



TASHKENT STATE TECHNICAL UNIVERSITY
named after
ABU RAYKHAN BERUNIY

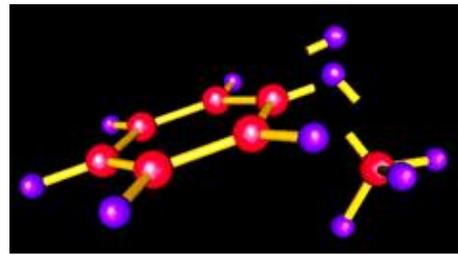
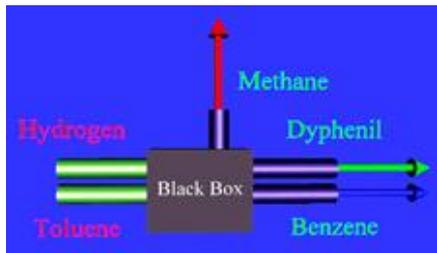
FACULTY OF OIL AND GAS

**DISTANCE E-LEARNING
COURSES**

e-KDCT

Tashkent

2003



In Tashkent State Technical University in the framework of International Educational project TEMPUS-TACIS "Long Distance Education in Uzbekistan" in cooperation with the partners from the European Community: University Twente (The Netherlands), Technical University Hamburg-Harburg (Germany) and University Aalborg (Denmark). Mastering and implementation of advanced specialized courses in domains of «Chemical Engineering and Industrial Ecology» and «Oil and Gas Processing» were realized.

The fields of application of distance e-learning courses e-KDCT are:

- Teaching the Bachelor and Master students;
- Professional training and retraining;
- Qualification upgrade;
- Upgrade and renew base knowledge;
- Getting additional education

For the structural representation of worked out materials, virtual laboratory stands and educational video materials it was provided to use number of functional options, which allow to assimilate more deeply the lecture and also practical materials.

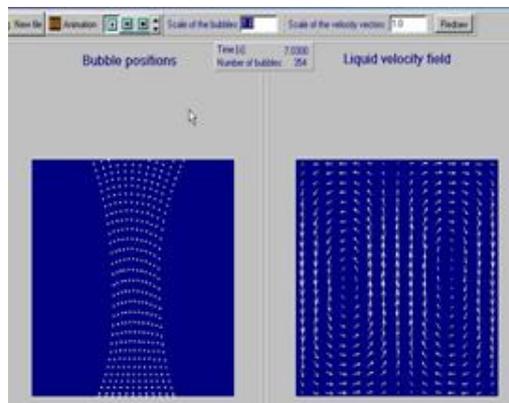
Functional options of e-KDCT

- ❖ **News** – to announce some new information.
- ❖ **Reading materials** – for self-mastering of theoretical aspects of proposed advanced courses. All materials are performed in chapters. The courses consisting of PC software are provided with explanation of PC applications.
- ❖ **Assignments** – for self-carrying out the assignments provided for each chapter.
- ❖ **Quiz** – for quizzing the enhanced knowledge.
- ❖ **Multimedia** – virtual laboratory stands, educational video materials (AVI и WMV) and simulation materials are placed in this option. This option evidently shows an opportunity of the computer applications used during mastering of the courses.
- ❖ **Web-links** – additional links to Internet resources, which can be used to find the definite information.
- ❖ **References** – information sources, consisting of advanced courses materials.

- ❖ **Downloads** – additional, useful PC software for engineers, and also PC programs to compose the technological calculations.
- ❖ **Question and answer** – to keep a contact between the students and teachers, and realize information exchange.
- ❖ **Journal** – to fix the knowledge enhanced by the students.
- ❖ **Students** – list and photos of the students attending in long distance education. Here it is possible to keep a contact with the students by e-mail, registered for each the students.
- ❖ **Mail to** – animated option – to write the direct letter to the authors, who developed e-KDCT at the University of Twente (The Netherlands), they are Kobiljon Kholmatov and Diana Khashimova – collaborators of TSTU, Oil and Gas Faculty, Department of Chemical Engineering and Industrial Ecology.

