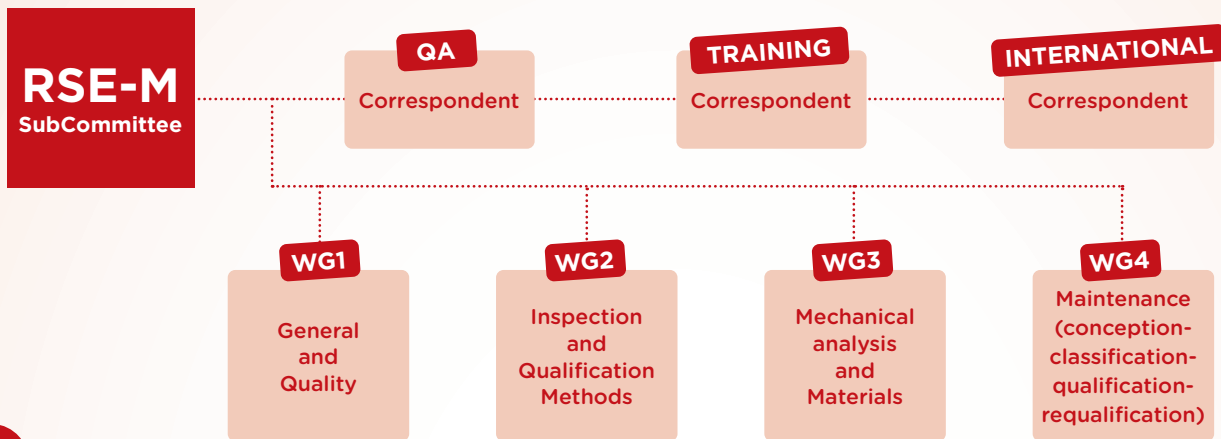


## About AFCEN Subcommittee RSE-M

### In-Service Rules For Mechanical Components of PWR



### Subcommittee

About 30 companies and more than 100 experts are participating to Working Groups and specific Task Groups

**Technical Secretary: [rse-m@afcen.com](mailto:rse-m@afcen.com)**

### RSE-M IN-SERVICE RULES



### Available Publications

#### RSE-M latest edition : 2022

#### Technical publications

- **AFCEN-RS-16-018-A:** Principle and substantiation for taking Warm Pre-Stressing (WPS) into account in PWR vessel fast fracture resistance criterion
- **AFCEN-RS-17-019-A:** Principles of and background to the formulation of analytical methods for calculating stress intensity factors and the J integral for a planar defect
- **AFCEN-RS-18-026-A:** Principles and background to the formulation of the criteria of appendix 5.5 relating to the fast fracture strength of pressure equipment displaying a planar defect during operation
- **AFCEN-RS-19-013-A:** Guide to Qualification of NDT processes using ultrasound Establishing performance data

#### Technical publications

#### linked with French regulation:

- **AFCEN-RS-16-007-E:** Guide for Periodic Requalification of Class N2 or N3 ESPN piping
- **AFCEN-RS-16-009-B:** Professional guide for the classification of repairs and modifications of nuclear pressure equipment subject to Annex V points 1 to 4 of the amended Order of 30/12/2015
- **AFCEN-RS-16-010-E:** Guide for notable repair or modification maintenance operation file of nuclear pressure equipment subject to Annex V points 1 to 4 of the amended Order of 30/12/2015 (French only)

- **AFCEN-RS-17-022-C:** Guide for Main Primary and Secondary System spare parts procurement
- **AFCEN-RS-18-003-A:** Guide for requirements and assessment of NPE assembly subject to Annex V points 1 to 4 of the amended Order of 30/12/2015
- **AFCEN-RS-18-004-C:** Protection against overpressure conformity assessment during set-up of pressure equipment
- **AFCEN-RS-18-005-A:** Guide for requirements for installation of NPE subject to Annex V point 5 of the amended Order of 30/12/2015
- **AFCEN-RS-18-006-A:** Essential safety requirements applied to repair or modification of pressure equipment subject to Annex V points 1 to 4 of the amended Order of 30/12/2015
- **AFCEN-RS-18-007-A:** Guide for Main primary and secondary system repair or modification
- **AFCEN-RS-20-001-A:** Glossary
- **AFCEN-RS-PTAN-09002-2023:** Classification of Modification Sheets in the RSE-M as of the 2022 Edition

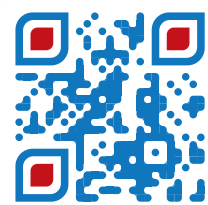
#### Training

**The objectives are to acquire a general knowledge of the RSE-M:**

- to have an overview of the general structure,
- to identify the fields of application and to navigate through the Code,
- to identify the Code requirements and suggestions for maintenance and monitoring of related equipment.

