

**Modern Technology Solutions for the Repair of
Magnetized Oil and Gas Pipelines at
Gazprom Transgaz Tomsk LLC**



Anton Shestko – Oil & Gas
Pipeline Operation Engineer

The role of Gazprom Transgaz Tomsk in Gazprom PJSC



- Gazprom transgaz Tomsk as a part of its activity combines construction customer and operating organization functions
- The Company is the customer of project “Power of Siberia”
- The Company operates large gas and oil transmission network on the territory of the West Siberia and the Far East of Russian Federation

The goal of Gazprom Transgaz Tomsk and ways of achieving it





Sergey Baklanov – welding engineer in the laboratory for quality control of welded joints.

Oil and gas infrastructure of the Russian Federation

НЕФТЕПРОВОДЫ:

- 1 Дружба
- 2 БТС
- 3 БТС-2
- 4 ВСТО
- 5 ВСТО-2

Действующие

Газоперерабатывающие заводы

Нефтебазы

Пункты налива/слива нефти

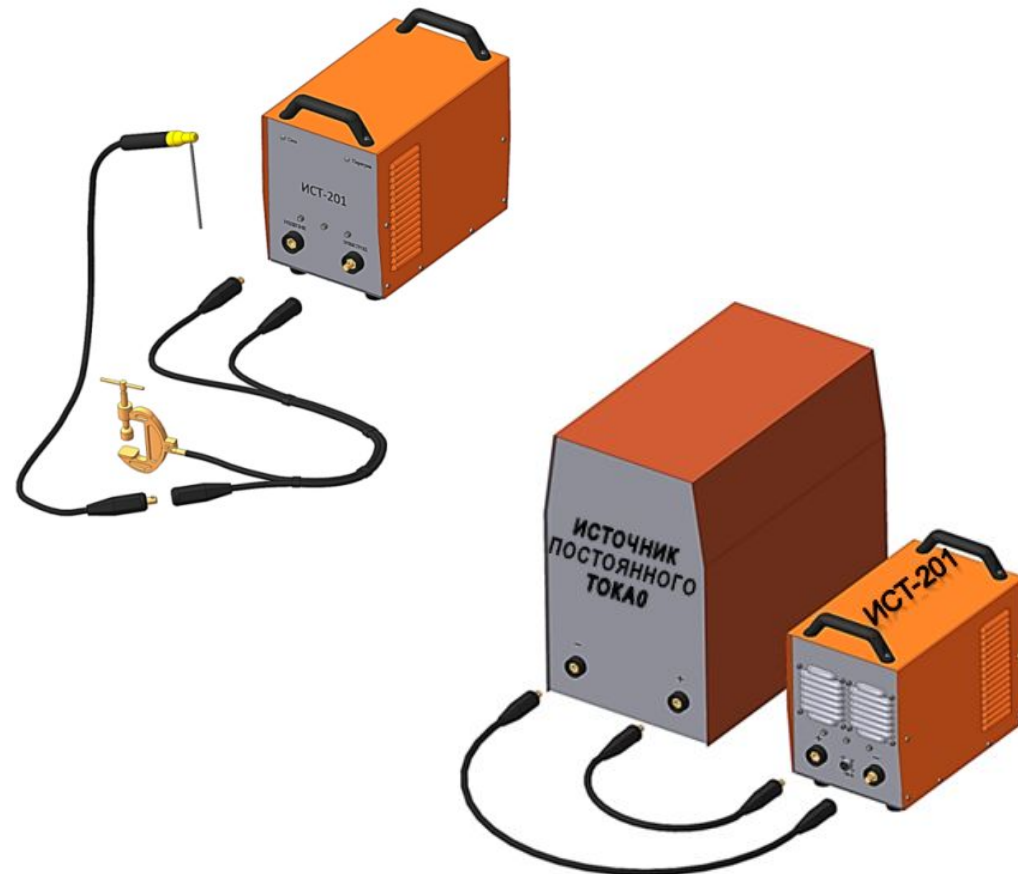
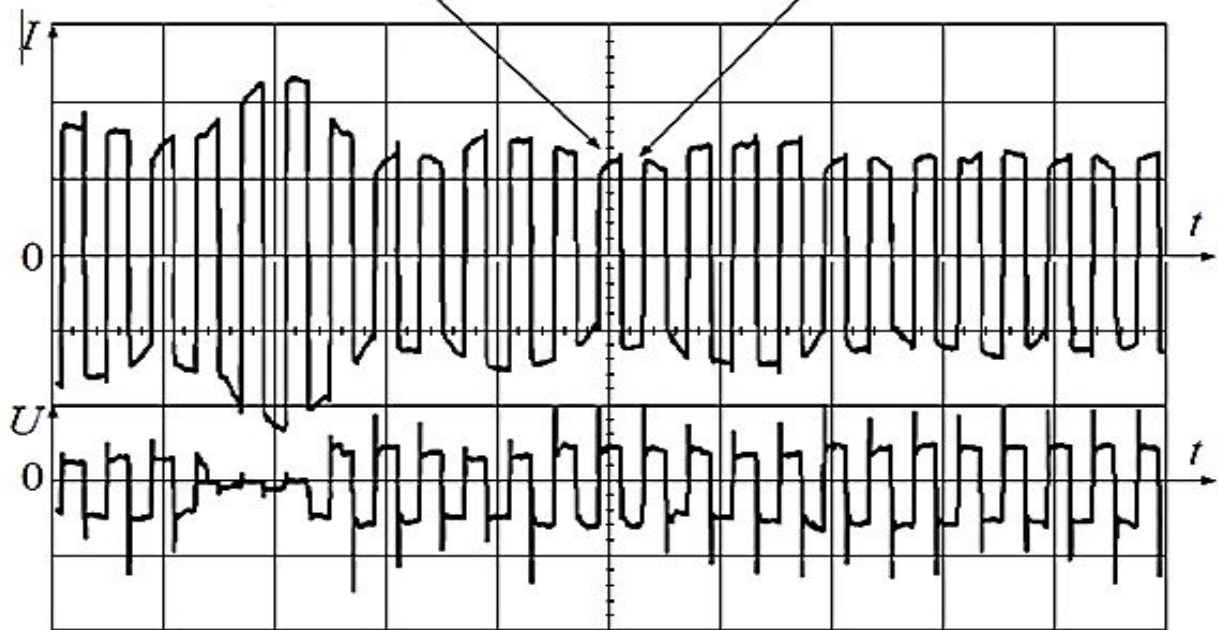
Танкерный флот

