ВИТЕБСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНОЛОГИЧЕСКИЙ УНИВЕРСИТЕТ

VITEBSK STATE TECHNOLOGICAL UNIVERSITY

UNIVERSITY'S FACULTES

- Faculty of design and technology
- Faculty of artistic design and technology
- Mechanical-technological faculty
- Faculty of economics
- Correspondence faculty
- Preparatory faculty
- Faculty of improvement of qalifications and staff retraining

Multilevel system of continuous training in VSTU

- vocational guidance work with applicants ;
- training in the first stage (Specialist) in 19 specialties (4 directions), 31 specializations ;
- continuous integrated reduced form of training on the basis of secondary education in 10 specialties (contracts signed with 77 colleges of the Republic);
- retraining on the basis of higher education in 10 retraining specialties;
- parallel training of full-time students at retraining ;
- Magistracy ;
- practice-oriented education on the basis of experience research and innovation activity of thetechnology park.

PERSONNEL POTENTIAL

At present 322 teachers from 26 chairs work at the university.

Between them:

- **15 Doctors of Science,**
- **14 professors,**
- **128 candidates of science,**
- **119 associate professors.**

SCIENTIFIC RESEARCH

Directions of Scientific Research

- scientific Schools
- postgraduate studies
- scientific Laboratories

MAIN TRENDS OF THE UNIVERSITY'S SCIENTIFIC RESEARCHES

- Development and research of equipment, machines and mechanisms, automated complex for textile and light industries.
- Development and research of machine and apparatus elements, production processes and means of production
- New materials development, research, and introducing into production, perfecting of textile and light industries articles production processes and designs
- Research of production efficiency improvement reserves on the basis of its intensification, rising of economic work level, forming of effective controlling mechanism.
- New technological processes and equipment for industrial ecology and energy and resources saving research and development
- Development of principles, methods, and means of quality control in light industry and machine building

SCIENTIFIC SCHOOLS

The university has 7 Scientific Schools:

1. Scientific school in the field of ecology, natural resources, resource conservation, environmental management and protection in emergency situations;
2. Energy-efficient technologies wet-heat, heat treatment and drying of products and materials in light and textile industries;
3. Information Technology in the production of light industry;

SCIENTIFIC SCHOOLS

4. Development and research of medical supplies knitwear and its production processes;
5. New techniques and technologies in textile yarns and products for domestic and industrial purposes;
6. Quality of footwear and its components;
7. Scientific school in the field of nonfood items merchandising

GRADUATE SCHOOL

The University has:

- postgraduate studies in 7 specialties;
- Doctorate in 1 specialty;
- 2 Boards for PhD theses.

Laureates of the Vitebsk Regional Executive Committee contest to receive awards for talented young scientists and specialists: Tsar Alexander, VSTU associate professor; Zamostotsky Eugene, VSTU Associate Professor; Kostin Paul, VSTU assistant

SCIENTIFIC RESEARCH

- The center for collective usy of the scientific equipment
- 26 Science and Research Laboratories
- are founded in the University for scientific research

In the spinning of natural and chemical fibres department research laboratory

In the laboratory of light industry machines and devices department

Student science

- **4 Student Science and Research Laboratories**
- **26 student scientific assiciations**

Students - winners of the footwear and accessories yang designers, International Competition «Mosshoes»

The laureate of the XIX Republican competition of student's works for the practical significance of the work

Alexandra Logunova, 4 course student, «Development of technical regulatory legal acts and study of the composite materials properties based on industrial waste»

Winners of the X international contest «Future pros of Computer 3D - modelling», Moscow

1st place
project «Calculation and construction library of 3D-models of electric motors to drive the extruder»
(students gr. M-17 Mikhailovsky Yu, Brovko Yu.)

2d place
engineering project «Testing device for polymer materials on bending and abrasive wear»
(graduate of 2012 Lisovenko Yu.)

