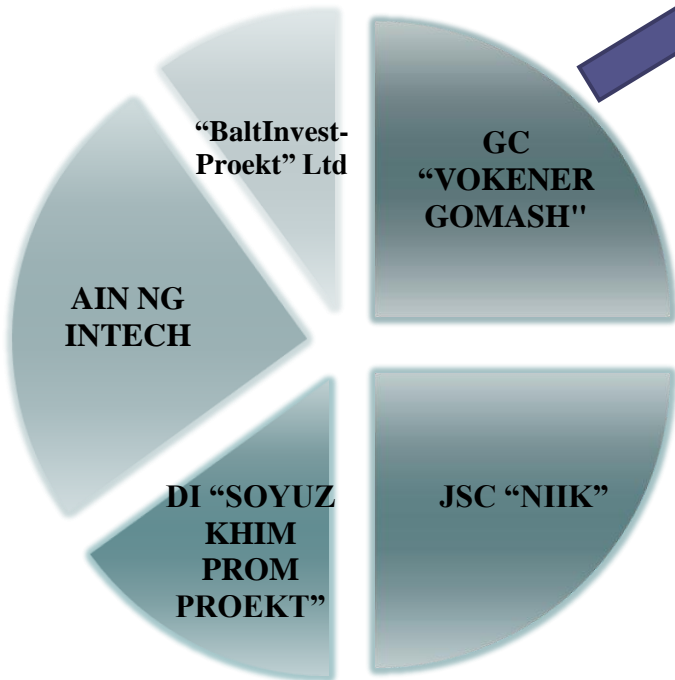




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**International consortium for implementation of
project: «The Construction of a refinery
complex in the Republic of Ecuador»**

**group of companies
"VOKENERGOMASH"
Nizhniy Novgorod city
2017**



The consortium provides a full range of engineering services for the implementation of projects “turnkey” scheme EPC/EPCM:
E – ENGINEERING
P – PROCUREMENT
C – CONSTRUCTION
M – MANAGEMENT

A consortium of the leading Russian engineering companies, which united their efforts for implementation of the project “Construction of a Refinery in the Republic of Ecuador with the capacity of 300 thousand barrels per day”

MISSION:

- To achieve the implementation of the Project optimal results that satisfy the Customer.
- To realize the technological potential of modern Russian and foreign developments in the field of oil processing.

STRATEGY:

- The organization of the Project in strict accordance with Customer requirements
- The concentration of professionals in one team and centralization of the accumulated experience of implementation of projects.
- The use of modern technologies in the field of oil refining
- Integrated solutions at all stages of development and implementation of the Project

GOALS:

- ✓ Implementation of the construction project in the Republic of Ecuador of an oil refining complex with capacity of 15 million tons per year (300 thousand bopd) of crude oil.
- ✓ Improving the efficiency of use of natural resources.
- ✓ To improve the environment by providing consumers with new high-quality fuels that conform to the highest requirements of modern environmental standards.

CONSORTIUM STRUCTURE

key responsibilities

**Management company
GC “VOKENERGOMASH”**

JSC “НИИК”