Reasons for magnetization of oil and gas pipelines

- application of magnetic methods of inspection;
- impact of the earth's magnetic field;
- impact of the magnetic field of electric lines.



The innovative solution of magnetized pipes arc welding problem



Oscillogram of electrical parameters of the arc and video footage of the welding process under the disturbing action of a magnetic field

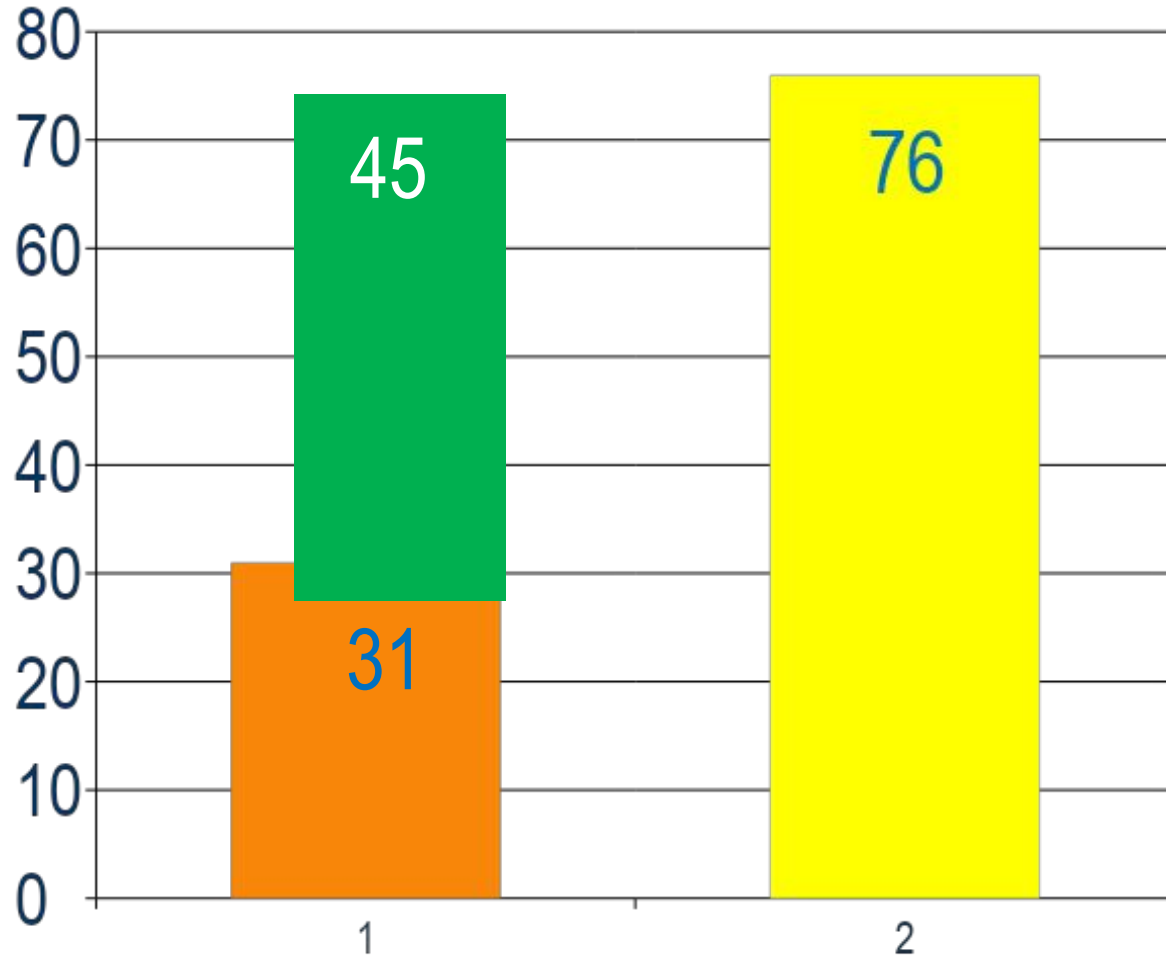
IST-201 Semiconductor inverter

The economic effect of equipment implementation in Gazprom transgas Tomsk, m. rub.

- IST-201 semiconductor inverter**
(price per 1 unit = **324000** rub.)

- equipment for demagnetizing**
(price per 1 unit = **790600** rub.)

- economic effect**



The efficiency of repair of magnetized pipelines using the IST-201 welding current modulator significantly increased.

- We can leave out stages connected with the pipeline demagnetation.
- Repair time can be reduced by half.
- We obtain the productivity of the welding process similar to the DC welding process in the absence of a disturbing magnetic field.
- We guarantee formation of a welded joint and improved quality of welding work.
- Labor productivity is increased and economic impact is obtained.

Thank you for your attention!