Business project Ugosti.by - online meal service by the students (spec. «Management)» A. Vlaskin and A. Myleschnko - winners of the contest «Youth in entrepreneurship 2012» (Gomel) and the Grand Prix at the MINSK STARTUP WEEKEND

International cooperation

University partners are:

- Moscow State Textile University (Russia)
- Moscow State University of Design and Technology (Russia);
- St. Petersburg State University of Technology and Design (Russia);
- Kiev National University of engineering and design (Ukraine);
- Aviero University (Portugal);
- Shanghai University of Science and Technology (China)

Participation in international projects

- Agreement with the Fund «Eurasia» on the theme «Cases of Belarusian business: development and introduction of business education;
- Together with Kherson national technical University (Ukraine) project on «Development of resource-saving technologies for the complex processing of bast crops and production of the combined threads with the aim of obtaining new materials and textile products for special purposes»;

Participation in international projects

- Under the programmeTEMPUS «Leading and Managing Change in Higher Education» LaMANCH;
- Under the programmeTEMPUS-JPCR «Ecological Education for Belarus, Russia and Ukraine»;
- Under the programmeTEMPUS-JPHES «University and Industry for the modernisation of textile manufacturing sector in Belarus»;
- Under the programmeTEMPUS-JPHES «Interrigeonal Network for innovation Development of Ecosystem Technosphere Based on Micro- and Nanoobject Technologies»

Technopark VSTU

Серия КО № 0061329

СВИДЕТЕЛЬСТВО

о государственной регистрации коммерческой организации

Администрацией Октябрьского района г. Витебска
24 августа 2010 года

в Единый государственный регистр юридических лиц и индивидуальных предпринимателей внесена запись о государственной регистрации

Республиканского инновационного унитарного предприятия "Научно-технологический парк Витебского государственного технологического университета";

Государственного предприятия "НТПВГТУ"

с регистрационным номером 391359911

ГОСУДАРСТВЕННАЯ РЕГИСТРАЦИЯ СУБЪЕКТОВ ХОЗЯЙСТВОВАНИЯ

Подпись должностного лица регистрирующего органа

Г.В.Пакшина

Государственный комитет по науке и технологиям Республики Беларусь

СВИДЕТЕЛЬСТВО

№ 6

о регистрации Республиканского инновационного унитарного предприятия «Научно-технологический парк Витебского государственного технологического университета»

в качестве научно-технологического парка

Срок регистрации 24 сентября 2013 г.

Основание Приказ Государственного комитета по науке и технологиям Республики Беларусь 25 октября 2010 г. № 275

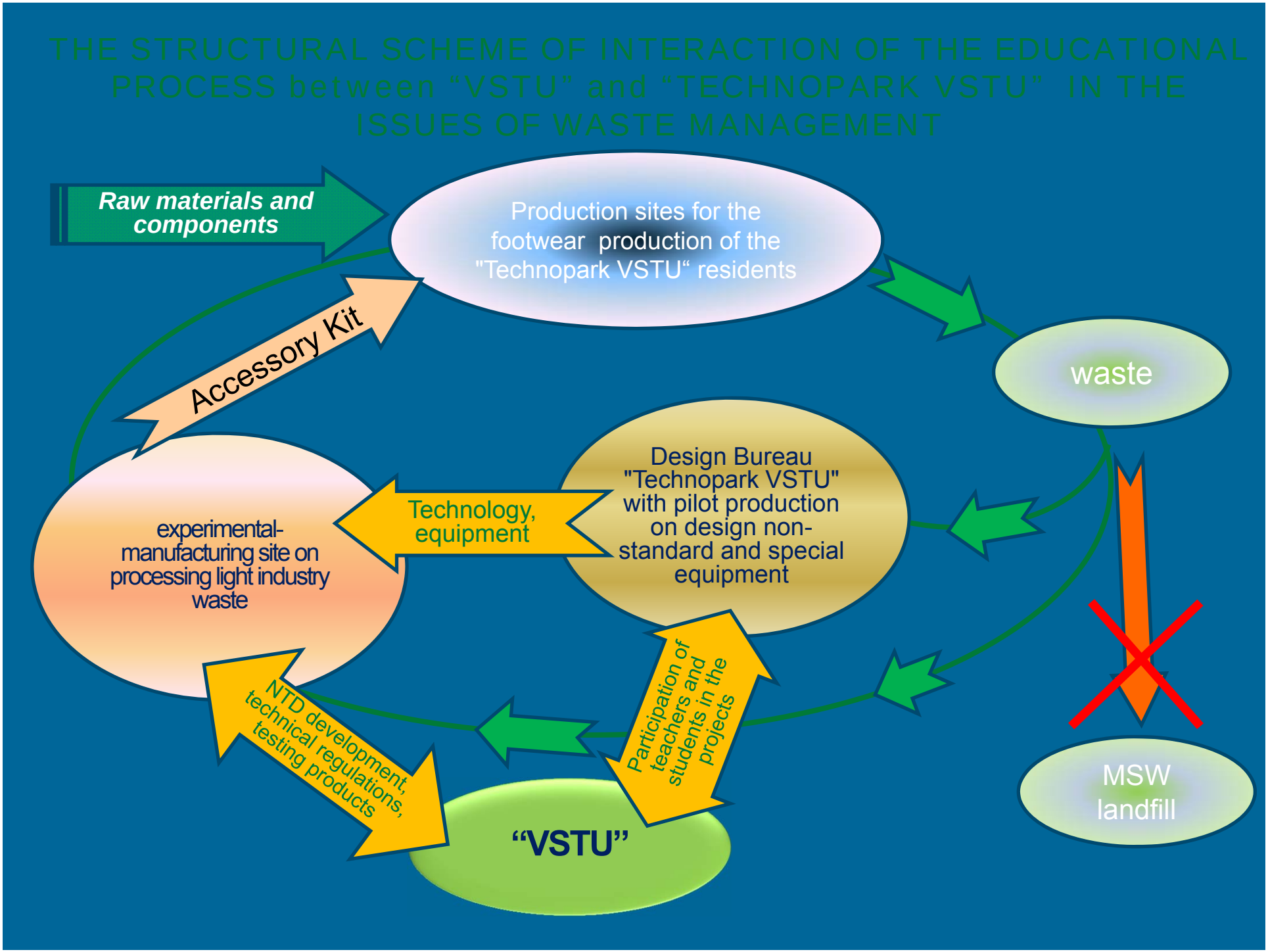
Председатель Государственного комитета по науке и технологиям

