

Technical Specifications

Making Sure Your Plant Operates Safely

Framatome's Technical Specifications (TS) support operation within the framework of the safety analysis report (SAR).

Challenge

The SAR describes the nuclear power plant and sets the initial conditions assumed for the accident analyses. It is then necessary to define the framework within which the plant can be operated without violating these initial conditions.

Regulators are increasingly requiring upgraded operating documentation to compensate for loss of know-how as original engineering and operating crews with all their experience finally go off shift.

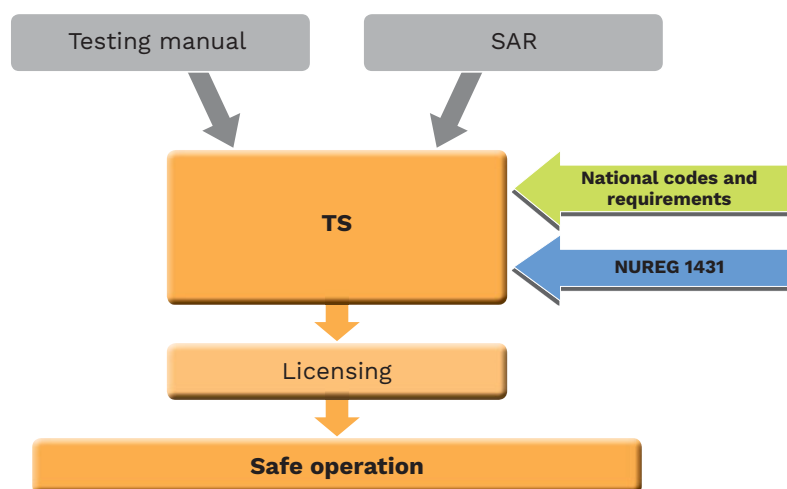
Solution

TS lay down the rules for plant operation that ensure that the accident analysis initial conditions are preserved at all times.

We possess a original equipment manufacturer, Framatome possesses a wealth of experience in generating TS for new-build construction and backfitting projects so as to provide assurance to authorities and operators alike that plant safety is preserved.

Customer benefits

- A comprehensive description of the window of safety for plant operation
- TS upgrades present an opportunity for less experienced staff to acquire the know-how and know-why of their predecessors
- TS upgrades strengthen the safety case for license amendments, extensions and renewals, paving the way to licensing authority approval
- Versatile approach to cater for different designs and national formats
- Screen-based TS for modern computerized control rooms



TS form the link between engineering and operation

Your performance
is **our** everyday **commitment**

Technical information

We offer various TS formats:

- TS in accordance with the Improved Standard Technical Specifications (ISTS) format (e.g. NUREG 1431)

Developed in the wake of the Three Mile Island accident, the ISTS provide an industry-standard paradigm that is accepted by licensing authorities worldwide.

Upgrading to ISTS provides a useful opportunity for younger staff to revisit the plant's design basis and documentation.

We have experience from generating improved TS for plants of different designs, adapting the vendor-specific ISTS to match the technology of our plants.

- National TS formats

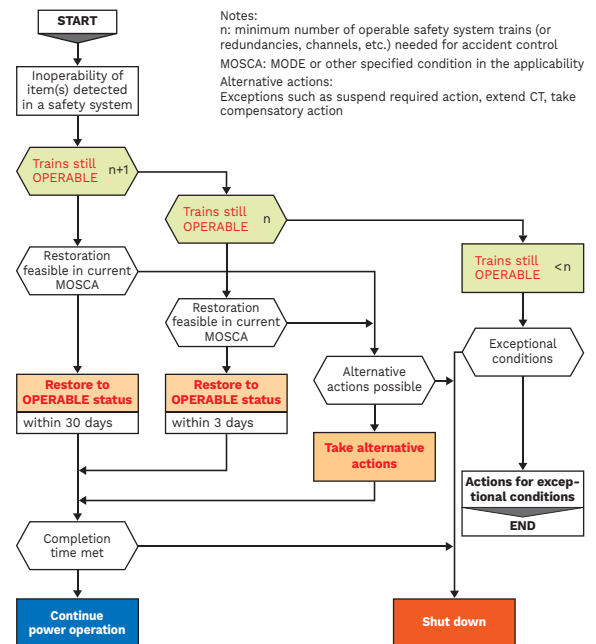
Some national fleets have custom TS. Our versatile approach enables us to cater for their needs as well.

Our latest cutting-edge development is a tool for generation of TS XML format for use in screen-based control rooms.

The use of XML with DITA (Darwin Information Typing Architecture) gives:

- Improved content accuracy, consistency, and timeliness through the ability to more efficiently manage updates and changes
- Enhanced collaboration through greater ease of communication across different platforms
- Increased efficiency through greater content re-usability

thus ensuring that the files transferred to the customer will be usable on any platform, even after 80 years of construction, operation and decommissioning.



TS logic

3.7 PLANT SYSTEMS

3.7.5 Emergency Feedwater (EFW) System

LCO 3.7.5 Four EFW trains shall be OPERABLE.

-----NOTE-----
Only one EFW train is required to be OPERABLE in MODES 4, 5 and 6.

APPLICABILITY: MODES 1, 2 and 3.
MODES 4, 5, and 6 when one steam generator is required OPERABLE for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One EFW train inoperable in MODE 1, 2 or 3.	A.1 Restore EFW train to OPERABLE status.	14 days
B. Two EFW trains inoperable in MODE 1, 2 or 3.	B.1 Restore at least one EFW train to OPERABLE status.	24 hours
C. Required action and associated completion time of condition A or B not met.	C.1 Be in MODE 2.	6 hours
	AND C.2 Be in MODE 4.	12 hours

TS format

References

Worldwide: Argentina, Belgium, Brazil, Bulgaria, China, Finland, France, Germany, India, Japan, Lithuania, Netherlands, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States

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