Subjects

- ◆ Computational Fluid Dynamics, PC software CFD-2PF
- ◆ Chemical Process Design

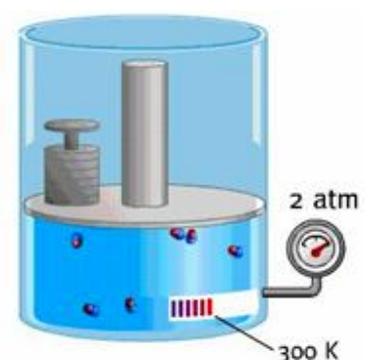
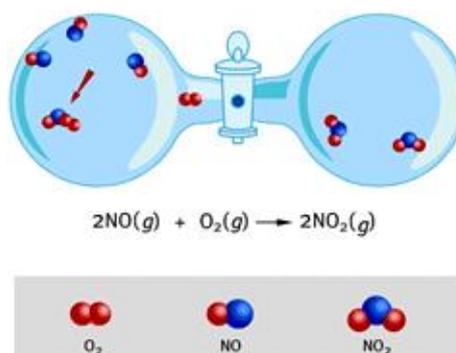
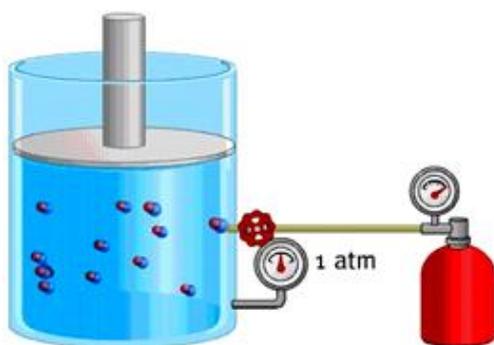




- ◆ Visualization and navigation in virtual environments, PC software CosmoWorlds
- ◆ Fundamentals of Chemical Engineering
- ◆ Chemistry of Fuel materials
- ◆ Thermodynamics for the Process Technology
- ◆ Numerical Methods in Chemical Engineering, PC software MatLab

Virtual laboratory stands and educational video materials

- ❖ Introduction in Computational Fluid Dynamics, PC program CFD-2PF (video format WMV)
- ❖ Discreet Bubble Model in Gas-Liquid system (video format AVI)
- ❖ Assignments for Discreet Bubble Model in Gas-Liquid system (video format AVI)
- ❖ Assignment 1 for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Assignment 2 for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Assignment 3 for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Assignment 4 for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Conclusion for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Assignments and conclusion for Discreet Bubble Model in Gas-Liquid system (video format AVI and WMV)
- ❖ Black Box 1 for «Chemical Process Design» (video format AVI and WMV)
- ❖ Black Box 2 (video format AVI and WMV)
- ❖ Black Box 3 (video format AVI and WMV)
- ❖ Black Boxes (video format AVI and WMV)
- ❖ Benzene production – Introduction (video format AVI and WMV)
- ❖ Benzene production – Raw materials (video format AVI and WMV)
- ❖ Benzene production – Molecules before chemical reaction (video format AVI and WMV)
- ❖ Benzene production – Mechanism of the reaction 1 (video format AVI and WMV)
- ❖ Benzene production – Mechanism of the reaction 2 (video format AVI and WMV)
- ❖ Benzene production – After reaction 1 (video format AVI and WMV)
- ❖ Benzene production – After reaction 2 (video format AVI and WMV)
- ❖ Benzene production – Products (video format AVI and WMV)
- ❖ Benzene production (video format AVI and WMV)
- ❖ Hybridization (video format AVI and WMV)
- ❖ Properties of the gases (video format AVI and WMV)
- ❖ Limitation of the reactant (video format AVI and WMV)
- ❖ Vapor pressure (video format AVI and WMV)
- ❖ Molecular View (video format AVI and WMV)
- ❖ Acid Ionization HCl (video format AVI and WMV)
- ❖ Acid Ionization HF (video format AVI and WMV)
- ❖ Acid Ionization HCl и HF (video format AVI and WMV)
- ❖ Buffers H (video format AVI and WMV)
- ❖ Buffers OH (video format AVI and WMV)
- ❖ Buffers H and OH (video format AVI and WMV)
- ❖ PC program Aspen Plus (video format WMV)
- ❖ Interview with Prof. Henk van den Berg (video format WMV)





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