

# PRESENTATION OF AUTOMATED PROCESS CONTROL SYSTEMS SOLUTIONS



PROCESS CONTROL SYSTEMS FOR OIL REFINERY AND PETROCHEMISTRY PLANTS
 PROCESS CONTROL SYSTEMS FOR RAILWAY OIL LOADING UNITS
 PROCESS CONTROL SYSTEMS FOR PRODUCTION, TREATMENT OIL AND GAS UNITS
 PROCESS CONTROL SYSTEMS FOR MINING

BPA LLC – professional engineering company in automated process control Major subject – PCS, ESD systems in fields: oil production and refinery, petro chemistry, gas production and treatment, power industry

Moscow

Saratov

Uzbekistan

V. Novgorod

Turkmenistan

Rostov-on-Don

(Azov)

Azerbaijan(

N. Novgorod

Almetievsk

Kazakhstan

o Ufa

Orenburg

Omsk

до лгано ненецкий

EHK

ABT

**BPA** 

Staff 200 persons. GEO presence: 5 states – Russia Kazakhstan Azerbaijan Uzbekistan Turkmenistan

today

**13 years experience** 

9 cities in Russia – Moscow Nizhniy Novgorod Veliky Novgorod Almetievsk Ufa Orenburg Omsk Azov Saratov

Own production unit and warehouse near Moscow



Vendor	Major subject
Rockwell Automation	Controllers, control systems, VFDs
Siemens, Schneider- Electric, ABB	Electrical equipment, power supply and distribution
Wonderware	Software, SCADA
Invensys Systems	Triple controllers for safety systems, turbo machinery anti surge control, DCS
GUTOR Electronic	Industrial DC, UPS, chargers
Rittal	Cabinets
Emerson, Jumo, Krohne, Endress & Hauser, Foxboro, DS controls, IBC Praha	Instrumental equipment, control valves, on-off valves
GM International	Intrinsically safe equipment
Phoenix Contact	Clamps, plug-and-sockets, power supplies

# **BPA** competence

**«BPA»** can fulfill main contractor functions and deliver PCS.

#### **Engineering service scopes:**

- survey and valuation
- □ selection of instrumental, PCS
- development of requirements specification, feasibility study
- basic and detail engineering
- equipment procurement
- development and adaptation of software
- construction works
- supervision, commissioning
- personnel training
- maintenance

Own production facilities for electric cabinets assembling let to implement individual customer requirements in short terms.



# Organization chart

In Russia BPA LLC consists of head office and 8 regional branches

#### **Production block:**

- Project management department;
- Design department;
- Software development department;
- Acquisition and supply department;
- Assembly area in Moscow;
- □ Construction works areas in Saratov, Ufa, Azov;
- Commissioning area in Almetievsk, Tatarstan.

### **Commercial block:**

- Marketing department;
- □ Financial department.

In company has been implemented quality management system in accordance with GOST R ISO 9001:2011.



# **Training courses**

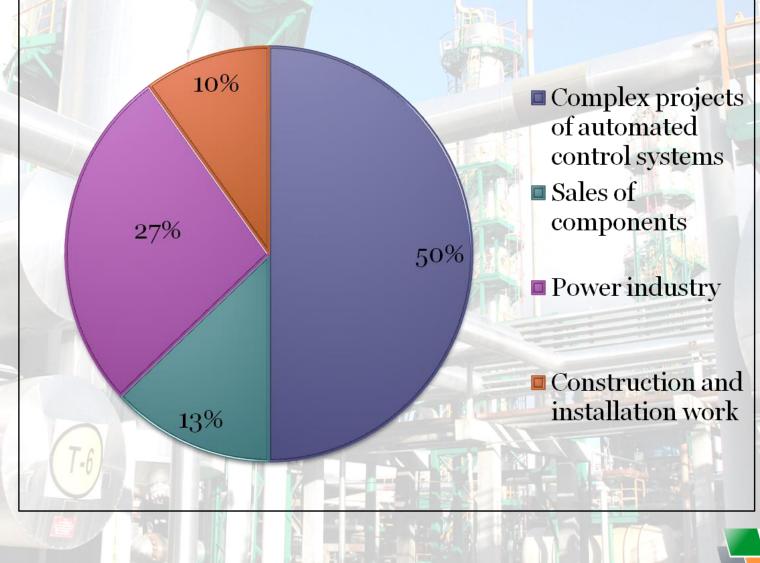
BPA LLC staff is high qualified engineers and workers. All engineers have certificates from vendors. Training courses list:

- □ I/A Series Configuration (Invensys Systems) 16 persons.
- Trident maintenance Tristation 1131 Developer's workbench (Triconex) – 8 persons.
- PLC ControlLogix 5000 and Programming Software RS Logix5000 (Rockwell Automation) – 14 persons.
- □ Simatic, PCS7 (Siemens) 10 persons.
- □ Centum CS 3000R3 (Yokogawa) 3 persons.
- □ InTouch (Wonderware) 8 persons.
- Operation and maintenance service of the PowerFlex 7000 drives (Allen Bradley) – 3 persons.
- Low voltage electrical equipment (Schneider Electric) 7 persons.
- □ CAD EPLAN 8 persons.

