The robust aluminium mechanical optical system in optimised Paschen-Runge mount together with high constant internal temperature and pressure, allows the system to be independent from external environmental conditions.

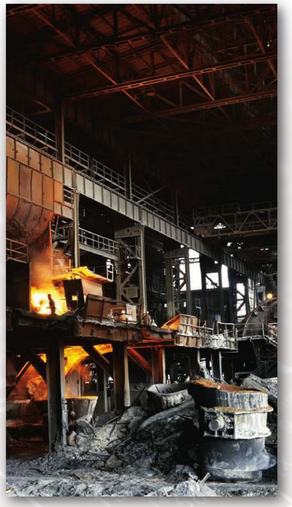
The readout system simultaneously processes the signals from the photomultiplier tubes and from the optional CCD detectors. After the complete scan of the wavelength the analysis will be displayed on screen with all data collected.

The software is very intuitive and “easy to use”. It assists the users in achieving their routine analysis efficiently and quickly. Automatic standardisation, network linking and remote control are some of the most important features. The autodiagnosis program can check continuously the status of the equipment.

Which kind of metal alloys can be analyzed?

ATLANTIS can be configured for the analysis of for the analysis of all the most important alloys as:

· Fe base: Cast Iron, Carbon & Low alloy, Stainless steel, Tool Steel, etc.
· Al base: from ultra-pure Aluminium to secondary Al-alloys as Al-Si, Al-Si-Cu, Al-Zn,etc.
· Cu base: Pure copper, Bronze, Brass, Cupro-nickel, Nickel-silver, etc.
· Ni base: Inconel, Incoloy, Hastelloy, etc.
· Co base: all different Stellite grades
· Zn base: Pure Zinc and Zamak grades
· Pb base: Pure lead, Battery alloys, etc.
· Mg base: AZ grades, Mg with rare elements
· Ti base: Ti-Al-V , Ti-Mn, etc.



ATLANTIS’ most important features are:

· Enhanced analytical performances
· Flexibility, stability and reliability
· Accuracy and reproducibility
· High class certified standard calibration
· High Energy Pre Spark (HEPS) source PC controlled
· High constant temperature and pressure optical system
· Shorter analysis time
· High range of metal analysis
· Advanced software technology
· Very intuitive software for unskilled operators
· Advanced service support
· Continuous upgrade possibilities to increase productivity

ATLANTIS TOP LABORATORY OPTICAL EMISSION SPECTROMETER

ATLANTIS TOP LABORATORY OPTICAL EMISSION SPECTROMETER

TECHNICAL DATA

Optical System:
Paschen Runge mounting
Spectral field: 120 to 900 nm
Focal length 750 mm
Linear dispersion 0.35 nm/mm in first order depending on grating
High luminosity holographic grating with 1200, 2400, 2700, 3600 grooves/mm depending on the analytical configuration
Vacuum System:
the vacuum grade is provided by mean of a two-stage vacuum pump in series with high efficiency low noise. Turbo molecular pump (option) controlled by vacuum control device can be supplied for better detection in UV elements

Source:
Multi-frequency spark source
Excitation parameters controlled by computer
HEPS (High Energy Pre Spark) from 200 to 1000 Hz

Personal Computer (optional):
Intel Core Processor, 4 Gb Ram, 320 Gb HD 7.200 rpm, Combo DVD + DVD RW, Monitor 19 LCD, mouse, keyboard and HP deskjet printer

Software:
Software: MetalLab32 software, operating in Windows environment is very easy to be used.
The operator can really use all the spectrometer’s functions
Some of the most important functions are listed: Analysis - Automatic standardization
Printing and management of certicates - Determinations of alloys in accordance to international norms (UNI, ASTM, DIN...) - Network linking and remote control.

Power supply: 110/220 V AC 16 A 1 KW

Dimensions: L 60 x P 130 x H 120 cm

Weight: 250 Kg c.a.

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Local Agent

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GNR OPTICA

ANALYTICAL INSTRUMENTS GROUP

30 years of best-in-class technology

Photomultiplier tubes and CCD detectors simultaneously
High performance and flexibilty

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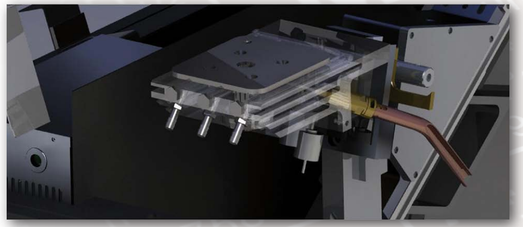
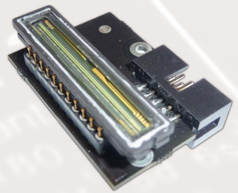
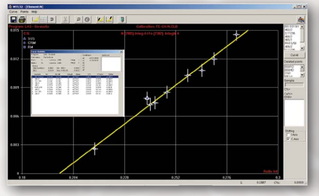
Rendering of **ATLANTIS** spectrometer with hybrid optical system



