



OSTCHEM

R I V N E  
AZOT

PJSC “Rivneazot” is the leading producer of mineral nitrogen fertilizers in Western Ukraine.

“Rivneazot” products are well-known in Ukraine and exported to more than 40 countries around the globe (the European Union, Africa, Asia, and CIS).

Nitrogen fertilizers ammonium nitrate and calcium ammonium nitrate produced by PJSC “Rivneazot” became the winners on national contents many times. The products were awarded “The best domestic product”, “100 best goods of Ukraine” in nomination “Industrial and technical products”, “Product beyond comparison” at the National Sorochinskaya Fair.

Furthermore, PJSC “Rivneazot” is recognized globally and receives international awards regularly. The most famous are “Products’ Technology and Quality” (Germany) and “For Trade mark” (Italy). The enterprise was rated in “Top-100. The best companies of Ukraine” according to the activity results over the last few years. On regular basis PJSC “Rivneazot” hosts international industrial conferences and seminars.

In accordance with Cabinet of Ministers of Ukraine resolution PJSC “Rivneazot” was listed among the enterprises of strategic importance.

Since 2011 the plant has become a part of OSTCHEM group.



In March 1969 the first enterprise of chemical industry in Polesie started operating. It was Rovenskyy plant of the mineral fertilizers production. Today it is Ukrainian chemical giant with its history, labour achievements and prospects.

PJSC “Rivneazot” primary focus is production of fertility granules to raise the crop yield of Ukrainian fields as well as implementation of measures aimed at efficiency growth at the operating production sites, equipment modernization, improvement of goods quality and its assortment widening.

The enterprise manufactured millions tonnes of mineral fertilizers, adipic acid and other industrial and technical products. Over the years PJSC “Rivneazot” passed the hard way of formation and development. Today the employees are proud of the progress and achievements that were recognized by the national and global contests’ awards.

It became possible owing to conscientious work of all the enterprise’s departments and productive collaboration of the owners, headquarters and the plant’s top management.

*Mikhail Zablude*

A handwritten signature in black ink, appearing to read 'Mikhail Zablude'.

*PJSC “Rivneazot” Chairman of the Board*

# PJSC “Rivneazot”



**100%**

leader of calcium  
ammonium  
nitrate production  
in Ukraine



**40**

countries-importers  
around the globe



**2** UAH  
billion

products  
realization  
sum in 2012



**4 000**

are employed  
at the enterprise



# History

*Construction of adipic acid  
production shop (1981)*



*Ammonia warehouse  
and non concentrated  
nitric acid shop (2008)*



*Construction of water chemical  
preparation sites (1984)*

The idea of the mineral fertilizers enterprise foundation in the western region of Ukraine appeared in the mid-1960s. On 31 March, 1969 the State Commission signed the operational acceptance report of ammonia and ammonia water production. It is considered to be Rivne mineral fertilizers plant's foundation date. However, before this date the plant had already experienced a range of significant events. In 1967 after motorway and railway that connected the future plant and the city had been built ammonia water site was put into operation (currently ammonia shop-1). Moreover, the construction of new buildings at ammonia shop-2 started. Manufacturing capacity of liquid ammonia production was 103 000 tonnes per year. Along with ammonia water shop launching there was founded the technical control department. In 1968 it was the small laboratory. Over the years the raw materials and products control service has enlarged considerably.





*Plant management (1973)*

Since 1969 the new auxiliary shops of water supply and sewerage, railway, electricity and central plant laboratory started operating. The plant was developing and becoming more powerful. The production program was realized and at the same time new production shops were built. The construction of non concentrated nitric acid and ammonium nitrate shops began; they were launched in December, 1972. There was one more labour achievement: according to the activity results of 1972 the plant became profitable. Since then the plant symbol, chemical flask is the integral part of Rivne emblem.

In the end of 1983 the organic production of adipic acid was put into operation.



