

## Profile SFR-72

### Creep testing facilities

USA

#### GENERAL INFORMATION

NAME OF THE FACILITY Creep testing facilities  
ACRONYM n.a.  
COOLANT(S) OF THE FACILITY n.a.  
LOCATION (address): Oak Ridge National Laboratory (ORNL)  
OPERATOR Mechanical Properties and Mechanics Group, Materials Science and Technology Division  
CONTACT PERSON Hong Wang, One Bethel Valley Rd, Oak Ridge, TN37831-6069  
(name, address, institute, ORNL, 865-574-5601, wangh@ornl.gov  
function, telephone,  
email):

STATUS OF THE FACILITY Available for creep testing at different temperatures in air, or inert environment, or under vacuum.  
Start of operation (date): n.a.

MAIN RESEARCH FIELD(S)

- Zero power facility for V&V and licensing purposes
- Design Basis Accidents (DBA) and Design Extended Conditions (DEC)
- Thermal-hydraulics
- Coolant chemistry
- Materials
- Systems and components
- Instrumentation & ISI&R

#### TECHNICAL DESCRIPTION

##### Description of the facility

Creep testing facilities belong to the Mechanical Properties and Mechanics Group (MP&M) in Materials Science and Technology Division, ORNL, which performs characterizations on the creep properties of materials for both structural and functional applications. Creep testing facilities have a large collection of creep machines for creep characterization at different temperature, load levels, vacuum or inert environments. The group's research programs are sponsored by the U. S. Department of Energy (DOE), DARPA, NASA, and DOD, as well as cooperative research with industrial companies and non-profit industrial associations.

**Acceptance of radioactive material**

No.

**Scheme/diagram**

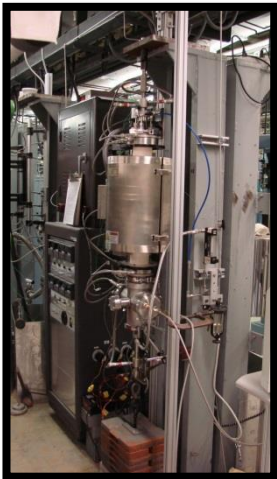
n.a.

**3D drawing/photo**

Creep Frames  
(more than 120 frames)



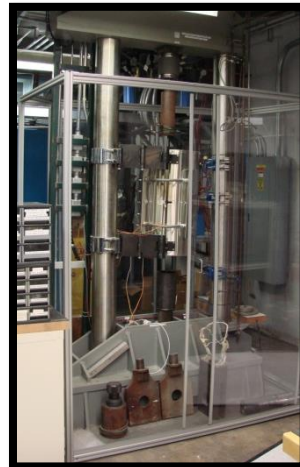
Creep frames with Inert environment



**High Temperature High Vacuum Creep Stations**



Creep frame with 100,000 lb load capacity.



*FIG. 1. Views of the Creep testing facilities*

**COMPLETED EXPERIMENTAL CAMPAIGNS: MAIN RESULTS AND ACHIEVEMENTS**

**PLANNED EXPERIMENTS (including time schedule)**

**TRAINING ACTIVITIES**

n.a. (operated by trained technical staff at ORNL)

**REFERENCES** (*specification of availability and language*)