(подпись) Войтов И.В. (фамилия, инициалы)

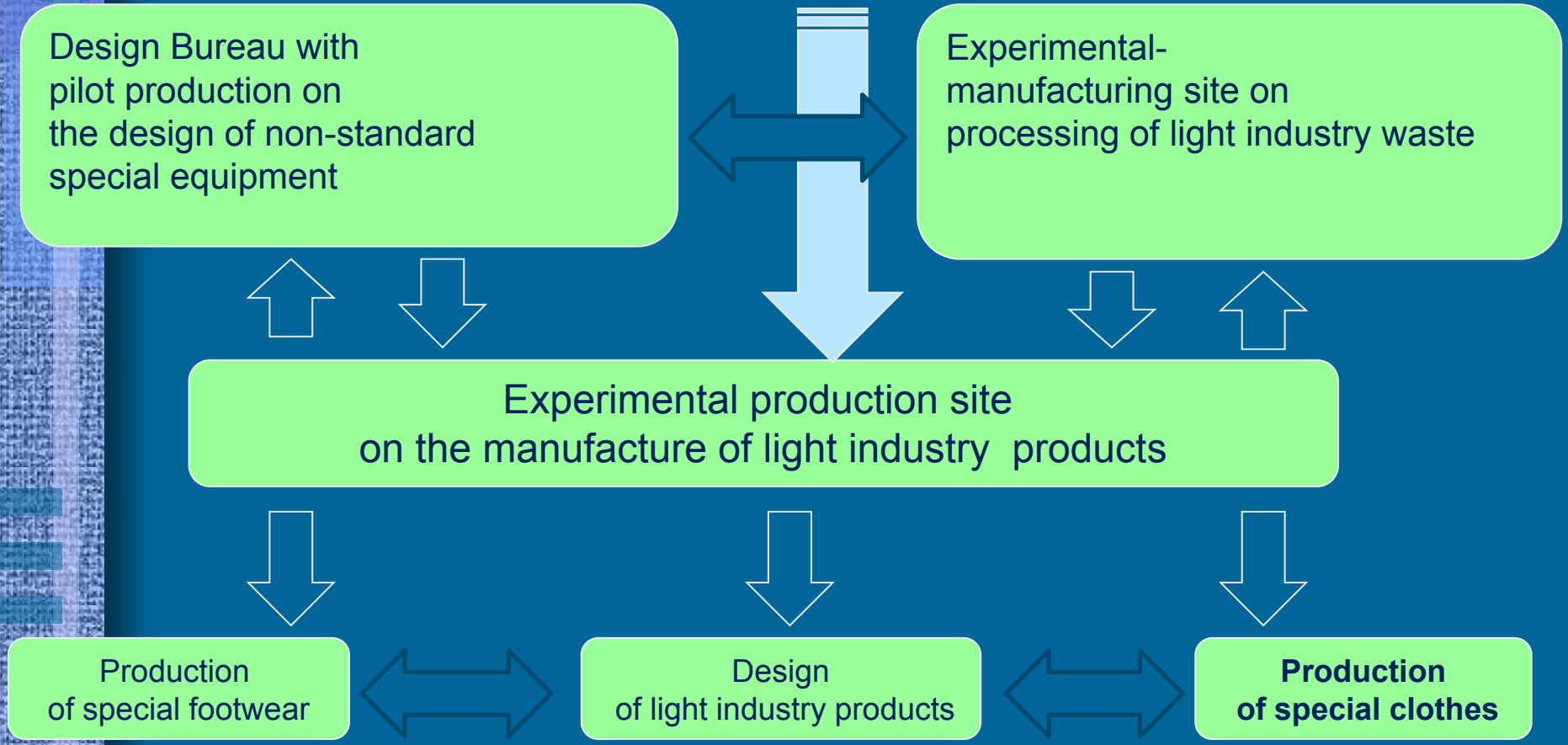
М.П.

