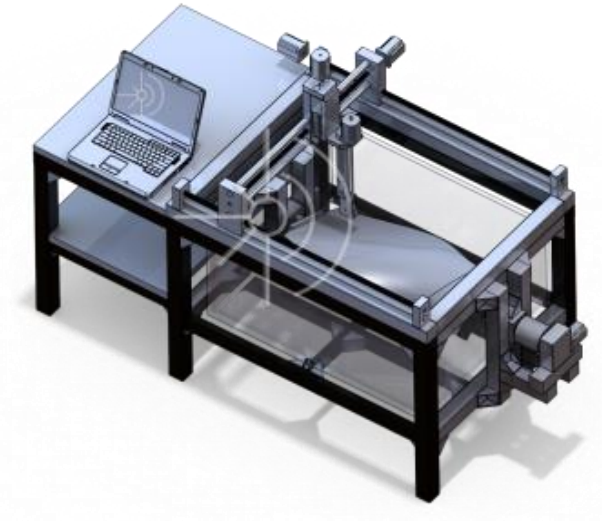




Automated five-axis laser ultrasound system



Automated five-axis laser ultrasound monitoring system is designed to determine the quality of products from various materials (metals, alloys, ceramics, plastics, composite materials etc.), detecting defects of various types in them. It is designed to control objects of complex geometry with surface tracking according to the CAD model.

1. Specifications:

Measuring mode: automated, permanent, immersion

Coverage: 650 – 850 mm

Productivity: 0.01 m²/h

ADC: 12 bit, 100 MHz, frame length - 4096, USB interface

Laser: Nd:YAG with diode pumping and Q-switching, 1.06 μ m, 100 μ J

Repetition rate of pulses: 1000 Hz

Productivity: at least 5 measurements/sec

Overall dimensions: less than 2000 mm x 1500 mm x 800 mm

Power supply:

- 220 V AC

- frequency 50 Hz

Power consumption: less than 500 W



Terms of Use:

- ambient temperature + 15 °C - + 35 °C

- relative humidity at + 25 °C: 50 - 80%

2. Configuration:

- laser unit
- ADC unit
- motion control unit
- 3 channel AC power conditioner 220V
- five-coordinate system to control complex surfaces (2 rotary axes, 3 translational axes)
- immersion tank
- broad-band optoacoustic transducers PLU-6P-02 (main)
- fiber optic cable
- a set of commutation cables
- data acquisition and processing system (PC working station)
- specialized software