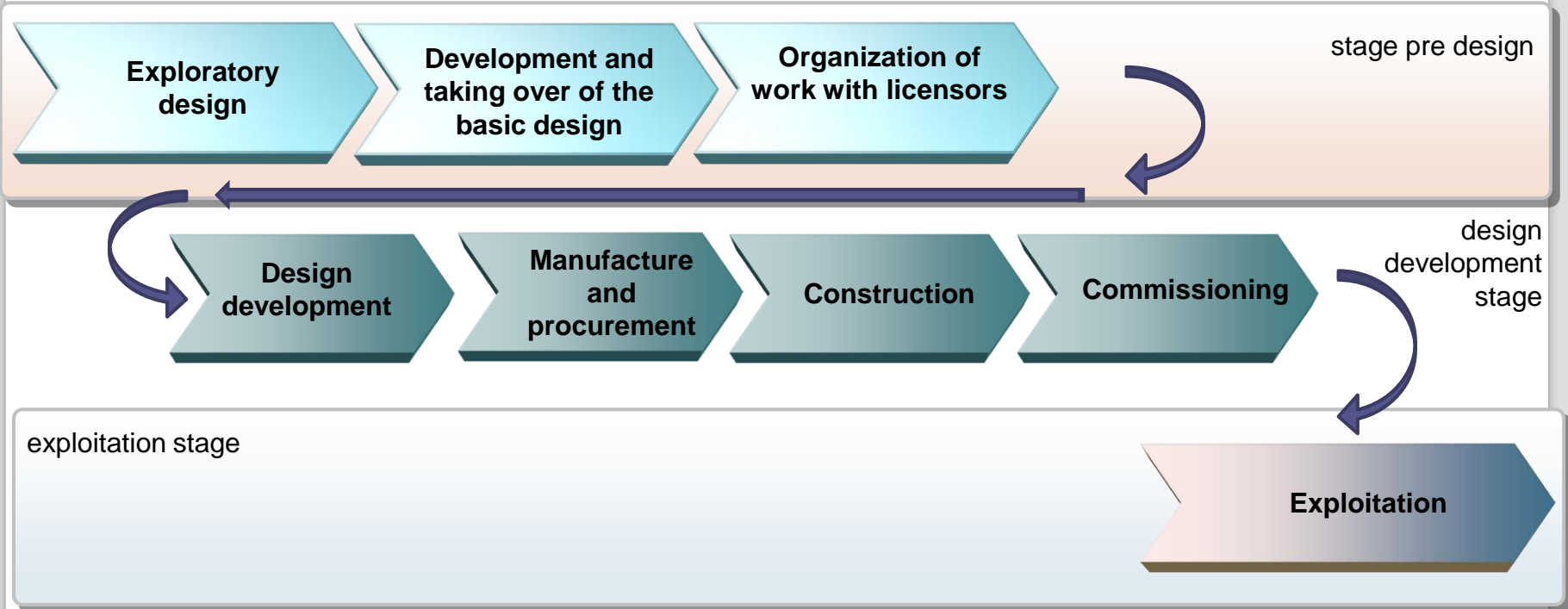
IN NG “INTECH”

“BaltInvest-Proekt Ltd

DI “SOYUZHIMPROMPROEKT”

- Revision and updating of existing design documentation;
- Collection of initial data for design works, development of technical specifications, questionnaires, requests for technical proposals;
- The development of a "basic design"
- Representation of the Consortium before the Project Customer and third parties;
- Creation of information model of the Project and information infrastructure;
- Calendar network planning in the design and construction of the facility;
- Workflow integration of the Consortium members and the Project Customer in a single management system;
- Ensuring cooperation between different specialists and unification of software products;
- Monitoring of Project execution and coordination of parallel activities;
- Selection, development and implementation of the licensed technologies and processes;
- Technological calculations;
- Provision of oil refining and petrochemistry process technology
- Development of technological regulations for development of design documentation;
- Development of design and working documentation;
- Development of engineering documentation;
- Adaptation of documentation to local norms and regulations on the territory of the Project implementation;
- Manufacturing and supply, as well as equipment installation supervision and commissioning;
- Organization of construction and installation works;
- Организация строительно-монтажных работ;
- Staff training;
- Modelling of operational processes of the full life cycle of a complex using supercomputer technology.

Life cycle of the Project



STAGES OF THE PROJECT

Start of the project

Project work: analysis of technologies, finished products and design options of project implementation

Basic Design

- Development of a Customer requirements specification for the Project
- Organization of work with Licensors
- Develop criteria for evaluating proposals Licensors and recommendations on the choice of technology
- Preparation of contracts for the licensing and basic engineering
- Determination of baseline data
- Acceptance of the basic design

Design

- Technical Customer Support in the preparation of permits in the Republic of Ecuador to the receipt of all required technical conditions for connection, the development of schemes of electricity, gas and water supply, the design of transport solutions;
- Design development;
- The formation of technical specifications, development contracts, distribution sites and coordination of the project participants activity, the analysis and acceptance of the project documentation;
- Max deserted organization of the production process through the introduction of modern systems of automation (Process control system)

