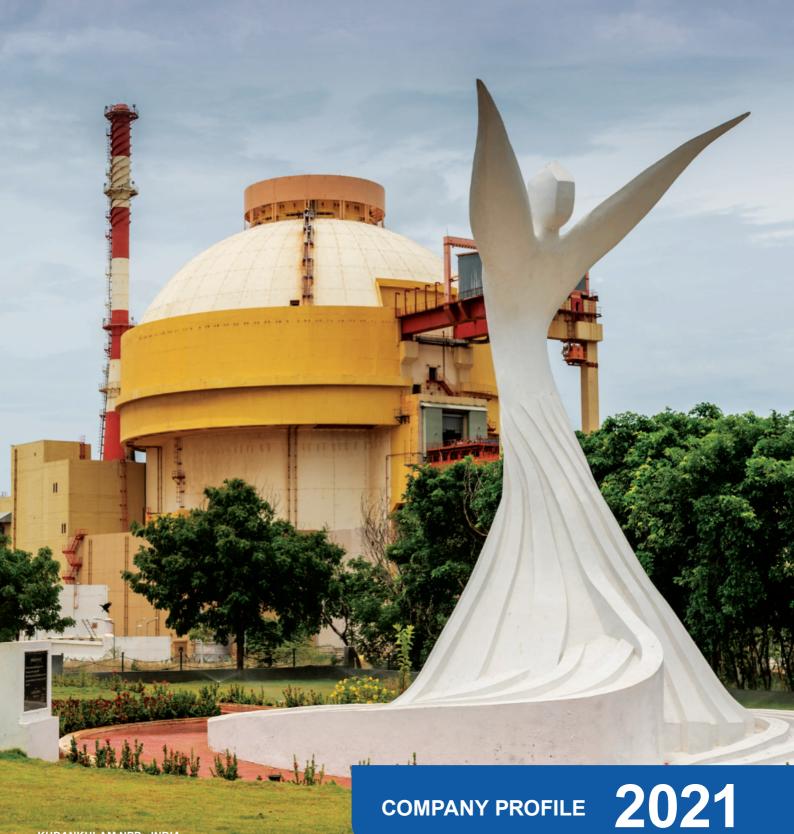


KUDANKULAM NPP - INDIA

Czech manufacture of industrial valves



ABOUT US

ARAKO employs approximately 200 people. We build on the more than 60-year tradition of development and production of industrial valves in Opava, connected with the SIGMA concern and the Minerva company. Our product portfolio offers valves for nuclear and thermal power plants, chemical and petrochemical plants. We own design and development department and we offer to customers customer service of valves. Nowadays we export to 25 countries and we are specialists in the production of nuclear valves.

QUALITY AND CERTIFICATIONS

We emphasize on quality and modern working environment. We pay attention to increasing customer satisfaction, improving the efficiency of internal processes and producing the highest quality valves. We own a complex of internationally recognized certificates focused on quality management, production processes and the product itself.

SYSTEM CERTIFICATES

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health and Safety Management System
- Directive 2014/68/EU (module H) Assessment of the Quality System
- EN ISO 3834-2 Quality Requirements for Fusion Welding of Metallic Materials

PRODUCT CERTIFICATES

- Certificate on EC Revision of the Type (module B)
- Certificates AD 2000-Merkblatt HP 0 / HP 100 R. TRD 201. AD 2000-Merkblatt A4. EN ISO 3834-2
- Certificate TRD 110
- Certificate VDI 2440:2000 (TA LUFT)
- Certificate EN ISO 10497:2011 and API Standard 607 (Fire safe)
- Certificates OIT for use of industial valves in nuclear power plants in Russia
- **EAC Declaration of Conformity**
- EAC Certificate of Conformity
- Certificates of Conformity of the type for Ukraine