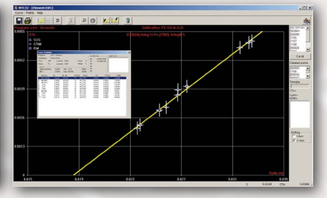
Zoom on the cooling system for the table stand



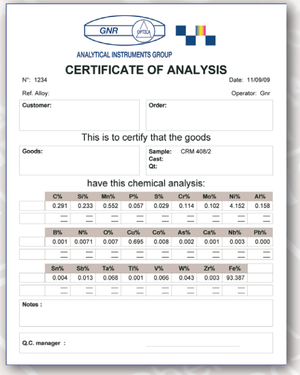
Photomultiplier technology linked with the new CCD technique grants the possibility to reach the best performances at lower detection limits and at the same time allows the flexibility and upgrading option in order to satisfy present and future needs



Calibration curve for Nitrogen



Calibration curve for Oxygen



GNR

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CERTIFICATE OF ANALYSIS

N°: 1234 Date: 11/09/09

Ref. Alloy: Operator: Gnr

Customer: **Order:**

This is to certify that the goods

Goods: **Sample:** CRM 408/2
Cast:
Qt:

have this chemical analysis:

C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	Al%
0.291	0.233	0.552	0.057	0.029	0.114	0.102	4.152	0.158

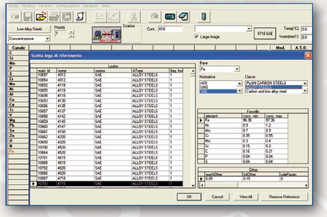
B%	N%	O%	Cu%	Co%	As%	Ca%	Nb%	Pb%
0.001	0.0071	0.007	0.695	0.008	0.002	0.001	0.003	0.000

Sn%	Sb%	Ta%	Ti%	V%	W%	Zr%	Fe%
0.004	0.013	0.068	0.001	0.005	0.043	0.003	93.387

Notes :

Q.C. manager :

Example of certification provided with Met32 software; it is possible to print attestation of conformity and certification of analysis including chemical composition, mechanical tests and more information on suppliers, lot, grade and norms.



Search & Match Database: including all the most known International norms as ASTM, UNI, DIN, JIS, etc.
Able to identify and show the difference between the resulting composition and norm's composition and also displaying the nearest alloy's grade
Open Database with an easy interface to allow the operators to create its own set of alloys and min-max composition.

SHR Software
Thanks to the powerful software algorithm is possible to extrapolate historical information of analysed materials.
This optional software package is of great interest whenever there is the necessity of reproducing specific items using the same material.
Analyzing the sample item is possibile to reconstruct the history of both metal's grade composition and supplier.
Another useful application of this package is directly correlated to the study of the sample under arguments on non-conformity of the finished product.

ATLANTIS is the result of 30 years of experience in developing and manufacturing optical spark emission spectrometers.
It can be considered as the top laboratory metal analyzer with excellent analytical performances, high flexibility and easy to use.

The high performance Multi-frequency spark source PC controlled allows to know the energy of the plasma with elevated precision.
Manufactured with best quality components, **ATLANTIS** is developed for any kind of analytical task.
It is well suitable for routine analysis in the process control, for monitoring in quality control as well as in research and development for complicate or special analytical needs.

ATLANTIS can be designed with optional MDS optic (Multi Detector System), granting at the same time the best accuracy and the wide flexibility of elements' ranges and metal bases. The unit can perform both fast and accurate analysis for the main alloyed elements as well as detect trace level for elements like Oxygen, Nitrogen, Phosphorous, Boron in steels, in Copper alloys, in Aluminium and Titanium alloys.

The spectrometer can mount a cooled table stand and an ultra-vacuum optic by an additional turbo-molecular pump able to grant the highest sensibility for trace elements analysis.
ATLANTIS optical system combines the specific advantages of both photomultiplier tubes and CCD detectors systems.
It improves the reproducibility and decreases the measurement time.

International certified standards are sparked during the factory calibration.
Data are evaluated to reach the highest accuracy and analytical quality.
For additional customer requirements a team of specialists is ready to develop new specific analytical methods .

Adaptors and reducer rings allows to analyze even small samples and thin wires

Some of the main advantages are:
- Fast: you can repeat the analysis in few seconds
- Dynamic Range: from ppm to %
- Versatile: any metal and many shapes can be analyzed
- Accurate: better that 1% relative
- Economical: low capital cost investment and operating cost
- Superior performance achievable in analysis of Oxygen and Nitrogen gaseous elements.

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