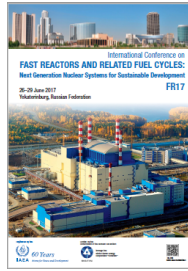


International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17)



Contribution ID: 423

Type: POSTER

Russian Companies' involvement in CEFR RP (China) construction

Wednesday 28 June 2017 17:50 (1h 10m)

PRC –Russia cooperation in CEFR RP construction commenced in 1992.

In 1992 –1995, specialists of RF from “Experimental Design Bureau of Mechanical Engineering” developed “CEFR unit concept” and technical requirements for the reactor and its main components.

In 1995 –1996, Russian companies' specialists developed detailed design of CEFR nuclear power plant.

Designing solutions implemented in CEFR design were studied using Russian companies' testing facilities.

In all, nearly 30 various tests and studies were carried out.

In March 1995, “RF Ministry of Atomic Energy-CNEIC Inter-Agency Agreement of Cooperation in the Field of Developing the Experimental Sodium-Cooled Fast Reactor in the PRC” was signed.

Since 2002, the cooperation in CEFR has been exercising the granted Status of International one. “Agreement between the Government of the Russian Federation and the Government of People’s Republic China on Cooperation in Construction and Operation Experimental Fast Reactor in China” was signed in Beijing on July 18, 2002.

Early in 1999, CIAE obtained permission of the Chinese government and National Nuclear Security Administration (NNSA) to construct CEFR. That enabled to prepare manufacture and testing of prototypes, RP equipment supply by Chinese and Russian companies, as well as supply of fuel (JSC “TVEL”, Elemash, OKBM), components for reactor vessel and rotating plugs, primary and secondary pumps, CRDMs, intermediate heat exchangers, refueling mechanism, fuel loading/unloading elevators (OKBM), steam generators (JSC “Ziomar” , Podolsk), devices (JSC “NII Teplopribor”), FSA flow meter (OKBM), devices of steam generator emergency protection (RF SSC-IPPE), level meters (OKBM, NII Teplopribor), electromagnetic pumps (OKBM, NIIIEFA), and ionization chamber suspensions (OKBM, STC Elegiya). In all, Russian companies supplied 100 units of equipment.

In that stage, consulting services were rendered by specialists from OKBM, IPPE, and SPb AEP, lectures on BN reactors were delivered, practical trainings for CIAE specialists were prepared using OKBM and IPPE facilities (BFS large physical test facility), training for CNI-23 installation company’s specialists and technical briefing for operating repair personnel were conducted in OKBM, CIAE operating personnel (operators) were trained in RIAR Training center using BOR-60.

Currently, Russian companies are continuing to cooperate with China in the following areas:

JSC “Afrikantov OKBM”–SPTA supply for CEFR equipment and provision of consulting services for repair technology development for equipment of Russian origin;

JSC “RF SSC RIAR”–training of CEFR operating personnel;

JSC “Rusatom Service”–provision of consulting services in the RP operation stage

JSC “TVEL”–fuel supply.

Country/Int. Organization

Russia/JSC “Afrikantov OKBM”

Author: Mr PETROV, Igor (JSC “Afrikantov OKBM”)

Presenter: Mr PETROV, Igor (JSC "Afrikantov OKBM")

Session Classification: Poster Session 2

Track Classification: Track 2. Fast Reactor Operation and Decommissioning