2. Principal New Equipments

Bending and Internal Pressure on real structural samples (BIPress)

Purpose and Outlines:

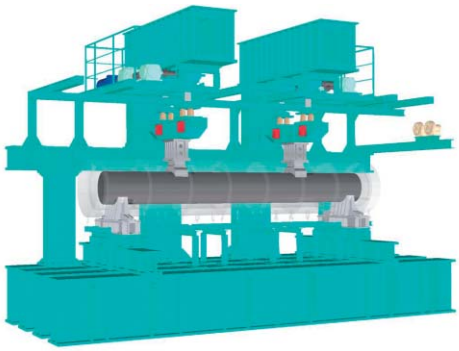
This test facility applies internal pressure with steam and four-point bending load by a set of load jacks simultaneously at high temperatures to a large scale pipe specimen cutting from real pipes such as reheat pipes. This is one of the largest internal pressure creep facilities in the world. Deformation behavior and damage evolution process can be measured during the test until rupture of the pipe. This facility is drawing attention from utilities and fabricators, and is used for validation of remaining life evaluation methods, nondestructive inspection techniques and damage monitoring systems for the piping.

Specifications:

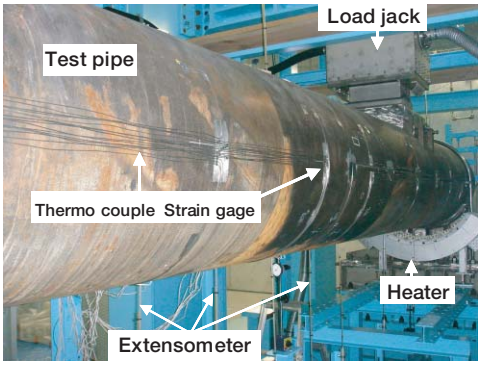
- Heating device: Electric heater
- Maximum temperature: 750℃
- Internal pressure control: high pressurized steam
- Maximum internal pressure: 50MPa
- Loading device: Electric motor screw jack
- Load capacity: 4000kN
- Maximum test pipe size: (Outer diameter 1m) x (Length 8m)

Location and Date of Installation:

Yokosuka Campus, March, 2007



Appearance of the facility



Real pipe specimen