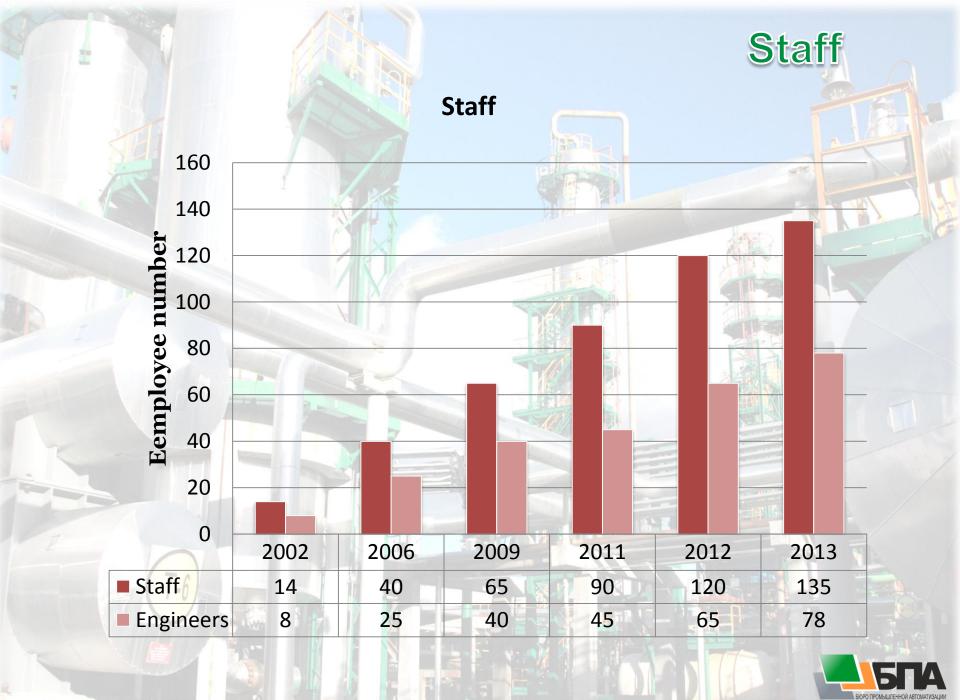
**Company policy in professional development includes: scheduled** training courses, participation in exhibitions, seminars, conferences.



# **Structure of revenue**







# **BPA** assembly area and warehouse

#### BPA LLC has total area of industrial premises 1000 square meters. It includes:

- warehouse for components, parts and material;
- premises for machining and packing;
- assembly shop;
- testing and FAT area;
- engineering office.

There are machine tools, printers for marking wires and terminals, individual working tools.

There is electric laboratory, it has Rostehnadzor certificate.

#### Staff

- Designers 17 persons;
- Assemblers 12 persons;
- Quality supervisor 2 person;
- □ Electric laboratory supervisor 1 person;
- □ Logistics 6 persons.



# **BPA** assembly area and warehouse

✓ Labeling area

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✓ Machines for buses



✓ Warehouse







# **BPA Construction work areas in Ufa, Azov, Saratov**

Azov - 45 persons

Ufa - 50 persons

Saratov – 40 person



# **BPA** partner in EU, Latvia



- Industrial area -3600 sq.m.
  Storage area 2500 sq.m.
  Staff:
- •Managers 16 employees
- Mechanics 12 employees
- •Electricians 46 employees •Back-office - 8 employees

BPA uses Partner in Latvia for foreign projects in EU and CIS

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## **Process control systems in oil refinery and petro chemistry**