*Organic Production Units (1985)*



*The central control panel of adipic production management (2003)*



*Organic Production Sites (2002)*

*Ammonia shop-2 (2003)*



The following years were accompanied with successful development as well as challenges and crises. Since the 1990s and up to the privatization process finalization the enterprise suffered hard times.

September, 2003 became a new milestone in "Rivneazot" history. After the privatization process finalization the new owner appropriated significant funds to the enterprise development. The investments allowed realizing capital repairs in all the shops, modernizing equipment and helped lead the plant out of economic crisis. The allocated funds contributed to new kinds of fertilizers production, first of all calcium ammonium nitrate. Today PJSC "Rivneazot" is the leader in this sort of fertilizers manufacturing.

In 2011 the plant became a part of OSTCHEM Group DF.



*Contemporary plant management*



# Production capacities



Owing to high production standard, well-qualified employees, steady equipment modernization as well as automatization and computerization of manufacturing processes PJSC “Rivneazot” holds a remarkable place in the industry of Ukraine and is competitive with many foreign chemical enterprises.

PJSC “Rivneazot” produces mineral fertilizers (ammonium nitrate, calcium ammonium nitrate, ammonia, fertilizer mixture “Rovno-NPK”), organic products (adipic acid, cyclohexanol, cyclohexanone, low dicarboxylic acids, cyclohexanol distillation residue) as well as other products (non concentrated nitric acid, carbonic acid, oxygen gaseous technical, solid carbon dioxide (dry ice), liquid nitrogen).

The enterprise territory covers about 890 hectare.

PJSC “Rivneazot” consolidates 6 main engineering and 14 auxiliary producing shops.





## Main capacities

Liquid ammonia



420 000 tonnes per year

Ammonium nitrate  
granulated



540 000 tonnes per year

Calcium ammonium  
nitrate (CAN)



450 000 tonnes per year

Adipic acid



25 000 tonnes per year



Main production shops

Ammonia  
production

Non concentrated nitric acid  
production

Ammonium nitrate  
production

Calcium ammonium nitrate  
production

Organic  
production

Ammonia shop No.1

Ammonia shop No.2

Non concentrated  
nitric acid shop

Ammonium nitrate shop

Complex mineral fertilizers  
shop

AK-1 – AK-5 shops

*The shop produces aqueous ammonia, solid carbon dioxide (dry ice), carbonic acid, oxygen gaseous technical, liquid nitrogen). The first aqueous ammonia was manufactures in November, 1968.*

*The shop was put into operation in 1973 and produces synthetic ammonia.*

*The shop produces non concentrated nitric acid. Two nitric acid sites with production capacity of 120 000 tonnes per year were put into operation in 1972 and six more sites started operating in the period 1974–1984.*

*The shop produces ammonium nitrate containing 34% of nitrogen.*

*The complex phosphate fertilizer production was renovated. The reconstruction allowed manufacturing calcium ammonium nitrate which is a new product in Ukraine. This is the first large-tonnage production in Ukraine.*

*It consists of two main shops producing cyclohexanol, cyclohexanone and adipic acid and the shops manufacturing subsidiary materials such as sodium hydroxide as well as goods made of residual products that is purified low dicarboxylic acids.*

Auxiliary shops

Steam and boiler shop

Electricity supply shop

Energy equipment repair shop

Monitor and measure equipment and automation shop

Water supply and sewerage shop

Water chemical preparation shop

Railway shop

Transport shop

Rivne industrial and household effluents neutralization and purification shop

Repair and construction shop

Repair production

Economic activities shop

Communication shop

Warehousing shop



# Main products

## Nitrogen fertilizers

Product	Standard
Ammonium nitrate	DSTU 7370:2013
Aqueous ammonia technical	GOST 9-92
Calcium ammonium nitrate (CAN)	TU U 24.1-05607824-041-2004
Fertilizer mixture “Rovno-NPK”	TU U 24.1-05607824-044-2007
Liquid ammonia technical (anhydrous ammonia)	GOST 6221-90
Urea	GOST 2081-92