STAGES OF THE PROJECT

Supply

- Development of personal technical equipment requirements and demands of the technical proposals to the equipment manufacturers.
- Development of design and construction documentation for the equipment
- The formation of the registry of potential vendors
- Potential vendors audit
- Development of workmanship quality plans and equipment acceptance plans
- Tender procedure and bidding on the selection of equipment manufacturers
- Logistics of equipment delivery to the installation site
- Control of equipment production
- Acceptance of the equipment at the construction site

Construction

- Organization of construction at the site
- Selection of construction organizations
- Distribution of responsibilities for the areas and coordination of construction organizations
- Construction of the interconnected control of the IDA system
- Acceptance of work performed and the required executive documentation
- Supervisory responsibility
- Acceptance Inspection

STAGES OF THE PROJECT

Comissioning

Organization of commissioning and the output object on the working mode to ensure the operational parameters

Control system

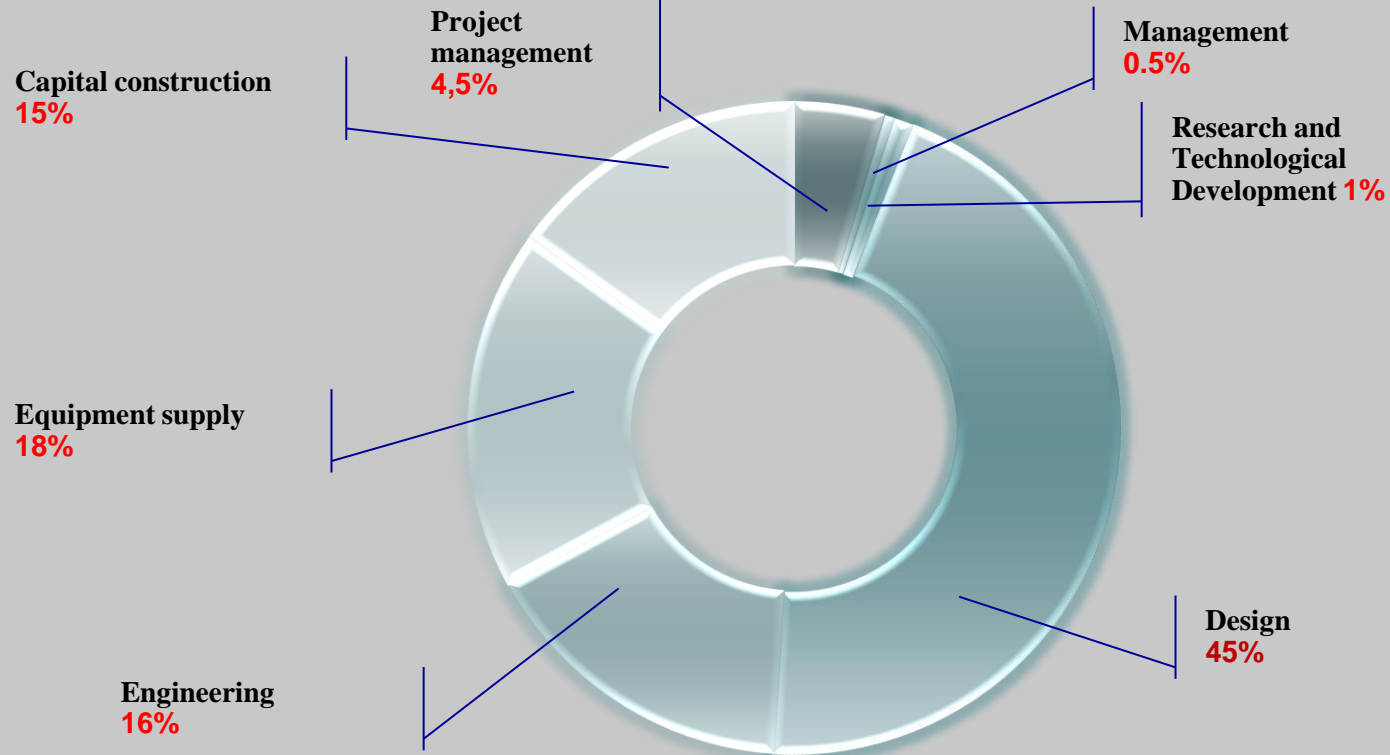
Development of object management - development of regulations, Emergency Response Assistance Plan (ERAP), instructions and other local documents, job descriptions, quality control, safety management systems and occupational safety