«25» октября 2010 г.

THE STRUCTURAL SCHEME OF INTERACTION OF THE EDUCATIONAL PROCESS between “VSTU” and “TECHNOPARK VSTU” IN THE ISSUES OF WASTE MANAGEMENT



Introduction of university scientists and scientific employees' innovative projects IN PRODUCTION



USE OF THE PROCESSING INDUSTRIAL WASTE SITE AS PRODUCTION BASIS FOR TRAINING IN THE FIELD OF ECOLOGY

waste

Waste processing site provides closed loop circulation of waste within Technopark VSTU residents

Waste generated from the footwear manufacture is processed into materials which are used in footwear production.

Participation of teachers and students in scientific research concerning waste properties, development of processing technology, equipment design and the development of normative and technical documentation allows you to explore all the features of production in practice.

Equipment for light and textile industry

Press for shoe upper parts doubling

Sole press with thermoactivator

Automatic sewing machine with micro-proctssor control for stiching shoe upper parts

Equipment for light and textile industry

Higtly-efficient devise for shoe-upper drying and thermal stabilization

Button-hole semi-automatic devise with micro-processor control

Technology and equipment for processing industrial wastes

Highly productive exthiider for producing decorative footwear welt

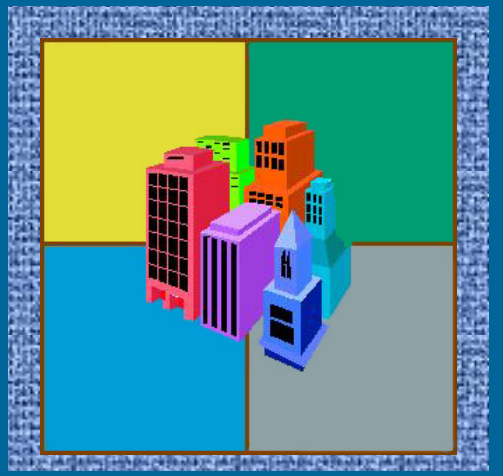
Equipment for exthision of powder materials

Technology and equipment for processing waste from production of tufting

Technology and equipment for processing industrial wastes

Yarn made of production wastes

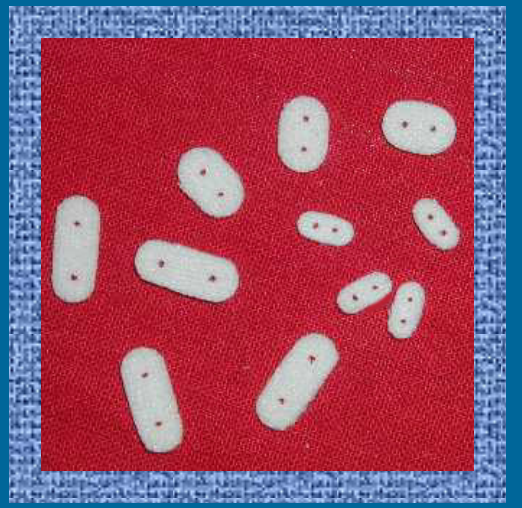
The technology of producing brick-and concrete paint based on the waste from water-pumping station



Technology of producing facing plates for electric transport based on galvanic waste

Medical knitted fabrics

Device supporting for heart ventricles



Surgical fastening plates (SFP)

Medical Hosiery

“Texplant” – explantant for the treatment of progressing short – sightedness

Technology of yarn and threads production

Yearn by pneumatic metod of formation

Technology fancy threads

Combined electro-conducting threads

The NEED FOR ENVIRONMENTAL EDUCATION

- Training on various topics related to environmental impact is due to the demand of the country for qualified specialists and environmentally educated managerial staff.
- Provision of ecological outlook, the acquisition of theoretical knowledge and practical skills in the field of ecology and environment necessary for the fulfilment of their professional duties.

