

PROJECT

# Condition Monitoring System for the ITER Cryogenic System

CUSTOMER

GTD System & Software Engineering

COUNTRY

Spain

APPLICATION

Condition Monitoring

MARKET

Nuclear

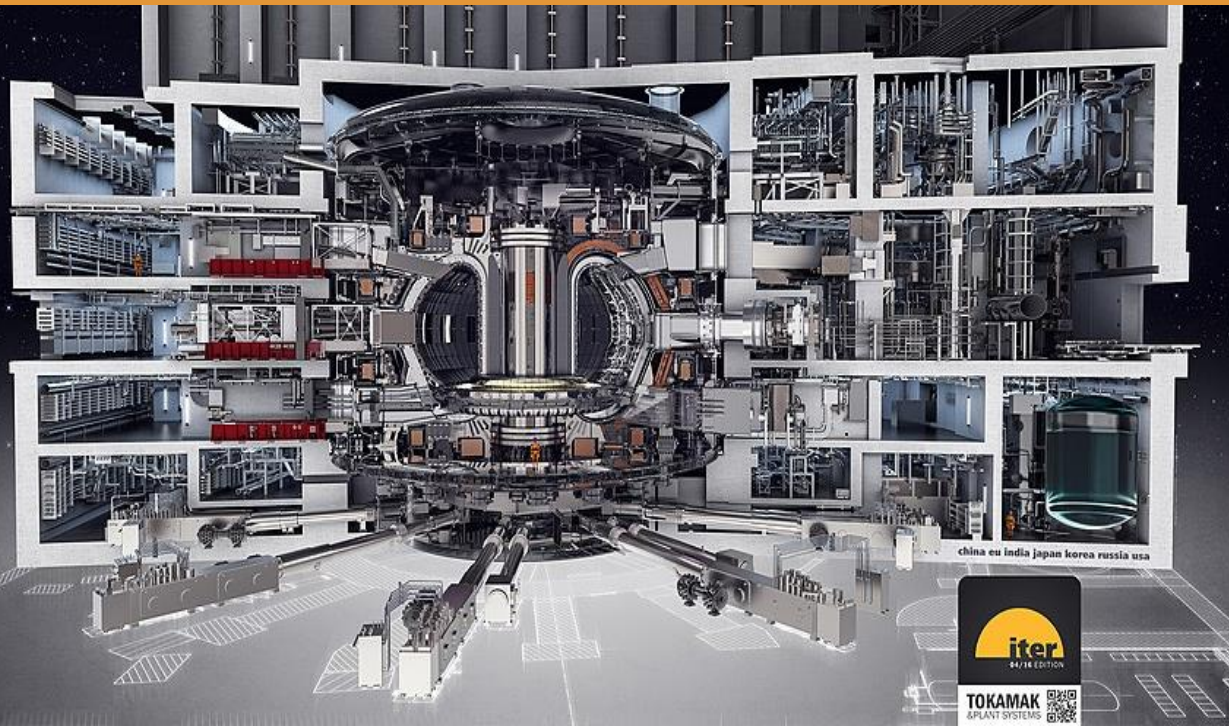
SHORT DESCRIPTION

Temperature monitoring system for the ITER cryoplant. A total of 7 systems totaling 328 channels communicate to the plant monitoring system via Profibus. Each system consists of 5 custom slimline racks with A102, A105, and A105CR measuring modules inside a NETIC enclosure to provide static magnetic shielding. The qualification level for static magnetic fields for systems used in ITER is 25 mT.

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## PROJECT

# Condition Monitoring System for the ITER Cryogenic System

## APPLICATION

In collaboration with GTD System & Software Engineering and Framatome, we supplied temperature monitoring systems for the ITER cryoplant in France. The ITER project aims to demonstrate the feasibility of fusion as a large-scale, carbon-free energy source. Our solution involved seven systems with a total of 328 channels, communicating with the plant monitoring system via Profibus. Each system utilized custom slimline racks with A102, A105, and A105 CR modules housed in NETIC enclosures for static magnetic shielding, meeting the stringent qualification level for static magnetic fields up to 25 mT.

## REASON FOR SELECTION

Our capability to deliver highly accurate temperature measurements at cryogenic levels, combined with custom solutions to mitigate magnetic field interference, made us the preferred choice for ITER's critical monitoring needs. The Q.bloxx A105 CR module's low excitation current minimized sensor self-heating, ensuring precise measurements essential for maintaining the superconducting magnets at temperatures as low as 2-3 K.

## SALES PARTNER

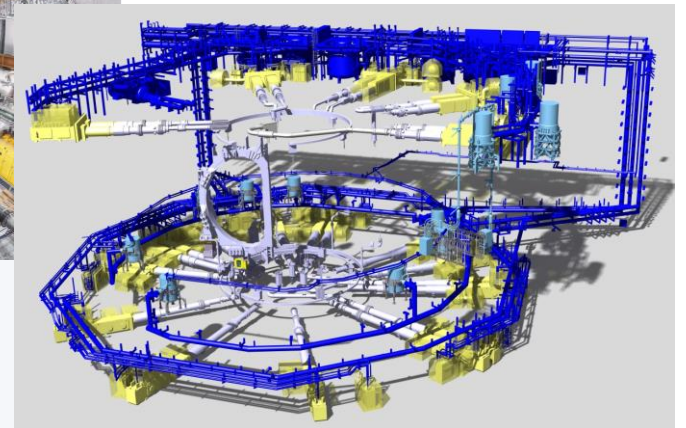
InstrutechSOLUTIONS, Spain

## SYSTEM DESCRIPTION

328-channel measurement system with static magnetic shielding Profibus communication interface

## COMPONENTS

- 5 x Q.raxx slimline A102-2 DP-NETIC
- 14 x Q.raxx slimline A105-12 DP-NETIC
- 7 x Q.raxx slimline A105-16CR DP-NETIC



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