Stuff training

- Development of the concept of selection and training of personnel
- Development of training programs

CONSORTIUM PERSONNEL CAPABILITY

The total staff more than 1300 people



CONSORTIUM PERSONNEL CAPABILITY

Personnel qualification

84% have higher education in their sphere of occupation

35 people have two and more higher education in their sphere

12 people have PdD degree

2 people have MBA

MAIN CUSTOMERS



НОВАТЭК



ОАО «ВНИПИнефть»



БАШНЕФТЬ



РОСАТОМ



corund cyan



ОАО КИРОВО-ЧЕПЕЦКИЙ
ХИМИЧЕСКИЙ КОМБИНАТ
им. Б.П.Константинова



ЕВРОХИМ
МИНЕРАЛЬНО-ХИМИЧЕСКАЯ КОМПАНИЯ

АММОНИЙ
акционерное общество



EXPERIENCE

JSC Gazpromneft-Moscow Oil Refinery, Moscow city

Vacuum column (height 45 to 600 mm, diameter of 11 000 mm, weight more than 420 tons)
Development of engineering design and construction documentation, manufacturing, supply and installation.

* Atmospheric column height 60 400 mm, diameter 6500 mm, weight more than 325 tons).
Technical design and engineering documentation, manufacturing, supply and installation.

Reshtriya Chemicals and Fertilizers Ltd., Mumbai, India

* modernization of urea reactor unit RCF Trombay V. Delivery and installation of equipment (internal set of devices) to the urea reactor.

JSC «Tatneft»

* Delayed coking unit capacity of 2 million tons per year. Development of working design documentation for the main process equipment, manufacturing and supply of hydrocyclones.

JSC LUKOIL-Komi, Usinsk city

* Waste heat boiler assembly with the burner device. Development of engineering design, technological calculations, design documentation development, manufacture, supply, installation supervision and commissioning.

CJSC "ROST", Chkalovsk city

* Production building №1 for manufacture of products from polymeric materials. Turnkey construction.

EXPERIENCE

JSC «Ammoniy», Mendeleevsk city

Complex "Ammonia-methanol-urea". Construction equipment and premises "turnkey", including design, equipment supply, installation of equipment.

JSC Sibur Petrochemicals, Dzerzhinsk city

* Reconstruction of the process equipment workshops №602 and №604. Development of design documentation, estimates, supply of basic technological equipment.

* modernization of natural gas pipeline. "Turnkey" works execution, design work. Supply of equipment, construction of additional purge vent plugs, installation of equipment.

* Oxy-ethylene drain and loading dock workshop №604. "Turnkey" works execution for the Development of deadlock railways. Design, construction.

* Tank car loading rack construction and replacement feeding cable lines 0,4 kV. Installation work.

EXPERIENCE

JSC TAIF-NK, Nizhnekamsk city

- * Desulfurization unit (by circuit of the alkaline solution concentration) and purification of process air. The development of working documentation, supply of equipment and installation.
- * Alkalinizing assembly for heavy gasoline fraction column K-3. "Turnkey" works. Development of design and working documentation, supply of equipment and installation.
- * Stationary unit of amine purification system for workshop №01. Development of working documentation, supply of equipment.
- * Modernization of catcracker unit, its productivity increase up to 1.1 million tons a year of raw material. Development of technical documentation, technological calculations.
- * Repair of continuous-flow reactor of catalytic cracking unit. "Turnkey" works. Development of documentation, delivery and installation of internal units.
- * P-101 reactor catalytic cracking unit. "Turnkey" works. Reconstruction. Development of documentation, delivery and installation of internal units.
- * Technical re-installation to bring diesel fuel to Euro-4 standard. "Turnkey" works. Development of design and working documentation, supply of equipment and installation.
- * Installations TABE, MTBE. Production and supply of process equipment (pumps, propane column, condensers, refrigerators).
- * Preflash column KA-101, vacuum column KA-110, atmospheric column KA-102, stripping columns KA-104 KA-105 KA-106. Development of the technical project, development of the cutting, delivery logistics.

