afcen

Shaping the rules for a sustainable nuclear technology

AFCEN Codes used worldwide (end of 2020)

130 nuclear reactors and multipurpose research reactors are currently designed and/or built using AFCEN Codes.

EUROPE

France

In Service......56
Under Construction......3
Plants in Project1

Finland

Under construction.....1

UK

Under construction.....2
Plants in Project4



South Korea

In Service.....2

India

Under Construction......1
Plants in Project6

China

In Service	38
Under Construction	10
Plants in Project	4

Membership :

Join the community of AFCEN experts to contribute to secure, competitive and carbon free nuclear energy

contact@afcen.com www.afcen.com

Total = 130

In service......98

Under Construction17

Plants in project15

FINLAND E

SOUTH AFRICA

South

Africa

South Africa
In Service.....

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RSE-M
IN-SERVICE
INSPECTION RULES



RCC-E
ELECTRICAL AND
I&C SYSTEMS



RCC-CW CIVIL WORKS

THE SEVEN CODES

CURRENTLY PUBLISHED BY

AFCEN



RCC-C FUEL ASSEMBLIES



RCC-F FIRE PROTECTION



RCC-MRX
MECHANICAL
COMPONENT

AFCEN is an International Standard Developing Organization whose primary purpose is to:

- Produce **up-to-date codes** offering accurate and practical rules for the design, construction and inservice inspection of components for use in industrial or experimental nuclear facilities (**RCC codes**),
- Ensure certified and readily-available **training programs** enabling code users to achieve a high level of expertise, knowledge and practical skills in using AFCEN codes.

AFCEN comprises 67 institutional members, representing more than **880 experts** who contribute to the development and continuous improvement of AFCEN codes at the international level.

Experts engaged in AFCEN share its core values:

Collaboration
 Expertise
 Accountability

AFCEN General organization



AFCEN Codes are a set of rules:

- Covering a wide range of technical fields: mechanical engineering, electricity and I&C systems, nuclear fuel, civil engineering works and fire protection systems,
- Improved for the last 40 years, particularly by using feedback that has been acquired from building and operating over 130 nuclear reactors around the world,
- Generic, not specific to a particular project,
- Adaptable to regulations in force in different countries,
- Bringing together the entire nuclear industry of a country.

The AFCEN Codes



PWR

MECHANICAL

COMPONENTS



RULES FOR PWR

MECHANICAL

COMPONENTS



EQUIPMENT

ELECTRICAL AND I&C SYSTEMS AND



CIVIL WORKS

FOR PWR



NUCLEAR

FUEL

FIRE PROTECTION OF NUCLEAR

RCC-F

ISI ANDS

MECHANICAL COMPONENT FOR HIGH-TEMPERATURE

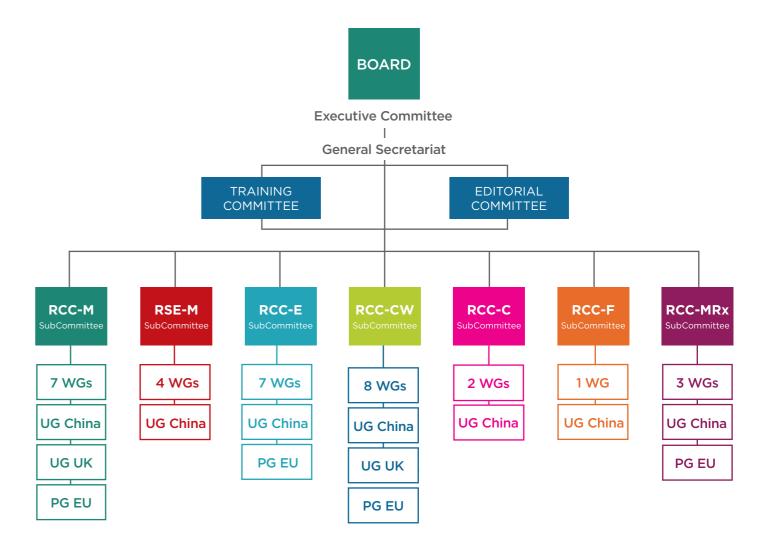
RESEARCH AND

FUSION REACTORS

RCC-MRx

AFCEN Codes edited in **French and English** (available on individual subscription or paper format).

An international working structure based on Subcommittees and specialized Users Groups for each Code



WG: Working Groups

UG: Users Groups

PG EU: Prospective Group bound to CEN Workshop 64

- To edit and adapt the Codes to the context of each country.
- To develop a strong cooperation and feedback between AFCEN members.
- To develop AFCEN certified trainings.

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