

U4.01/94 Treatment of backlog of radioactive waste water at Rovno NPP

Project description

This project implemented in the frame of the European Commission TACIS Nuclear Safety Programme aims at back fitting the present radioactive waste water treatment at Rovno NPP by:

- enabling a trouble free operation of the waste water treatment system
- removing slurry from the waste water before further treatment
- bringing the slurry in a suitable condition for intermediate storage and handling.

The objective of the project is to install downstream a proven system of Treatment of



Backlog of Radioactive Waste Water in order to separate by centrifugation slump sludge from waste water storage tanks.

This contract included design, manufacturing, factory tests and delivery of a centrifuge module and drum handling equipment, spare parts, documentation in English and Russian as well as provision of installation, safety analysis and licensing support, acceptance and commissioning tests, equipment certification and training .

Contract amount : 1 344 k Euro

Fig. 1 Drum handling at the centrifuge

module

Equipment cost : 967 k Euro

Liquid waste treatment configuration / Схема переработки жидких РАО

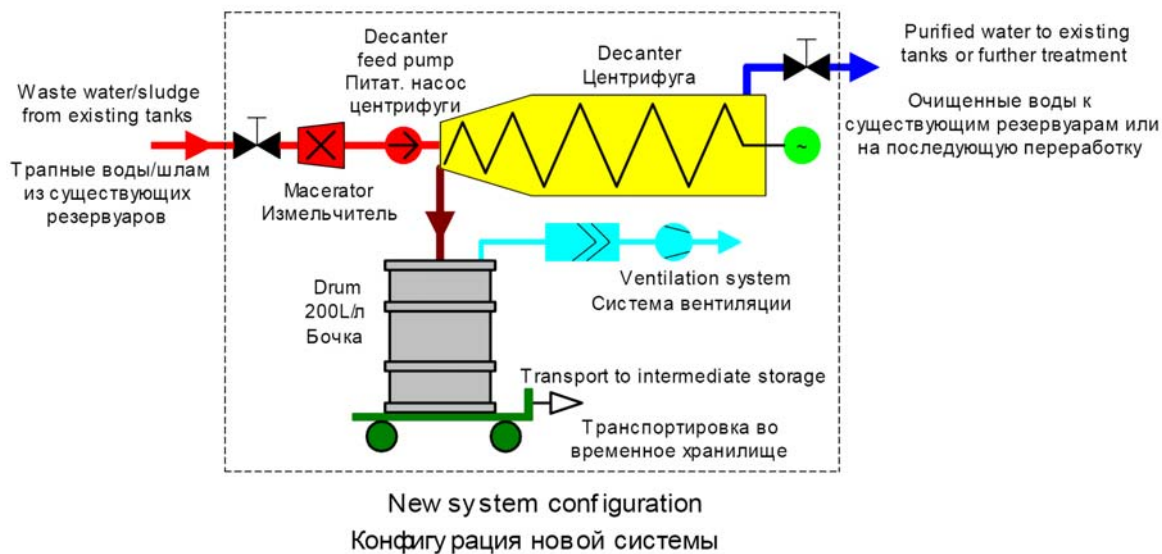


Fig. 3 Process control

Organisations involved

Funding and logistic support: EC
Beneficiary: NAEK ENERGOATOM
End User: ROVNO NPP
Procurement Agent: FICHTNER
Supplier: FRAMATOME ANP GmbH
Integration studies: KIEP
Installation and testing: INCONSATOM & ROVNO NPP
On Site Assistance: EDF (EC Consultant)



Fig. 4 Centrifuge module



Time Schedule

1996- May 1999 Elaboration & approval of the Technical Specification for supply
July 2000 Tender Launch
January 2002 Signature of the supply contract
2002-2003 Elaboration of the Justificatory documentation for licensing
2002-2003 Manufacturing & Factory Acceptance Tests
December 2003 The system was installed and commissioned in special building n° 1 of RNPP

Main Benefits of the project

- The centrifuge system brings the slurry in a suitable condition for intermediate storage and handling
- Technical exchanges on management and prevention of accumulation of radioactive wastes



Fig. 5 Drum grabber specific tests

Safety improvement

- This project was developed in accordance with the Safety Improvement Programme for ROVNO 1&2 with the VVER-440/213 Reactor Plants
- This system allows to reduce the volume of radioactive waste water producing the final product acceptable for safe storage in solid waste storage facilities in accordance with IAEA recommendations
- During the project implementation was applied the "2+2" approach involving the Western and Ukrainian Regulatory Bodies with their respective Technical Support Organisations