## Organic products

Product	Standard
Cyclohexanol distillation residue (CDR)	TU UA 24.1-05607824-052:2010
Cyclohexanone light fraction (CLF)	TU UA 24.1-05607824-051:2010
Cyclohexanone technical	GOST 24615-81







## Gases

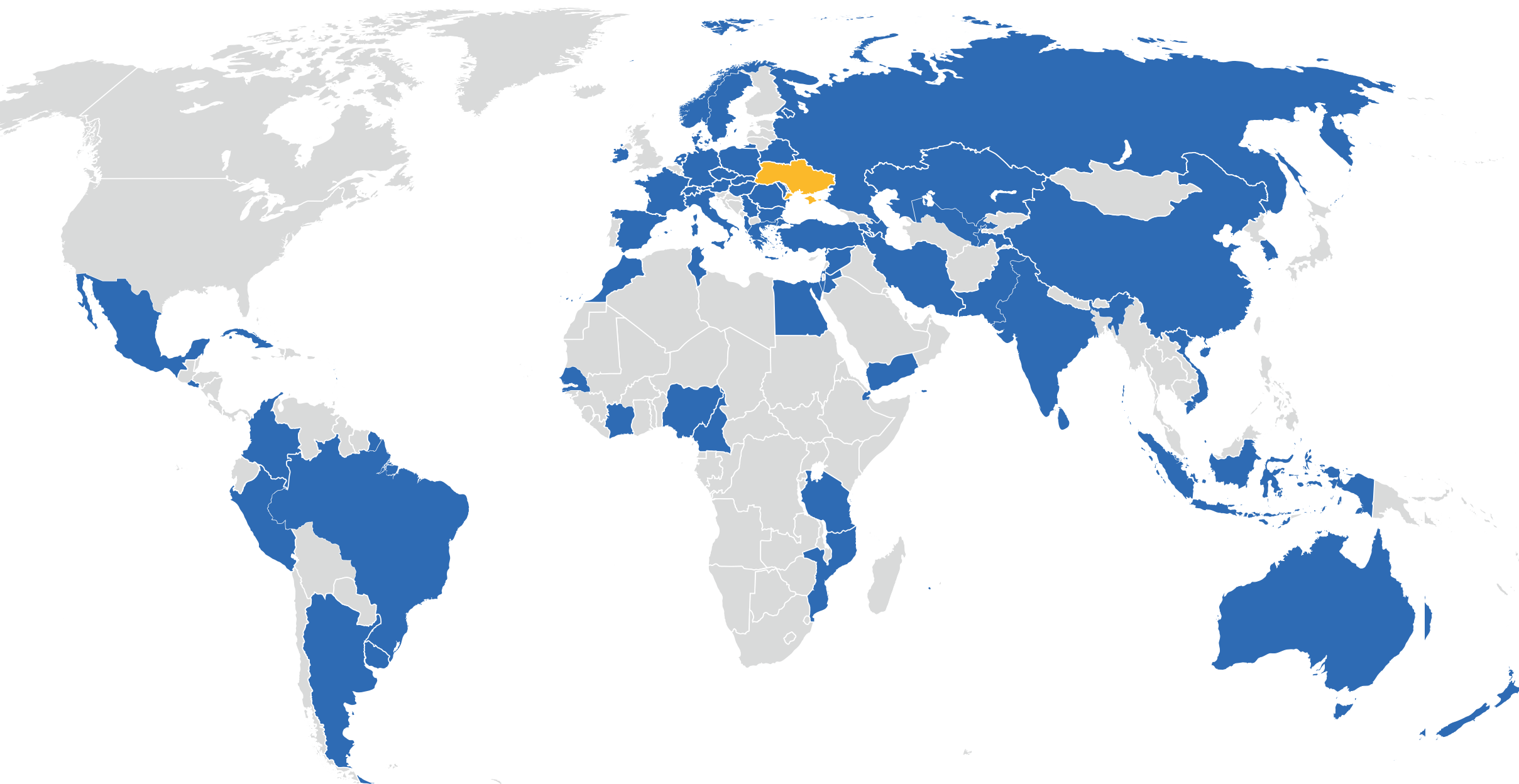
Product	Standard
Liquefied carbon dioxide	DSTU 4817:2007
Nitrogen liquid	DSTU GOST 9293:2009
Oxygen gaseous technical	DSTU GOST 5583:2009
Solid carbon dioxide (dry ice)	GOST 12162-77

