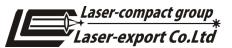




ELANIK

Handheld LIBS analyzer of chemical composition of metals and alloys

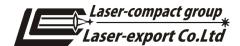




30-YEARS EXPERIENCE

in development, production and selling lasers

• Since 1992, we've supplied almost 50,000 lasers of our own production to 42 countries, mainly to the USA, Germany, France and Japan.



30-YEARS EXPERIENCE

in development, production and selling lasers

The combination of the company's knowledge and experience in the field of optics, electronics, spectroscopy and project management in high technology products allowed in a short term creating a device that has no analogues in the world by its abilities.



DEVICES FOR EXPRESS-ANALYSIS OF CHEMICAL COMPOSITION:

XRF portable analyzers







- + Lightweight
- Don't measure light elements, incl. carbon
- X-ray radiation

Mobile OES



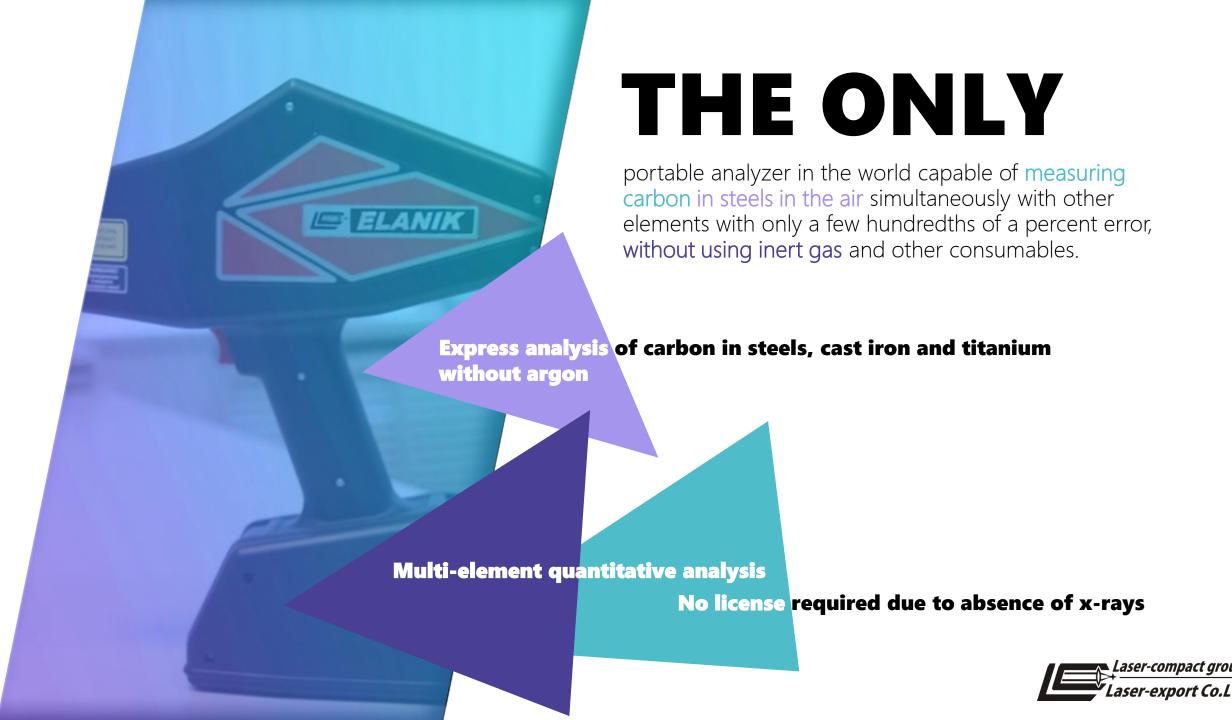


- Bulky, not easy to use
- Require maintenance
- Expensive

LIBS handheld analyzers (ELANIK)