SUPPLIER CERTIFICATES

ČEZ, a. s., Czech Republic; ŠKODA JS, a. s., Czech Republic; SIGMA DIZ spol. s r. o., Czech Republic; KSB AG, Germany; Siemens AG, Germany; GP NAEK Energoatom, Ukraine; PAKS NPP, Hungary; Slovenské elektrárne, a. s., Slovakia, ZAO Atomstrovexport, Russian Federation, Rosenergoatom; Russian Federation

HISTORY OF ARAKO

- Minerva Opava, sewing machine factory predecessor of ARAKO 1945
- 1953 Beginning production of industrial valves
- 1976 Development and production of the first valves for the nuclear industry
- 1980 The company is incorporated into the VHJ SIGMA concern
- 1992 Foundation of ARAKO spol. s r.o.
- 1997 Construction of a new production and storage hall
- Adoption of a new production program in Germany, including a prototype 1998 of the product - Gate Valve S38
- Completion of development and commencement of production 2003 Pneumatic Control Valve Y70
- Delivery of valves for 1-2 units in Kudankulam NPP (India) 2005 - 2008

ARAKO PRODUCTION



VALVES FOR NUCLEAR ENERGETICS

We have been specializing in the production of nuclear valves for 43 years and we are able to offer following:

- Gate Valves
- · Globe Valves with Bellows
- · Quick-Acting Globe Valves with Bellows
- Check Valves
- Pneumatic Control Valves
- · Globe Valves KIP with Bellows
- · Globe Valves KIP with Packing

Gate Valves | PN 10-630 DN 40-500, 800

Gate valves are used where a minimum flow restriction of working medium is required. We offer a cast and forged Gate Valves with a rising or non-rising stem, with a flexible or split wedge, in a welded or flanged design, with a control: hand wheel, gearbox, electric drive, remote control and more.



Globe Valves | PN 10-630 DN 6-200

These valves are mainly used in power engineering, chemical industry and other industries where the functionality is required at high pressures and temperatures. The shut-off valve ensures 100% tightness of the closure. The control design with a profile closing element, usually of a parabolic shape, serves to throttle the working medium on the basis of specific flow parameters of the working substance. Valve bodies are made of cast and forged materials. Because of a longer service life, the hard facing of disc and body is provided with the hard metal of the type Stellite 6th



Check Valves, Swing Check Valves | PN 10-630

These valves protect the pipe section or equipment against harmful kickbacks of the working fluid. They open spontaneously by the pressure of the flowing substance and close by the effect of its back pressure or only by stopping the flow of the working medium. We produce our Check Valves and Butterfly Valves in a welded or flanged design, in a horizontal or vertical piping, both from a cast and forged materials.



Strainers | PN 10-320 DN 10-200

They are used to trap mechanical impurities contained in the working medium. Any impurities will remain in the filter element made of special technical fabric. For high pressures, a stainless steel double-layer screen, designed in a carrier cage.



Ball Valves | PN 10-63 DN 10-150

Industrial valves are bi-directional, designed to fully open or close the flow of the working medium. Three-piece construction connected with bolt srews, allows easy repair without the need to remove flanges. Tightness is ensured by a floating ball, housed in PTFE seats.



2010

2006

Others

In our portfolio we also include Blow-Down and Continuous Blow-Down Valves, and Special Valves, which is Energy reducer M25. They consist of a multi-stage body, with a stable system of orifice plates and vortex chambers, in which very high pressure drops are reduced, according to exact customer requirements.

ARAKO is undergoing rebranding and changing its exiting Logotype

2016 - 2018 Confirmation of contracts for the supply of valves for projects Hanhikivi NPP, Akkuyu NPP, Paks NPP, El Dabaa NPP

2010 - 2016 Delivery of valves for 3-4 units in Mochovce NPP (Slovak Republic)

2010 - 2013 Extensive modernization of production facilities

Completion of development and commencement of production Forged Gate Valve S43

2008 Completion of development and commencement of production Blow-Out and Pickling Device - special for SIEMENS

2007 ARAKO becomes part of the group Atomenergomash, engineering division of ROSATOM

Completion of development and commencement of production High-Pressure Shut-Off Globe Valve V46.2

OUR SERVICES

Service and production valves Industrial valve development **Product cooperation**

METALWORKING:

- · lathe-turning
- milling
- grinding

WELDING HEAT TREATMENT METAL BLASTING **PAINTING PRESSURE** (including nuclear production)

ARAKO FACTS

ARAKO spol. s r.o.