THE NEED FOR ENVIRONMENTAL EDUCATION

- Market transformation taking place in the economy, dictates the need for the development of environmental education as a basis for sustainable development that meets the requirements of the present stage of development of society.
- Study of environmental law, law on legal liability for environmental offenses, as well as issues of international legal protection of the environment will enhance environmental awareness, legal and environmental culture specialists.

DEVELOPMENT OF ENVIRONMENTAL EDUCATION UNIVERSITY

ENVIRONMENTAL EDUCATION UNIVERSITY

Full-time education

Disciplines:
- Fundamentals of ecology
- Basics of ecology and Economics of nature management
- Basics of ecology and energy saving
- Waste recycling textile industry

Section «Labor Protection and industrial ecology in a diploma project (work)

Correspondence education

Disciplines:
- Fundamentals of ecology
- Basics of ecology and Economics of nature management
- Basics of ecology and energy saving

Section «Labor Protection and industrial ecology in a diploma project (work)

Graduate degree of the 2 stage

– Post-graduate study specialization 25.03.13 «Geoecology»
- Scientific school in the field of ecology, natural resources, resource saving, rational nature management and protection in emergency situations.

providing ENVIRONMENTAL EDUCATION AT THE UNIVERSITY

Educational and program documentation	**Publishing**	Multimedia
– curricula - Guidance and Development	Tutorials: - Fundamentals of ecology and environmental economics - Fundamentals of Ecology and Environment Courses: - Fundamentals of ecology and environmental economics monographs: Road building and paints - Disposal of CHP waste - Study of ion exchange processes Direction "Chemical Technology and Ecology" in the scientific journal "Bulletin of UO VSTU"	– multimedia lectures -educational- imitative games - Test tasks

Scientific research in terms of environmental education

RESEARCH ISSUES: Physical-chemical and biological environmental-friendly technologies of solid fuels processing, recycling and disposal of organic and inorganic waste.

EXPERIMENTAL DIRECTION

Physical and chemical principles of recycling and disposal of organic and inorganic waste.

PRACTICAL DIRECTION

– study of working conditions, the environmental situation at the enterprises of light industry and machine building industries and development of measures for their improvement;
- development of resource-saving and ecologically sound technologies for complex utilization of industrial waste;
- eco-friendly technologies for processing solid combustible minerals, processing and recycling of organic and inorganic waste.

THE RESULTS OF the research in terms of ECOLOGICAL EDUCATION

patents

Bituminous mixture waste CHP: Patent № 8764;

- Coating composition: Patent № 8920;
- Paint composition for road marking: Patent № 12396;
- Method of producing polystyrene exterior paint: Patent № 1239;
- Water-soluble composition for white paint for road marking: patent № 14803.

