

SEISMIC CRITERIA FOR PIPING

- POST EARTHQUAKE EXPERIENCE
- FAILURE MODES UNDER EARTHQUAKE LOADS
- BEHAVIOR OF EP STRUCTURES UNDER SEISMIC LOADING: Displacement controlled?
- ELBOWS BEHAVIOR
- LOCAL vs GLOBAL DUCTILITY
- CRITERIA
- SITUATION IN FRANCE

FAILURE MODES UNDER EARTHQUAKE LOADS

- PLASTIC OR ELASTOPLASTIC INSTABILITY
 - Excessive/progressive deformation
 - Max of (F,D) curve
 - Not related to loss of integrity
 - Permanent load
- LOW CYCLE FATIGUE
- TEARING

BEHAVIOR OF EP SYSTEM

RESPONSE OF EP 1 dof SYSTEM

Inelastic spectrum

Low and medium frequency response

SYSTEMS WITH MORE THAN 1 dof

Displacement controlled

CRITERIA

- DESIGN: locate supports and get allowable loads on equipment
- SUPPORT / INTERFACE LOADS
- DEFECT ACCEPTABILITY: ISI

LOCAL vs GLOBAL DUCTILITY

- SIMPLE SYSTEM
 - Displacement control
 - Elastic follow up: static or dynamic
- IS IT GENERAL?

SITUATION IN FRANCE

DIFFERENT CODES:

- RCC-M: for PWR
- RCC-MX for FBR
- ETCM for the European project