Legal form: Limited liability company Identification number: 47152371

Founded in: 1992

Since 2007 the company belongs to the Russian holding Atomenergomash, engineering division of the State Corporation for Atomic Energy Rosatom

STATUTORY AUTHORITY OF ARAKO

Managing director: ROVSHAN ABBASOV

EXECUTIVE MANAGEMENT:

Julia Dolgusheva **Executive Director** Jaromír Petřkovský Production Director Petr Hlaváč Commercial Director Pavlína Koligová Personnel Director Kamil Rychnovský Quality Director Lenka Kavanová Finance Director Jegor Kirjanov **Project Director** Martin Klimša Chief Designer

Josef Švamberg Management representative for IMS

PARTNERS

AKCIONĚRNOJE OBŠČESTVO ATOMNOJE I ENERGETIČESKOJE MAŠINOSTROJENIE

Share: 497/650

Bolšaja Ordynka 24, Moscow,

Russian Federation

Liges s.r.o. Share: 153/650

Identification number: 27933270 Hviezdoslavova 2897/18. 746 01 Opava, Czech Republic

ARAKO NUMBERS

Total revenue (in thousands of CZK)



REFERENCES

NUCLEAR POWER PLANTS

THERMAL POWER PLANTS, CHEMICAL, PETROCHEMICAL, GAS INDUSTRY

CZECH REPUBLIC	TEMELÍN NPP	CZECH REPUBLIC	PRUNÉŘOV II / Power station
	2 x 1000 MW, VVER 1000		TUŠIMICE II / Power station
	DUKOVANY NPP		LEDVICE / Power station
	4 x 510 MW, VVER 440		STRAKONICE / Heating plant
	ČEZ ENERGOSERVICE S.R.O.		TRMICE / Heating plant
	I & C ENERGO A.S.		ZEVO CHOTÍKOV / Waste incineration plant
SLOVAK REPUBLIC	MOCHOVCE NPP		DALKIA, ČEZ, ŠKODA JS, ČEPRO,
	2 x 470 MW + 2 x 440 MW, VVER 440		
	JASLOVSKÉ BOHUNICE NPP		UNIPETROL, PLYNOSTAV, MND
	2 x 560 MW, VVER 440	SLOVAK REPUBLIC	SES TLMAČE, SLOVENSKÉ
RUSSIAN FEDERATION	ROSTOV NPP		ELEKTRÁRNE, U. S. STEEL KOŠICE,
	4 x 1000 MW, VVER 1000		SLOVNAFT
	KOLA NPP	POLAND	ELEKTROWNIE WARSZAWSKIE, ORLEN,
	4 x 440 MW, VVER 440		PERN S. A., IDS-BUD S. A., PSJ
	BALAKOVO NPP		HYDROTRANZIT
	4 x 1000 MW, VVER 1000	■ GERMANY	SIEMENS, SHELL, LINDE,
	BILIBINO NPP		STEINMUELLER BABCOCK,
	4 x 12 MW, EGP-6		SCHROEDER VALVES,
	NOVOVORONEZH NPP		LYONDELLBASELL, VINNOLIT,
	1 x 417 MW, 1x 1000 MW, 2x 1200 MW, VVER 440, VVER 1000, VVER 1200		SIEKMANN ECONOSTO
	KALININ NPP	NETHERLANDS	KLINGER B.V.
	4 x 1000 MW, VVER 1000	AUSTRIA	OMV, BDI – BIOENERGY
	LENINGRAD NPP		INTERNATIONAL AG
	3 x 1000 MW, 1x 1200 MW, RBMK 1000	FRANCE	AREVA