# Process control systems in oil refinery and petro chemistry

Nº	Description	Customer	I/O	Year	Vendor
1.	Automated PCS propane-propylen fraction	JSC «Ecooil»	350	2002- 2003	PLC – ControlLogix, Allen-Bradley. SCADA – Intouch, Wonderware.
2.	Automated PCS methyl-tritbutyl ether	JSC «Ecooil»	1400	2002- 2003	Redundant PLCs – PLC-5, Allen- Bradley. SCADA – RSView, Rockwell Software.
3.	PCS reforming unit 35-11/300	JSC «Saratov oil refinery plant»	300	2004- 2005	PLC – MicroLogix 1500, Allen- Bradley. SCADA – Intouch, Wonderware
4.	DCS and ESD commissioning furnace P-3 of reforming unit 35-11/300	JSC «Saratov oil refinery plant»	150	2005	ESD – Trident, Triconex. DCS – redundant ControlLogix, Allen- Bradley. SCADA – Intouch, Wonderware.
5.	Re-equipment	JSC Neklinovsknefteproduct	800	2008	DCS – DrirectLiogic DL-260. ESD – DrirectLiogic DL-260
6.	«Reforming unit. Furnaces P1/1 and P1»	JSC «Saratov oil refinery plant»	700	2009	ESD – Trident, Triconex. DCS – redundant ControlLogix, Allen- Bradley. SCADA – Intouch, Wonderware.
7.	Unit for utilization of associated petroleum gas	JSC «Kuybyshev oil refinery plant», GARO (Italy)	500	2010	DCS and ESD – redundant ControlLogix, Allen-Bradley. SCADA – RSView, Rockwell Automation.



## Process control systems in oil refinery and petro chemistry

	N≏	Description	Customer	I/O	Year	Vendor
and the second se	8.	Reinstallation DCS and ESD 35-11/600 reforming unit	JSC «Saratov oil refinery plant»	1100	2011	ESD – Trident, Tricon, Triconex. DCS – I/A Series, Invensys systems.
	9.	DCS and ESD hydrotreater unit 24/6	JSC «Saratov oil refinery plant»	1800	2012	ESD – Trident, Tricon, Triconex. DCS – I/A Series, Invensys systems.
	10.	DCS and ESD low temperature isomerisation unit	JSC «Saratov oil refinery plant»	4000	2012	ESD – Trident, Tricon, Triconex. DCS – I/A Series, Invensys systems.
	11.	DCS and ESD Yajskiy oil refinery plant	«Invensys process systems» LLC	3300	2012	ESD – Trident, Tricon, Triconex. DCS – I/A Series, Invensys systems.
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ОРО ПРОМЫШЛЕННОЙ АВТОМАТИЗАЦИ

## Process control systems in loading oil units and storage tanks

N≌	Description	Customer	I/O	Year	Vendor
1.	DCS and ESD of oil loading facility	«Lukoil» LLC	2200	2004	DCS and ESD (redundant) – PLC- 5, Allen-Bradley. SCADA – RSView, Rockwell Software.
2.	DCS and ESD LNG tanks	JSC «Ecooil»		2004- 2005	Instrumental – level meters BM100 µ flowmass meters Korimass, KROHNE. DCS and ESD – SLC-500, Allen-Bradley. SCADA – RSView, Rockwell Software.
3.	PCS of tanks	JSC «Alrosa».		2005	DCS and ESD (redundant) – ControlLogix, Allen-Bradley. SCADA – RSView, Rockwell Software.
4.	DCS and ESD of loading facility	JSC «Azovproduct»	900	2003- 2005	DCS and ESD (redundant) – PLC- 5, Allen-Bradley. SCADA – RSView, Rockwell Software.
5.	DCS and DCS of unit for loading dark petroleum products into rail trucks	JSC «Saratov oil refinery»	500	2009	DCS and ESD (redundant) – ControlLogix, Allen-Bradley. SCADA – I/A Series, Foxboro



## Process control systems in loading oil units and storage tanks

N≌	Description	Customer	I/O	Year	Vendor
6.	PCS of gas detection system (41 tanks)	JSC «Saratov oil refinery»	1100	2009	DCS and ESD (redundant) – ControlLogix, Allen-Bradley. SCADA – I/A Series, Foxboro
7.	Technical re-equipment of unit for loading dark petroleum products into rail trucks	JSC «Saratov oil refinery» /MARCON Ingenieurgesellschaft mbH	1100	2009	DCS and ESD (redundant) – ControlLogix, Allen-Bradley. SCADA – RSView, Rockwell Software.
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## **Process control systems in mining**

Nº	Description	Customer	I/O	Year	Vendor
1.	PCS of heating power shop.	«JSC «Alrosa»	1100	2009	PLC – SLC-500, Allen-Bradley. SCADA – RSView, Rockwell Software.
2.	PCS of water pump station.	«JSC «Alrosa»	1800	2010	PLC – ControlLogix, Allen- Bradley. SCADA – RSView, Rockwell Software.
3.	PCS of water treatment facilities		2000	2007	PLC – VIPA (Simatic S7-315). SCADA – WinCC 6.0, Siemens
4.	PCS of heating shop	«JSC «Alrosa»		2008	PLC – ControlLogix, Allen- Bradley. SCADA – RSView, Rockwell Software.
5.	PCS of heating shop	«JSC «Alrosa»		2008	PLC – ControlLogix, Allen- Bradley. SCADA – RSView, Rockwell Software.
6.	PCS of water pump station.	«JSC «Alrosa»		2009	PCS – ControlLogix, Allen- Bradley. SCADA – RSView SE, Rockwell Software.



