

Profile LFR-72

LEPUMP

CHINA

GENERAL INFORMATION

NAME OF THE FACILITY	Lead-bismuth Eutectic Primary Pump Test Facility
ACRONYM	LEPUMP
MEDIUM (COOLANT(S)) OF THE FACILITY	LBE
LOCATION (address):	CNPRI, Shenzhen, China
OPERATOR	CNPRI
CONTACT PERSON(S)	Jiming Lin
(name, address, institute, function, telephone, email):	China Nuclear Power Technology Research Institute (CNPRI) 0086-755-88617716 linjiming@cgnpc.com.cn

STATUS OF THE FACILITY	In operation
Start of operation (date):	2018

MAIN RESEARCH FIELD(S)	<input type="checkbox"/> Zero power facility for V&V and licensing purposes
	<input type="checkbox"/> Design Basis Accidents (DBA) and Design Extended Conditions (DEC)
	<input type="checkbox"/> Thermal-hydraulics
	<input type="checkbox"/> Coolant chemistry
	<input checked="" type="checkbox"/> Materials
	<input checked="" type="checkbox"/> Systems and components
	<input type="checkbox"/> Instrumentation & ISI&R

TECHNICAL DESCRIPTION

Description of the facility

LEPUMP is constructed to test the capabilities and running reliability of the primary pump, including bearing, seal, thermal insulation, shafting and et al.

Acceptance of radioactive material

No

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Scheme/diagram

Parameters table

Medium (Coolant) inventory	1.2t
Power	18.5 kW
Test sections	
TS #1	<u>Characteristic dimensions</u> 3.5m height, 1m diameter
	<u>Static/dynamic experiment</u> Static
	<u>Temperature range in the test section (Delta T)</u> 200°C-400°C (200°C)
	<u>Operating pressure and design pressure</u> Ambient
	<u>Flow range (mass, velocity, etc.)</u> N/A
Medium (Coolant) chemistry measurement and control (active or not, measured parameters)	No
Instrumentation	Thermocouples, flow meter, liquid level meter, pressure transducer, sound level meter, tachometer.

COMPLETED EXPERIMENTAL CAMPAIGNS: MAIN RESULTS AND ACHIEVEMENTS

Bearing material test 1

PLANNED EXPERIMENTS (including time schedule)

2019: Bearing material test 2,3,4.

TRAINING ACTIVITIES

Training activities are possible, depending on availability and after prior agreement under supervision of CNPRI.

REFERENCES (*specification of availability and language*)

No