

HOTnote

Perception CSI: **Semi-Automated Noise band Calibration procedure.**

The Customer

A German nuclear power plant.

The Application

Semi automatic noise band calibration procedure for neutron radiation at a nuclear power plant. The application calculates correction values for the noise limits of the nuclear power generator.



The Problem

The customer uses a Gen5i to measure neutron radiation during a fixed period of time. This measurement is used to calculate the noise limits of the nuclear power generator. The problem is that the calculations to be done are very specific and cannot be done by standard Perception software. Another problem is the fact that the operator has to be guided step by step to do the correct sequence of measurements and calculations.

This application will only be used a couple of times per year therefore its operation should be intuitive and simple.

The “General” Solution

The General solution is based on a Gen 5i with Perception software and a CSI application.

The Missing Link

Standard software cannot perform an automated measurement as proposed by the customer. Standard software cannot do the specific calculations needed.

HOTnote

The CSI Solution

With CSI it is possible to program an automated measurement cycle according customer specifications.

In this case the measurement is separated in 4 different steps.

- Step 1: Initial Recording, during this step Perception will do a recording with a default duration of 10 minutes.
- Step 2: Calculations, during this step the application performs the specific calculations and shows the results in different graphs and numerical tables.
- Step 3: Adjustment, the operator uses the calculated results to adjust the controlling switch boards manually. The CSI application gives him immediate feedback if the adjustment is correct.
- Step 4: Validating phase. During this step a new recording is done for validating purposes. At the end a report can be generated. The report layout can be modified by the customer.

The CSI application adds a new sheet to the Perception software; this sheet is an integral part of Perception. All other sheets are hidden but are still available; these sheets are not needed for the regular tasks to be done.