## Acids

Product	Standard
Adipic acid	GOST 10558-80
Low dicarboxylic acid (mixture)	TU U 24.1-05607824-045:2007



# Geography



More than 40 countries worldwide (the EU, Africa, Asia, CIS) as well as twenty three regions of Ukraine and Autonomous Republic of Crimea use Rivne mineral fertilizers.

Australia  
Austria  
Argentina

Belarus  
Belgium  
Brazil

China  
the Czech Republic

Denmark

Egypt

France

Georgia  
Germany

Hungary

India  
Indonesia  
Iran  
Ireland  
Israel  
Italy

Kenya

Latvia  
Lithuania  
Livan

Malaysia  
Mexico

the Netherlands  
New Zealand  
Nigeria

Pakistan  
Poland

Romania  
Russia

Slovakia  
Slovenia  
Spain  
Switzerland

Tanzania  
Turkey

Ukraine



# Quality Management System

The quality management system covers all stages of the product life cycle — from its production to service and customer support.

Centralized department of technical control is responsible for products quality. This department represents its own developed enterprise quality control system.

Quality management, standardization, certification and supervision bureau in REACH sphere develops and implements the enterprise new standards, technical terms and other documents on standardization and certification and revises the current ones. It also contributes to improvement of quality and competitiveness of products and service through standardization methods.

Moreover the bureau monitors and analyses the EU new chemical legislation REACH as well as organizational and methodic instructions on the legislation requirements implementation.

The bureau controls the enterprise's performance regularly to provide its compliance with the science and technology level, market needs and export demand.

Vladymyr Kovalenko, the deputy chairman of the board and the chief engineer leads all the production departments. The rest of the work is divided into segments headed by the managers according to the directions.



# Key results

2010—2012

The main direction in the enterprise activity is implementation of measures aimed at efficiency increase at the operating production sites, equipment modernization, improvement of products quality and its assortment widening.

**2** UAH  
billion

main products  
realization sum in 2012

**180** UAH  
million

taxes paid  
by the enterprise in 2012





## Main products manufacturing

Product	2010	2011	2012	Total over the period 2010–2012
Aqueous ammonia technical (tonnes)	69 369	75 625	61 974	206 968
Ammonium nitrate (tonnes)	519 346	527 716	549 424	1 596 486
Calcium ammonium nitrate (tonnes)	353 917	419 249	323 162	1 096 328
Liquid ammonia technical (tonnes)	411 653	428 303	396 279	1 236 235
Nitric acid (tonnes)	650 056	706 174	649 959	2 006 189
Adipic acid (tonnes)	19 832	29 116	12 742	61 690
Cyclohexanone (tonnes)	19 366	27 878	12 168	59 412
Liquefied carbon dioxide (tonnes)	313,940	275,380	222,606	812
Solid carbon dioxide (dry ice) (tonnes)	1,53	6,73	5,46	14
Nitrogen liquid (tonnes)	285,023	374,604	448,806	1 108
Oxygen in gas cylinders (thousand cubic meters)	70,04	67,86	52,58	190
Low dicarboxylic acid (tonnes)	981	1 377	605	2 964



