



Standard & customized real time systems

BALTOMATIC Real time systems

A system is an independent unit that is designed to perform inspections tasks in manual, semi or automatic mode with or without the assistance of an operator. It is generally a combination of several elements interconnected together going from the shielded enclosure to the manipulator and the imaging software for digital solutions.

Balteau is known for its long tradition in the manufacture of X-ray units and as a solution provider in systems for about 100 years. Balteau builds standard systems but also unique, customized units as you can have specific requirements. Balteau is indeed specialised in providing the adequate and customized solution to simple or complex products.

The Baltomatic series is showing you a basic overview of what has been produced by BALTEAU in the recent years and all systems presented in this brochure can be adapted or modified to fit exactly into your own requirements.

Systems composition

Due to the various different systems made by Balteau (standard or customized), we can now propose any type of combinations: different generators, digital or analogical detectors, cabinet sizes or different ways of manipulating the object can be proposed and will drive the final result offered to your review.

here are the main components our systems are made with:

SHIELDED X-RAY CABINET (CBN)



When you don't have the proper irradiation room, Balteau can design it for you. Made of Steel-Lead sandwich plates, our cabins can be equipped with hinged or sliding doors, with or without shielded window. Due to the robust and rigid constructions our cabins can also be moved from location with the appropriate lift trucks. Shielding is calculated by us following International standards and all cabins can be delivered with a Shielding Certificate issued by a third party. Cabins are equipped with electrical connexions, switches and lighting. Sometimes, a separate section can also host the generator and cooling device.

X-RAY SOURCE (SCE)



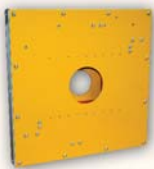
We provide X ray sources from 100 to 450 kV with different characteristics. Once Energy and power have been defined according to the application that need to be done, any corresponding Balteau units can be selected or proposed to be integrated into a system. Mostly common integrations are Baltograph series, but when budget are limited and applications are allowing it, even baltosport units (portable) can be integrated.

MANIPULATOR (MNP)



Variety of possible manipulation of an object is such that it is difficult to describe them all. Basically one can move the object, the detector and or source or all of them. The selection of the proper manipulator is one of the most important thing that will condition the versatility of your system in the future. When moving the object, things like weight, size of the object, travelling distances and area coverage will define what need to move, with what accuracy and speed. We have a list of standard manipulators from 2 to 6+ axis on both object and Source/ Detector, from 5 kg to 500 kg. Other manipulators, up to 9 axis are available upon request.

COLLIMATOR (CLM)



Not only for shielding efficiency and reduction but also for improving image quality with the reduction of scattering, Collimators are existing to be used on the Detector or the Source side. 2 or 4 independent sliding shutter, from 100 kV to 450 kV. By closing all shutters, the collimator will also save the lifetime of the detector when callibration has to be made.

CONTROL DESK (CTL)



All elements are gathered in a control bay which can have different form and sizes. The control bay is feeding the system and hosting the necessary switches, fuses or breakers to make the installation as independent as possible. Generally our control bays are 19" compatible. The control bay presented here is a bench type CTL which encloses the collimator control, The image processing and manipulator control, a detector control (here an image intensifier) and the X ray generator control unit (LS1D).

DETECTOR (DTR)



Any type of detector can be placed into a system when it has been properly designed. Film, LDA (linear detector arrays), Flat Panels or Image intensifier, Balteau can propose the integration of various solutions according to the specification or application. The selection of components integrated can either be the selection of the customer or a documented proposal when the customer wants a specific resolution or result. The main criteria after Performance will be price and therefore our specialists can certainly help you in that field to assist you in the proper selection.

INSPECTION SUITE

When radiography becomes digital, your system will need an Image Processing Software but not only; this is the reason Balteau's engineers developed a complete suite of softwares, able to control every parts of your installation named «The Inspection Suite ».

Part of the Baltoscope family and a direct successor of our well known IPS011, the Inspection Suite is made of 12 different modules (softwares), including the brand new IPS012, available in 3 different levels into which all modules complete each others and are offering a coherent suite from the connection or the processing level to the complete automation.

For further information about the suite, please refer to the Inspection Suite brochure and do not hesitate to contact one of our sales manager.

A few examples...

AIS 912



INSPECTION OF HONEYCOMB COMPOSITE MATERIAL

The AIS912 has been created to automate the inspection of composite material with honeycomb structure and to accelerate the inspection process. Thanks to its 9 motorized axes and with the different software developed by our engineers, the AIS912 allows the records of different motions the operator needs in order to radiography the whole sample with only one action. Every picture is then saved on a server database and can be processed by our Image processing system IPS012.

