

# Tube Profilometry of Steam Generators and Heat Exchangers

## Background

Westinghouse offers tube profilometry to determine tube wall geometry deformations including dents/dings and bulges and characterization based on circumferential and radial extent and shape.

## Description

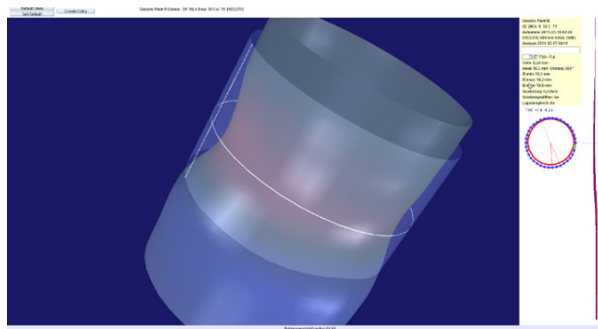
Tube profilometry is based on standard probes and standard acquisition techniques. Array probes are used for standard characterization acquisitions. Coverage of all used tube sizes and array probe configurations is provided and only three additional circumferential simulated standard dents are required.

We offer an independent stand-alone software application providing:

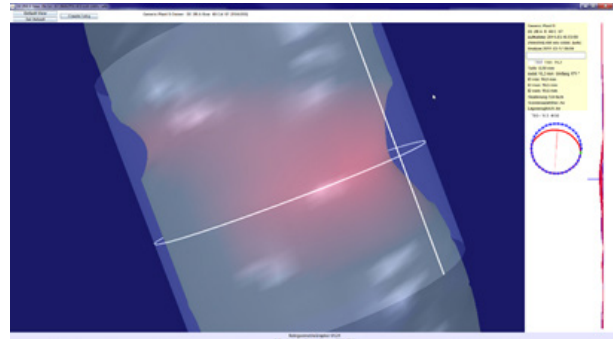
- Absolute measurements
- Three-dimensional (3D) graphics
- Longitudinal and radial cross section

The main features offered include:

- 3D graphics representation of array probe data
- Characterization and sizing



3D representation of tube deformation and actual measurements



3D representation of tube deformation and actual measurements

- User selectable axial extent and radial scaling
- Interactive zoom/rotation/translation selection
- Automated suppression of external disturbances

## Benefits

Tube profilometry offers the following benefits:

- Results reports including 3D representation and sizing values
- Stand-alone application
- Based on standard raw data
- Only one three-dent standard required
- Calibration aid

## Experience

Our tube profilometry experience includes:

- Lab acquisition and characterization of well-defined artificial tube deformations.
- Qualified by TÜV Süd for application in nuclear power plants.
- Field experience: successful characterization of denting at the top of tube sheet for an entire steam generator.