## RSE-M 2022

	Ed 2022	Ed.2020
<b>Rules of application of RSE-M</b>	<b>1000</b>	
Rules for using RSE-M	1100	A 1000
Scope of application of RSE-M	1200	A 1000
Quality	1300	A 1400
List of codes, technical publications and applicable standards	Annex 1.1	Annex 1.3
Figures for classification in categories	Annex 1.2	A 1235
Rules relating to the performance of a hydrostatic test or a hydraulic proof	Annex 1.3	A 2500
<b>CLEANLINESS</b>	<b>2000</b>	
Limiting contaminating compounds	2100	A 1600
Cleaning and cleanliness checking	2200	A 1650 and A 1660
Placing in outage conditions	2300	A 1700
Cleaning and cleanliness inspection rules	Annex 2.1	A 1600
<b>Periodic inspections and requalifications</b>	<b>3000</b>	
Periodic inspections (program, zero point/PSI (VCI) and performance	3100	§ 3000
Periodic requalifications	3200	§ 2000
<b>Non-Destructive Examination and other examination methods</b>	<b>4000</b>	<b>§ 4000</b>
Certification, qualification and accreditation of personnel	4100	A 4700
Description of NDE methods and other examination methods	4200	A 4200 and A 4600
Qualification of an NDE	4300	§ 4300
Implementation of NDE and other methods	4400	A 4800 and A 4900
Adjusting profiles and surface conditions	Annex 4.1	Annex 4.1
NDE documentation	Annex 4.2	Annex 1.6 (IV et V)
Examples of qualification of an NDE application	Annex 4.3	Annex 4.3 (partial)
NDE, surveillance and inspection methods	Annex 4.4	Annex 4.4 and B 4400
<b>Indication processing (IT)</b>	<b>5000</b>	<b>§ 5100</b>
Detection	5100	§ 5200
Discrimination	5200	§ 5200
Deviation processing (DTE)	5300	§ 5300
Choice and implementation of a processing solution	5400	§ 5400 and 5500
Defect assessment method	Annex 5.0	Annex 5.0
Defect geometry	Annex 5.1	Annex 5.1
Tables for defects deemed to be acceptable	Annex 5.2 (informative)	Annex 5.2
Fatigue and plastic instability analysis methods	Annex 5.3	Annex 5.3
Analytical methods for calculating stress intensity factors and J integral	Annex 5.4	Annex 5.4
Detailed analysis of a planar defect - mechanical acceptability criteria	Annex 5.5	Annex 5.5
Material properties	Annex 5.6	Annex 5.6
Detailed analysis of a volumetric defect	Annex 5.7	Annex 5.7
General principles concerning the use of partial safety factors	Annex 5.8	Annex 5.8
Deviation Processing File (DTE)	Annex 5.9	New Annex
Consistency file	Annex 5.10	Annex 1.5
Mechanical analysis for in-service integrity of PWR vessels	RPP2	RPP 2
Alternative multiple planar defect interaction method	RPP 3	New RPP
<b>In-operation surveillance</b>	<b>6000</b>	
Surveillance of leaktightness	6100	§ 6100
Surveillance and transient monitoring and recording	6200	§ 6200
Surveillance of irradiation effects	6300	§ 6300
Quantification of Steam leak rates	Annex 6.1	Annex 4.4 (VI.1)
Detection of loose parts in the MPS (CPP)	Annex 6.2	Annex 4.4 (IV.1)
<b>Implementation of a maintenance operation (OM)</b>	<b>8000</b>	
Designing a maintenance operation	8100	§8100 et 8500 (classification)
Spare parts	8200	§ 8200
Qualifying a maintenance operation	8300	§ 8300
Performing a maintenance operation	8400	§ 8400
Maintenance intervention methods	Annex 8.1	Annex 8.1
Applicable provisions to meet the requirements of French pressure equipment (NNPE (ESP)/NPE) regulations	Annex 8.2	Annex 1.8
Rules for applying the RCC-M for maintenance operations	Annex 8.4	Annex 1.4
Classification of interventions on the MPS-MSS (CPP-CSP)	Annex 8.5	B 8500
Content of the Maintenance Operation File (MOF (DOM))	Annex 8.6	Annex 1.6 (I et II)
<b>Glossary</b>		
Technical Publication	AFCEN-RS-20-001-A	A 1300 et Annex 1.1



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