## Main products realization

Product	2010, UAH	2011, UAH	2012, UAH	Total over the period 2010-2012, UAH
Aqueous ammonia technical	59 225 057	81 542 736	86 882 112	227 649 906
Ammonium nitrate	877 109 668	1 201 557 904	1 366 914 562	3 445 582 134
Calcium ammonium nitrate	512 857 861	791 125 338	648 089 937	1 952 073 137
Liquid ammonia technical	86 155 975	88 897 823	83 819 006	258 872 804
Nitric acid	58 713	72 024	80 018	210 754
Adipic acid	134 106 764	221 297 184	124 880 272	480 284 220
Cyclohexanone	22 399 892	43 210 340	38 925 305	104 535 537
Liquefied carbon dioxide	335 473	372 403	341 354	1 049 230
Solid carbon dioxide (dry ice)	4 030	30 790	24 980	59 799
Nitrogen liquid	181 194	272 864	336 605	790 662
Oxygen in gas cylinders	157 976	166 026	99 275	423 277
Low dicarboxylic acid	4 334 365	10 338 335	5 849 911	20 522 612
<b>Total</b>	<b>1 696 926 967</b>	<b>2 438 883 768</b>	<b>2 356 243 337</b>	<b>6 492 054 072</b>





# Investments and modernization

PJSC “Rivneazot” investment and development program aimed at manufacturing efficiency growth, production costs cutting as well as turnover increase.

In 2012 two investments projects were realized at PJSC “Rivneazot”:

new site of non-concentrated nitric acid production commissioning;

unit of electric energy production and regeneration based on steam recuperation launching.



## Investments in PJSC “Rivneazot” development

175

UAH million

2012

179

UAH million

2013

**The following investment projects were realized in 2013:**

restoring two sites of non concentrated nitric acid;

converting ammonia production to the innovative Distributed Control System;

constructing a new up-to-date non concentrated nitric acid warehouse.

In 2011–2013  
OSTCHEM invested  
in PJSC “Rivneazot”  
development

549  
UAH million





# Social responsibility

PJSC “Rivneazot” is proactive in both chemical industry development and social sphere improvement.

The enterprise supports preschool and school institutions, medical and health-improving centers, religious organizations and state establishments.

The enterprise social initiatives cover the acquisition of equipment and ambulance cars for medical facilities, periodicals subscription for educational institutions as well as categorical assistance to boarding schools and cloisters.

**53** UAH  
million

PJSC “Rivneazot” spent  
on charity programs in 2012

**5,5** UAH  
million

in line with a program “Save your city”  
was invested in the roads repair  
in 2012–2013

**2,3** UAH  
million

was allocated to employees’  
social support in 2012





PJSC “Rivneazot” corporate policy meets social needs of the employees. In 2012 along the personnel’s social support made up 2.3 UAH million.

The assistance was directed to military forces conscripts, mothers giving birth and large families, the enterprise’s employees who need medical treatment as well as to those who resign or retire.

By the International Women’s Day the bonus was given to the employed women and women who are veterans of the plant and unemployed pensioners now. The financial aid was also provided to the former employees of the enterprise who are the Great Patriotic War participants.





# Environmental commitment



Environment protection is a key focus in current manufacturing activity and further production facilities development.

Environment protection department realizes environmental monitoring and controls the observance of legislation at PJSC “Rivneazot”. Every year the department employees develop and implement the integrate complex of the initiatives directed to the environment preservation. This plan is approved by the plant’s chief engineer and agreed with the representative of the local self-governing. The concerted document provides for the measures on protection and efficient water, air and land resources consumption. Seventeen environmental projects were realized at PJSC “Rivneazot” in 2013.

Besides this joint program every shop develops and coordinates with environment protection department the local initiative plan aimed at environmental preservation.

PJSC “Rivneazot” realizes all the projects on environment protection in accordance with “Responsible care of the chemical industry of Ukraine”. It is a part of common environmental policy of all OSTCHEM group’s enterprises that joined the Responsible Care Global Charter.

1,12 UAH  
million

was spent by PJSC “Rivneazot”  
on environmental projects  
in 2013



# Employees development

37%

Today the enterprise employs more than 4 000 people. There are 2 800 workers among them. 27% have university degree. The average personnel age is 44.8.

employees were awarded “Veteran of Labour” medal.

The enterprise management pays considerable attention to personnel recruitment, placing and training. PJSC “Rivneazot” has its own educational center to organize employees’ special training, young specialists’ apprenticeship and work practice of vocational schools and university students.









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