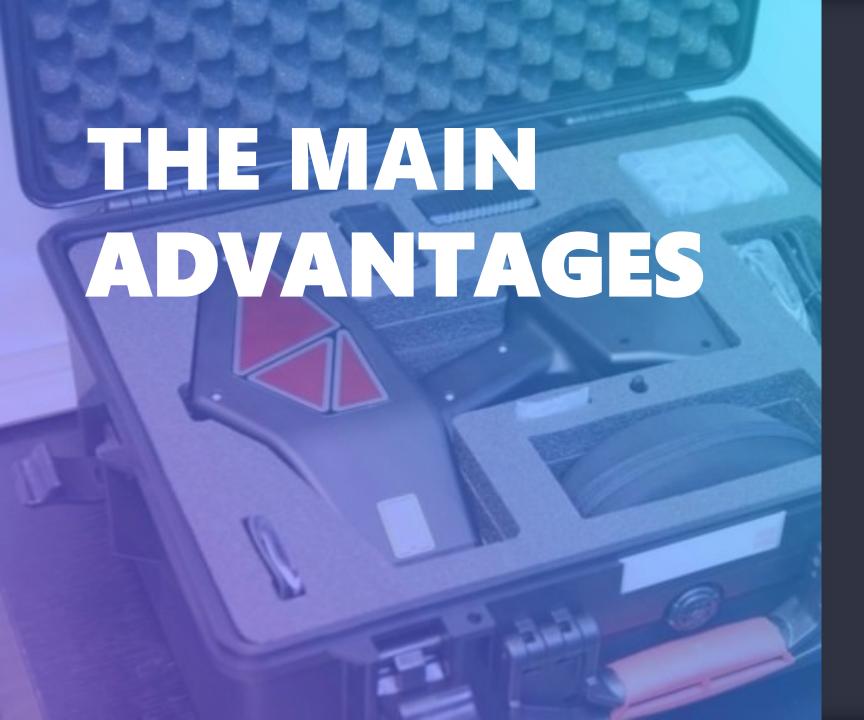
- + Lightweight
- Easy to use
- Maintenance free
- No X-rays
- + Can measure light elements, incl. carbon



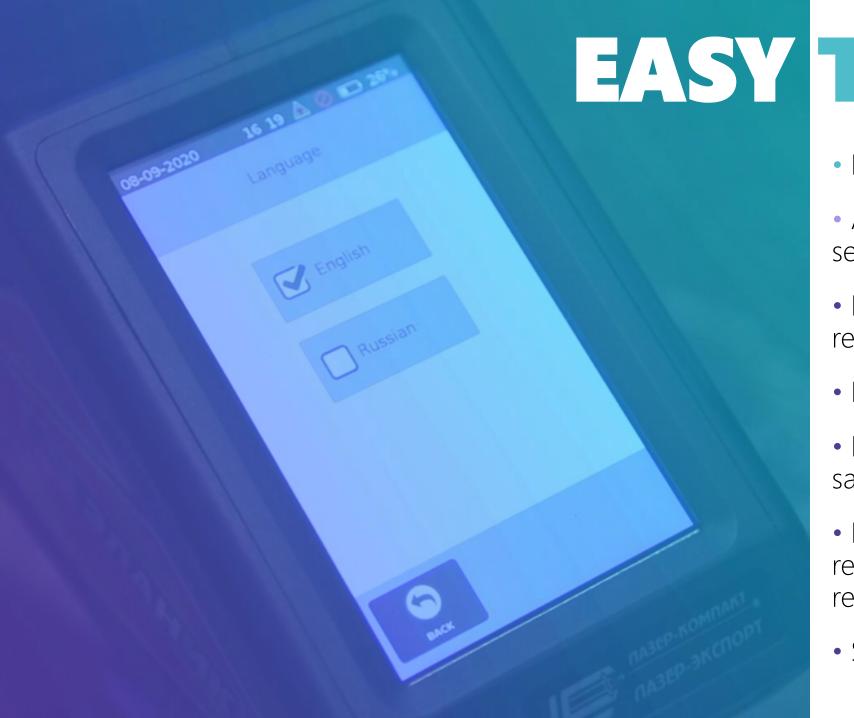
APPLICATIONS

- Measurement of elements from Li to Bi, including C (carbon) in steels and cast iron
- Positive Material Identification (PMI) at the input control, in warehouses, in the production process and in the field (pipelines, building constructions, workshops)
- Metal and alloys sorting at scrap recycling
- Calculation of carbon equivalent during welding and heat treatment.





