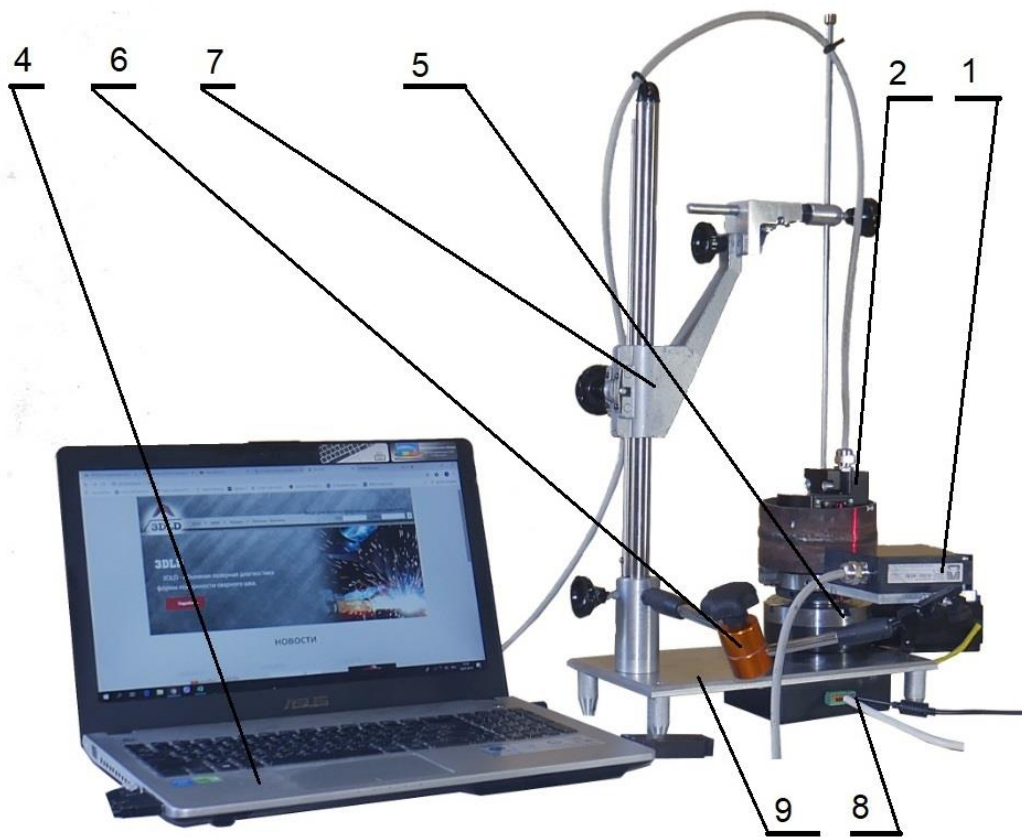




## LST scanner for evaluating butt weld test joints of pipes.



The LST scanner is designed for non-contact measurement and digitization of the front and root surfaces of the weld of butt of test pipes, for subsequent assessment using 3DLD technology of the practical skills of fusion welding welders.

The LST scanner consists of laser sensor LS2D (1) for scanning the face surface of the weld, laser sensor LS2D (2) for scanning the root surface of the weld, PC (4), switch (5), device for positioning LS2D sensor of the face surface of the weld (6), a device for positioning the LS2D sensor of the root surface of the weld (7) and base plate (9).

LS2D (1,2) represent modern 2D triangular laser sensors that digitalize surface up to 1000 sections per second and in each section receive coordinates 1024 points.

PC (4) contains 3DLD technology software that manage LST scanner, evaluates received data, calculates Welding Qualification Index(WQI) and forms certificate of welding skills.

Devices (6.7) - mechanical positioners provide the operator-defined positioning of LS2D sensors relative to the test pipes weld.

Switch (8) is a control unit that receives signals from LS2D (1) and LS2D(2) laser sensors and controls stepper motor. Switch connects PC with LST scanner using RJ-45 or Wi-Fi connection.

Base plate (9) is the basis for the placement of all components of the LST scanner except the PC (4).

#### Technical Specifications of the LST scanner.

Scanned objects	Butt welds of Test pipes
Width of scanning of a face seam less than (mm) 70	70
Width of scanning of a root seam less than (mm) 30	30
Measurement range by height of the front and root welds (mm)	- 2 ... + 6
Outer diameter of TEST pipes (mm)	90 -160
Internal diameter of TEST pipes (mm)	Not less than 80
TEST pipe height (mm)	Not more than 350
Speed of measurements (sections / s)	1000
Scan speed (mm/s)	12
Absolute measurement error along the height of the seam is not worse (mm)	0,05
Absolute measurement error along the seam width is not worse (mm)	0,4
Range of working temperatures (° C)	-5 + 50
Relative humidity at 25 ° C (%)	20 - 80
AC supply voltage (V)	220 - 230
Overall dimensions W x H x L (mm)	330 x 850 x650
Weight, less than (kg)	20