	VVER 1200	RUSSIAN FEDERATION	KONAKOVSKAYA GRES / Thermal power plant
	SMOLENSK NPP	ROSSIANTEDERATION	SREDNEURALSKAYA GRES
	3 x 1000 MW, RBMK 1000		
	KURSK NPP		Thermal power plant
	4 x 1000 MW, RBMK 1000		SCHATURSKAYA GRES / Thermal power plant
	BELOYARSK NPP		REFTINSKAYA GRES / Thermal power plant
	1 x 600 MW, 1 x 800 MW, BN - 600, BN - 800		YUZNOURALSKAYA GRES / Thermal power plant
UKRAINE	ROVNO (RIVNE) NPP		NIZNEVARTOVSKAYA GRES
	1 x 420 MW + 1 x 415 MW + 2 x 1000 MW,		Thermal power plant
	VVER 440, VVER 1000		LUKOIL, GAZPROM, WASTE INCINERATION
	ZAPOROZHYE NPP		PLANTS IN THE MOSCOW REGION
	6 x 1000 MW, VVER 1000	■ BELARUS	MINERAL WAX PLANT JSC,
	KHMELNYTSKYI NPP		AZOT GRODNO / Chemical power plant
	2 x 1000 MW, VVER 1000	KAZAKHSTAN	PAVLODARSKAYA / Thermal power plant
	SOUTH UKRAINE NPP	SWEDEN 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	VIMMERBY / Biomass power plant
	3 x 1000 MW, VVER 1000		ABB
BULGARIA	KOZLODUY NPP	UNITED KINGDOM	BIRMINGHAM / Biomass power plant
	4 x 440 MW + 2 x 1000 MW, VVER 440,	TURKEY	SOMA, AFSIN ELBISTAN, YATAGAN,
	VVER 1000		YENIKÖY, KEMERKÖY, TUNCBILEK,
	BELENE NPP		Thermal power plants
- BELABUS	2 x 1000 MW, VVER 1000	BANGLADESH * * * * * * * * * * * * * * * * * * *	SIKALBAHA / Gas power plant
BELARUS	BELARUSIAN NPP	ROMANIA	CE OLTENIA
INIDIA	2 x 1200 MW, VVER 1200		
INDIA	KUDANKULAM NPP		ROVINARI / Thermal power plant
	4 x 1000 MW, VVER 1000, VVER 1200		TURCENI / Thermal power plant
	KAIGA NPP		CRAIOVA I + II / Thermal power plant
	2 + 2 x 220 MW, PHWR RAJASTHAN NPP		ISALNITA / Thermal power plant
	4 x 220 MW, 1 x 200 MW, PHWR	CHINA	SHANXI DATONG NO 2 / Thermal power plant
LITHUANIA	IGNALINA NPP		GUODIAN YUYUAN / Thermal power plant
LITTIO/MAIA	2 x 1300 MW, RBMK 1500		DATANG LINZHOU / Thermal power plant
HUNGARY	PAKS NPP		JIAOZUO WANFANG / Thermal power plant
	2 x 500 MW, 2 x 470 MW, VVER 400	BULGARIA	MARITSA 1 / Thermal power plant
CHINA	TIANWAN NPP	LITHUANIA	AB LIFOSA / Chemical power plant
	2 x 990 MW, 1 x 1050 MW, VVER 1000	KUWAIT	SHUWAIK POWER / Distillation station
BANGLADESH	ROOPPUR NPP		AZ ZOUR SOUTH / Thermal power plant
	2 x 1200 MW, VVER 1200		DOHA WEST / Thermal power plant
TURKEY	AKKUYU NPP	─ FINLAND	OY KONWELL
	4 x 1200 MW, VVER 1200	■ USA	SIEMENS