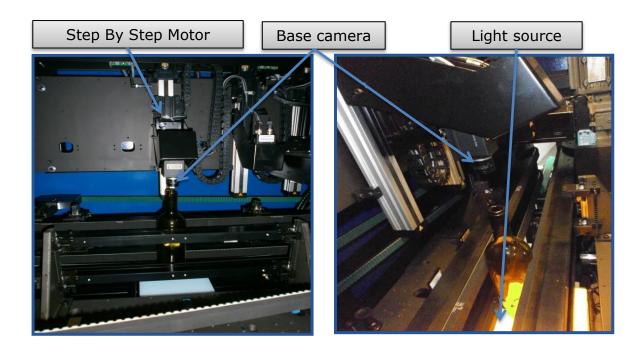


2. Inspection solutions 2. Evolution 5



2. Inspection solutions 2. Evolution 5

Base and Base Stress inspection



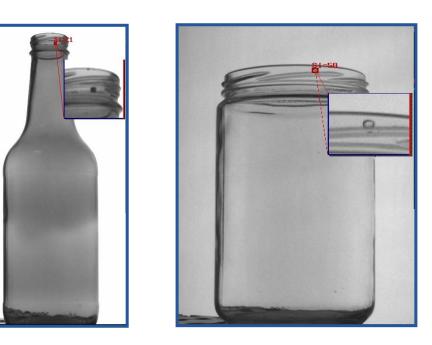


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3. New Software Inspection Modules

Module Intelligent Machine Module Engraving Inspection Module Asymmetric Container Module Multi-container Inspection Module Sidewall Module XXL Container Module Black glass 3. New Inspection Modules 3.1 Module Intelligent Machine

Defects in difficult zones : Finish thread

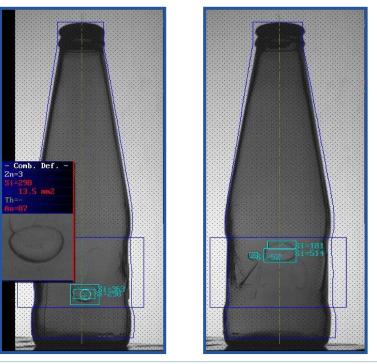




3. New Inspection Modules 3.2 Module Engraving Inspection

Detection in Engraved Zones

Example : Detection in the engraved area of 1664 beer bottle

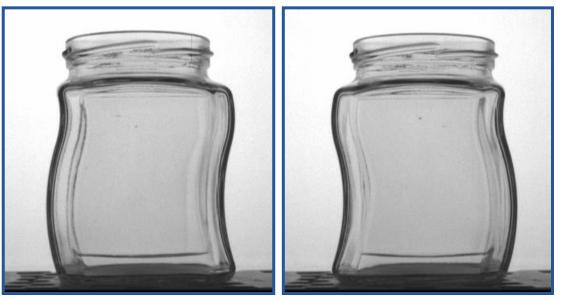




3. New Inspection Modules 3.3 Module Asymmetric Container

Inspection of asymmetric containers

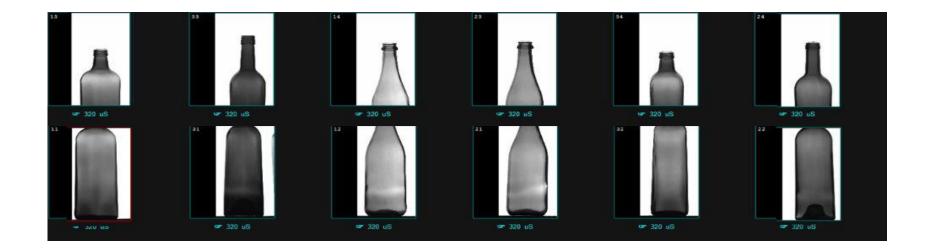
- No mechanical orientation needed
- Virtual article orientation by software





3. New Inspection Modules 3.4 Multi-Container Inspection

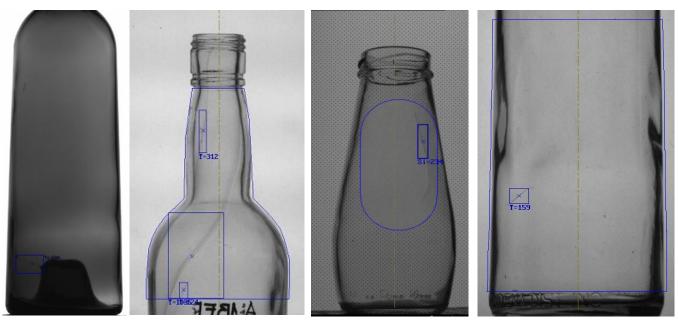
Inspection of Multi-gob production





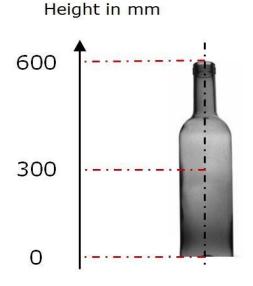
3. New Inspection Modules 3.5 Module Sidewall

Low contrasted sidewall defects





3. New Inspection Modules 3.5 Extra Large container



Containers

Up to 550 mm height Up to 190 mm diameter



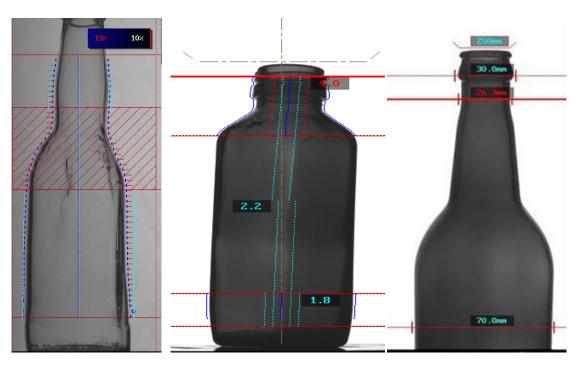
3. New Inspection Modules 3.6 Black Glass



Inspection of dark containers is possible thanks to the special lightsource dedicated to black glass illumination



3. New Inspection Modules 3.7 Geometry inspection

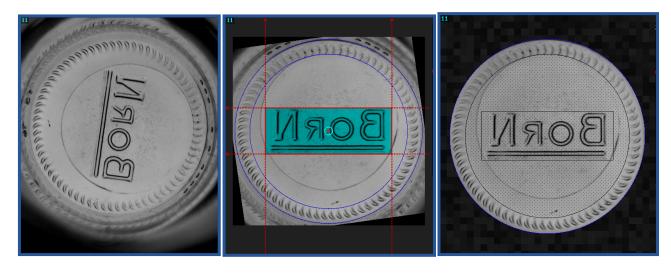


Deformed body, Broken bottles, Monsters, Laying articles, Lean articles



3. New Inspection Modules3.8 Module Dynamic Engraving

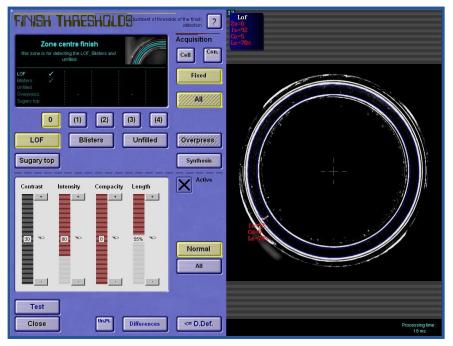
Inspection of base engravings



BEFORE ROTATION AFTER ROTATION AFTER CENTERING



Line Over Finish





Overpressed & Wire Edge





Blister & Chipped Finish





Unfilled Finish





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Questions ?

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