CONFERENCEs AND EXHIBITIONs

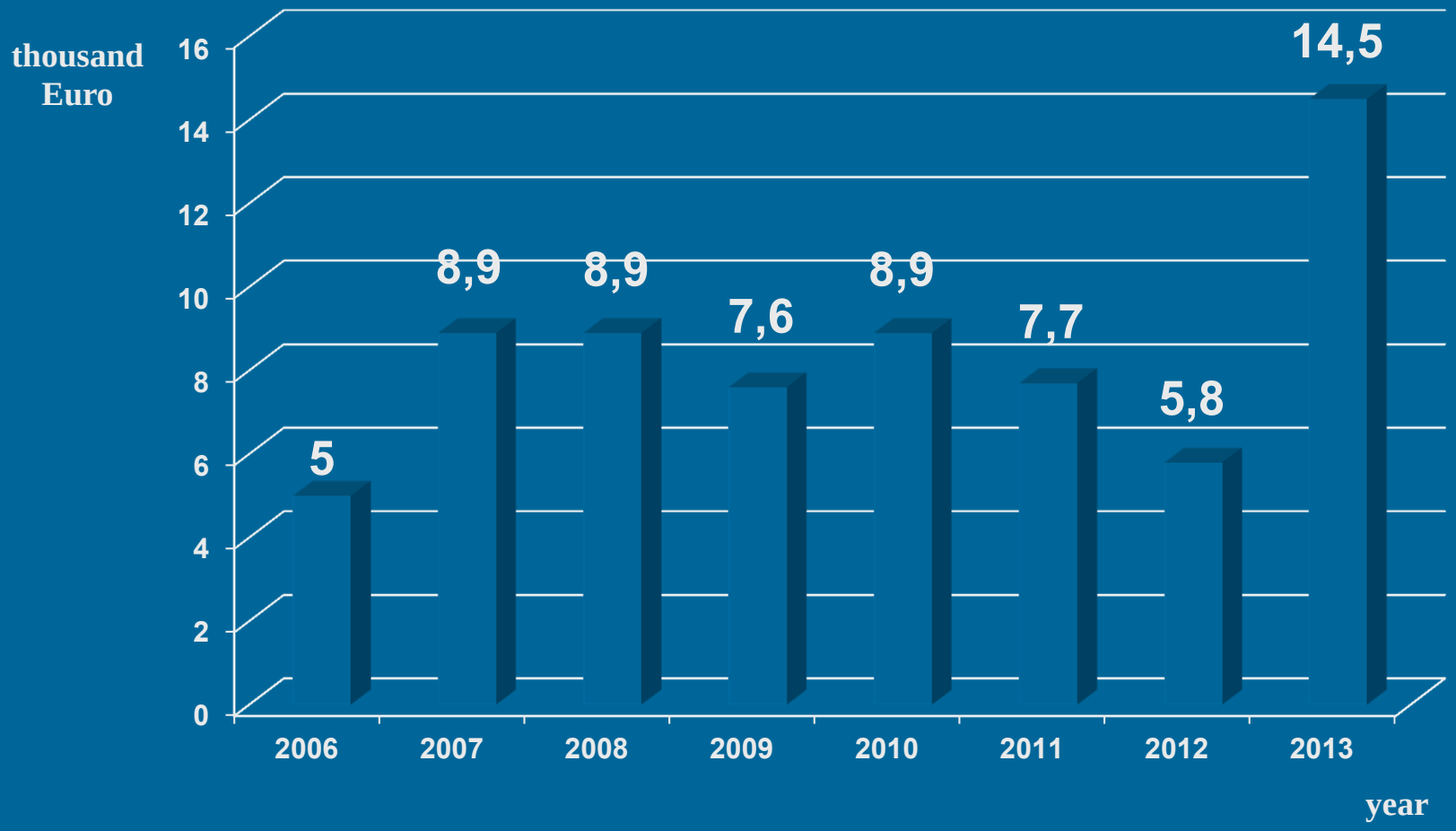
– section «Chemistry, chemical engineering and environmental problems in the sphere of industry”
International scientific and technical conference «New technique and technologies for textile and light industry»;
- section «Industrial ecology» scientific and technical conference of teachers and employees of educational institution «VSTU»;
- permanent exhibition of VSTU scientific projects ;
- Building industry. Innovations in construction - 2013 : the international exhibition and scientific-practical conference.

The results of the research in terms of environmental education

COMPLETED PROJECTS
(for the recent 7 years)

Development of technological process of yarn production with waste modern spinning equipment. JSC «Gronitex», Grodno.
- Development of technological process of woollen yarns production with a linear density from 100 to 250 Tex from waste production. JSC Sukno», Minsk.
- Development of technology of wood chipboard production with the use of textile industry fibrous waste . JSC «Vitebskdrev».
- GB research 2012-VPD-091 «Development of resource - and energy-saving technologies and measures of improvement of the environmental situation at industrial objects of the Republic of Belarus».
No. 16/347 «To develop composition and technology of the paint for roads marking manufacture on the basis of industrial enterprises wastes » in the framework of the state research program «Construction and architecture 16».
- X13BT-002 «New coagulants and flocculants in water treatment processes» in the «BRFFR-Vitebsk 2013» contest .
- № 615 X10-009 «Development of the fixation theory of inorganic pigments derived from industrial waste on the grant of the BRFFR.
- № 392/p «Development of scientific foundations of resource-saving production technology of construction finishing materials with the use of deironing stations and heat and power plants inorganic waste » GPNI «Construction materials and technologies 12».
- № 229 «The manufacture of a ceramic brick with the use of industrial waste, with Obol ceramic plant», Obol.

DYNAMICS of CHANGES in FUNDS USED FOR IMPLEMENTATION of PROJECTS FOR the PERIOD FROM 2006 TO 2013



Thank you !