ISO 23466:2020 (E)

Design criteria for the thermal insulation of reactor coolant system main equipments and piping of PWR nuclear power plants

Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 General design procedure

- 4.1 General requirements
- 4.2 Reactor safety considerations
- 4.3 Material selection
- 4.3.1 General requirements
- 4.3.2 Primary insulating material
- 4.3.3 Outer cladding/encapsulating material
- 4.3.4 Support/fixation material
- 4.4 Design and test of thermal behaviour
- 4.4.1 Design of thermal behaviour
- 4.4.2 Test of thermal behaviour
- 4.5 Design and test of mechanical properties
- 4.5.1 Design of mechanical properties
- 4.5.2 Test of mechanical properties
- 4.6 Additional requirements

5 Design requirements of RPV thermal insulation

- 5.1 General requirements
- 5.2 Safety requirements
- 5.3 Material selection
- 5.4 Thermal behaviour requirements
- 5.5 Mechanical properties and structural requirements

6 Design requirements of thermal insulation of RCS piping and other equipment

- 6.1 General requirements
- 6.2 Safety requirements
- 6.3 Material selection
- 6.4 Thermal behaviour requirements
- 6.5 Mechanical properties and structural requirements

Annex A (informative) Geometry description of metallic thermal insulation

- A.1 General

Annex B (informative) Geometry description of non-metallic thermal insulation

- B.1 General
- B.2 Non-metallic thermal insulation composed by thermal insulation panels
- B.3 Non-metallic thermal insulation composed by strapped layers

Annex C (informative) Type of RPV thermal insulation with RPV external cooling safety functionality

- C.1 General
- C.2 Design recommendations

Annex D (informative) Type of RPV thermal insulation with radiation shield safety functionality

- D.1 General

Page count: 24