Main Characteristics

- A 9 axes motorized manipulator
- An X-ray generator type XSD
- An X-ray tube head type TSD or TSC
- A flat panel FP Digit
- A control unit type LS1
- A control desk

Applications

- Aerospace
- Automotive
- Composite and large objects

AIS 203-RD



INSPECTION OF METALLIC AND NON-METALLIC COMPONENTS

The AIS203RD has been created to inspect metallic and non-metallic components. It has been built for every single element to be configurable and highly flexible to be used in different application in digital radiography. The system is built around a robot for the detector/source manipulation in order to provide the user with every possible inspection angle for any components that can be fitted on the main manipulator.

Main Characteristics

- Shielded cabinet (optional)
- An X-ray generator type XSD
- An X-ray tube head type TSD or TSC
- A flat panel FP Digit
- A collimator
- A manipulator
- An industrial robot
- A control desk

Applications

- Aerospace
- Hollow forgings
- In line production

AIS 958



INSPECTION OF SMALL TO MIDDLE SIZE COMPONENTS

The AIS958 is a very compact complete digital X-ray system allowing a wide variety of samples with different thicknesses to be inspected. The 5 axis motorized manipulator can inspect a sample from all angles and thus, achieve a complete inspection. The cabinet is made of a steel structure with lead reinforcement "sandwich" type assembly (steel-lead-steel). It can also be mobile with its installation in a trailer (optional), allowing to move over a wide area and respond effectively to customer requests.

Main Characteristics

- A 5 axes motorized manipulator
- An X-ray generator type LLX
- A flat panel FP Digit
- A control unit DC1
- A control desk

Applications

- Training
- Small components
- Middle components

AIS 201



INSPECTION OF GAS BOTTLES

The AIS201 is a Real Time Radiography inspection system especially designed for the control of welded cylinders. This cost effective inspection system will drastically cut down the inspection time and cost, thanks to its motorized (automatic optional) handling 5 axis manipulator. The XSD160 is a stationary constant potential X-ray generator specially suited to the RTR inspection, thanks to its high dose stability.

Main Characteristics

- A 5 axes motorized manipulator
- An X-ray generator type XSD
- A flat panel FP Digit
- A control unit LS1
- A control desk

Applications

- Gas cans
- Welded cylinders
- Hollow cylinders

AIS 228 & AIS 228X



INSPECTION OF SMALL TO MIDDLE SIZE COMPONENTS

The AIS228 is a very compact equipment that has been designed to inspect a wide variety of samples with different thicknesses. This shielded cabinets includes a directional X-ray generator from the very well-known and efficient Baltospot range. These cabinets are generally made of a steel structure with lead reinforcement «sandwich» type assembly (steel-lead-steel). This user-friendly equipment can be very easily operated with a maximum safety.

Main Characteristics

- A 1 axes motorized manipulator (optional)
- An X-ray generator type Baltospot or Baltograph
- A control unit type Baltospot or Baltograph

Applications

- Film & DR application
- Laboratories
- Irradiation



Balteau in words...

Balteau is a company based and established in Belgium since 1906. The activity of the power transformers successfully turned into the X-ray business in 1932. Years after years Balteau has affirmed its leadership leading the technology and setting the foundation of modern X-ray technologies. The first company ever to reach 200, 300 and 400 kV in the past, Balteau has today brought to the industry new standards that are consciously safety oriented to allow users to operate equipment safer and easier. Balteau is also greatly caring about environment and always uses top grade and specification materials to ensure that the efficiency of the equipment will be at the top of what is technologically achievable.

On the service and spares side, Balteau is providing the buyer with an exceptional and unequalled commitment of continuous service all through the life cycle of the product.

Qualified engineers and an extensive worldwide network dedicated to serve our customers is actively participating to the success of our brand and to your possibility of always getting, from the selection of your equipment to its follow up in service, a qualified and professional support.

Balteau in numbers...

Balteau has a very long established network in more than 40 countries, some of our agencies are of second generation proving they rely on the quality of our products and that they are totally committed to their business in NDT.

Balteau has produced more than 15.000 generators spread in more than 60 countries. We have 3 ranges of products and are the only manufacturer in the world to provide from Crawlers to Systems built into the same factory.

Balteau in names...

Patented names and commercial brandings are:

BALTOSPOT (Portable and Crawlers X-ray equipment)

- LLX (Constant potential portable equipment)
- GFC (Panoramic portable equipment)
- CERAM (Pulsed frequency portable equipment)
- HAND X (Radio remote control for portable X-ray)

BALTOGRAPH (Stationary X-ray equipment)

- XSD (HF CP X mobile and stationary X-ray equipment – High power)
- CLD (HF CP X mobile and stationary X-ray equipment – Low power)

BALTOSCOPE (Radioscopic, digital imaging & software)

AIS & Systems (Standard & custom made)

Produced by

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