- Portable
- Quick analysis in seconds
- Carbon measurement!
- High sensitivity low limits of detection (LODS) for light elements including C, Be, Mg etc.
- No inert gas required
- No X-Ray related restrictions
- Own well-developed analytics for LIBS
- Best price/quality ratio in the market



EASY TO USE

- Built-in camera
- Automated metal base selection
- No spectroscopy knowledge required
- Built-in alloy libraries
- Possibility to analyze small samples
- Doesn't contain parts requiring periodical replacement or maintenance
- Simple and clear interface

MEASURED ELEMENTS

Matrix	Measured elements		
Fe	C, Mg, Al, Si, Ti, V, Cr, Mn, Co, Ni, Cu, Zr, Nb, Mo, W		
Al	Be, Mg, Si, Ti, Cr, Mn, Fe, Ni, Cu, Zn, Zr, Sn, Pb		
Cu	Be, Mg, Al, Si, P, Ti, Cr, Mn, Fe, Ni, Zn, Sn, Pb		
Ti	Al, Si, V, Cr, Mn, Fe, Zr, Mo, Sn		
Ni	Mg, Al, Si, Ti, V, Cr, Mn, Fe, Co, Cu, Nb, Mo, W		

SPECIFICATIONS

Analysis method	Laser-induced breakdown spectroscopy
Source of radiation	pulsed YAG laser
Class	3B
Power supply	Rechargeable Li-ion batteries, 2 pcs.
Detection limits	From 1 ppm
Duration of measurement	4 – 15 s.
Display	resistive, diagonal 5''
Data storage	Built-in flash memory, 64
Data transfer	USB
Dimensions (LxHxW, mm)	298 x 316 x 106
Weight (kg)	2,5
Conditions of usage: - Environment temperature, °C - Relative air humidity at t=25°C, %, not more than	from +5 to +40 (standard version) from -20 to +40 (option) 90
Protection class from dust and moisture	IP54

Carbon equivalent (CE)

The calculation formula may be selected by the user when ordering. By default, the Dearden and O'Neill formula recommended by the International Welding Institute (IIW)

 $CE_{(IIW)} = C + Mn/6 + (Cr + Mo + V)/5 + (Cu + Ni)/15$ and the following scale for assessment of weldability:

CE (IIW)	Weldability	Display market color
0 – 0.35	Excellent	Green
0.36 - 0.40	Very good	Light green
0.41 – 0.45	Good	Yellow
0.46 - 0.50	Fair	O range
>0.50	Poor	Red

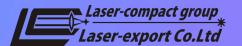


MEASUREMENT RESULT

On the screen:

- Alloy type
- Alloy grade (3 closest grades to the chemical composition measured)
- Carbon equivalent (CE)
- Chemical composition of the sample
- Absolute deviation by the measured points (if the measurement conducted in several points)





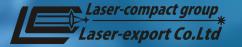
ELANIK

We are always ready to discuss the possibility of using ELANIK for your application.
Please contact us with any questions.

Ordering Info

When ordering, please indicate:

- Alloy types required for the analysis (for example, steel and cast iron Fe alloys; bronze and brass Cu alloys; Al-based alloys, etc.)
- Required operating temperature range: + 5 + 40 ° C standard version, or from 20 ° C low-temperature option.



THANKS FOR ATTENTION

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www.laser-export.com



www.elanik.com