EXPERIENCE

JSC VNIIneft, Moscow city

- * Industrial Park of gas fractionation plan with pumping station.
- * Tank farm of LPG with interplant racks. Development of working documentation on the construction part.
- * Hydrotreating of diesel fuels. Development of technical projects for the non-standard process equipment.

"Lukoil Nizhegorodnefteorgsintez" Ltd., Nizhny Novgorod city

Agidol Installation, additive injection unit. "Turnkey" works. Development of design and estimate documentation, design documentation, manufacture and supply of equipment.

LUKOIL-Perm ltd, Perm city

The dehydration unit of petroleum gas and regeneration of the glycol. Development project documentation.

JSC «Yakutgazprom», Yakutsk city

The complex processing of gas condensate and LPG storage. Development of design and working documentation, manufacture and supply of storage equipment.

EXPERIENCE

Mitsubishi Heavy Industries, Ltd, Japan

Complex "Ammonia-Methanol-Urea" to OJSC "Ammonium". Development of architectural and construction documents for urea production and for adjacent objects.

JSC Cherepovetskiy Azot, Cherepovets city

* Urea production capacity of 1500 tons per day Development of design and working documentation, field supervision.

HaloPolymer Kirovo-Chepetsk Ltd., Kirovo-Chepetsk city

Column equipment in the amount of 10 pieces. (Up to 3.5 meters in diameter and 30 meters high). Development of technical projects, oil interchange and technological calculations, selection of internal devices and their manufacture.

JSC «Ufaneftehim», Ufa city

Installation of catalyst regeneration gas catalytic cracking. Project work, development of source data for design, author supervision of the project. Supply of the equipment.

EXPERIENCE

JSC TAIF-NK, Nizhnekamsk city

Development of working documentation for integration into DCS, ESD safe mechanism of locks turning on and off in all positions cgsd for safe routine maintenance and equipment start-up.

Sintez-OKA ltd, Dzerzhinsk city

Development of design documentation for non-standard process equipment, manufacturing and supply of equipment (vessels, heat exchangers, reactor, pump).

JSC «Akron», Velikiy Novgorod city

Granulated urea plant at Rotoform technology. Detailed design.

JSC Nevinnomisskiy azot, Nevinnomissk city

* Melamine production at «LUGRI» technology. Development of project documentation on the basis of the basic design of the licensor, working documentation of the construction, supervision.

JSC «Shekino», Shekino city

Installation of the production of hydrogen. General planning, investment grounding, development of design and working documentation for the basic design Haldor Topsoe (Denmark), supervision, design of industrial safety declaration.

Qatar Fertiliser Company (S.A.Q)

* Experimental multipurpose high-speed drum installation for the production of granulated urea with additives capacity 100 kg per hour. Technology licensing, engineering, equipment supply, installation supervision, commissioning and guarantee testing.

EXPERIENCE

PVFCCo, industrial zone Phu My I, province Ba Ria Vung Tau, Vietnam

Plant fertilizer capacity of 1000 kg/hour. License agreement, technical documentation development, equipment supply, installation supervision, commissioning, guarantee testing.

JSC Fosagro-Cherepovets, Cherepovets city

The ammonia unit AM-3 capacity of 2200 tons per day. Development of design and working documentation, development of explanatory notes in the section "Assessment of impact on environment", adaptation of the basic design, construction supervision. The design of the analytical laboratory production of ammonia. "Turnkey" construction of the laboratory.

JSC Fosagro-Cherepovets, Cherepovets city

The ammonia unit AM-3 capacity of 2200 tons per day. Development of design and working documentation, development of explanatory notes in the section "Assessment of impact on environment", adaptation of the basic design, construction supervision. The design of the analytical laboratory production of ammonia. "Turnkey" construction of the laboratory.

JSC «Voronezhsintezkauchuk», Voronezh city

Production of butadiene styrene thermoplastic elastomers with the capacity of 50 thousand tons per year. Development of design and working documentation, designer supervision. The General project organization.

Consortium members have more than 80 years experience in domestic and foreign markets in the petroleum refining, gas processing, petrochemical and other industries.



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Thank you for your time!

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