### **CAD Eplan P8 Electric**

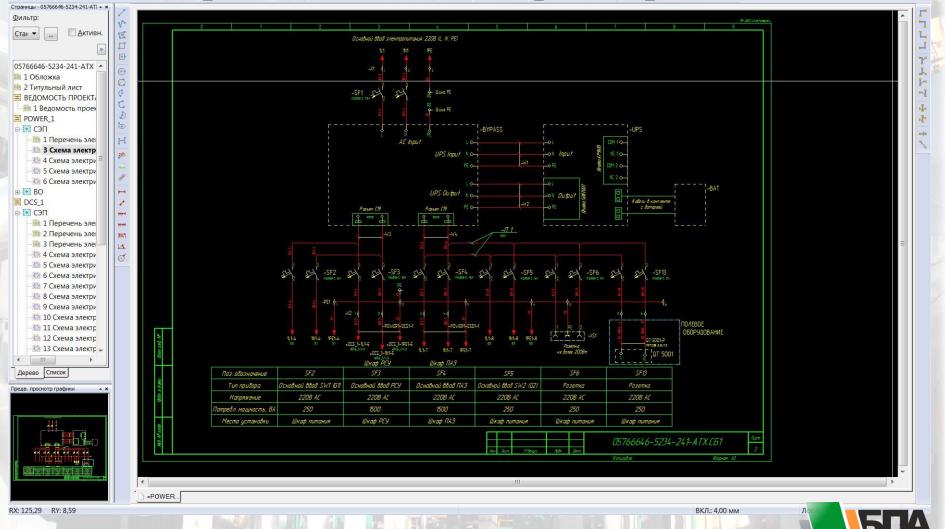
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#### EPLAN Electric P8 2.1 SP1 - [=POWER\_1+C3I7]

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### **CAD Eplan P8 Electric**

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#### EPLAN Electric P8 2.1 SP1 - [=DCS\_1+C3I/14]

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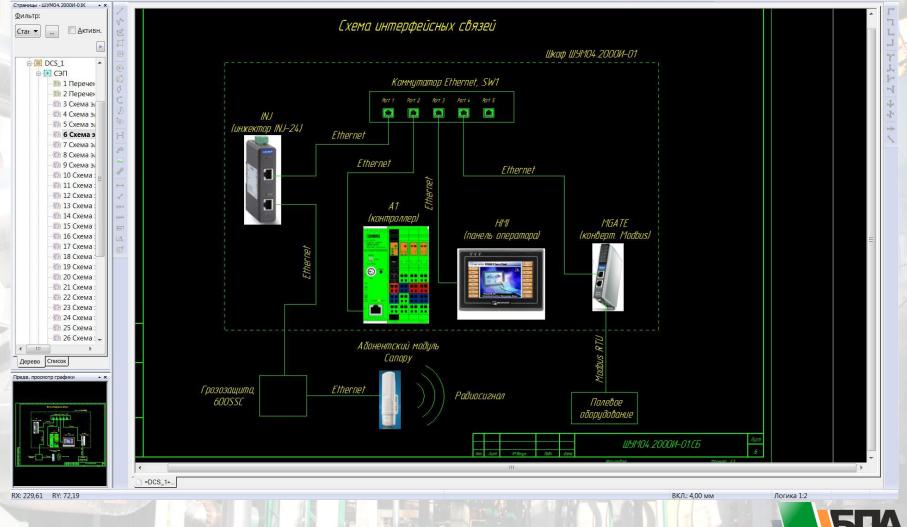
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🤗 EPLAN Electric P8 2.1 SP1 - с защитой от записи - [=DCS\_1+СЭП/6]

🗅 <u>П</u>роект <u>С</u>траница П<u>р</u>остранство листа <u>О</u>бработать В<u>ид</u> <u>В</u>ставить <u>Д</u>анные проекта Поиск Пара<u>м</u>етры С<u>е</u>рвисные программы О<u>к</u>но Спр<u>а</u>вка



### **Licenses and Certificates**









# THANK YOU !

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