

Deposit Mapping Services

Powerful assessment and predictive tool with 3-D visualization of secondary side deposits

Deposit Mapping Services facilitate understanding of secondary side deposits and support informed Steam Generator asset management actions.

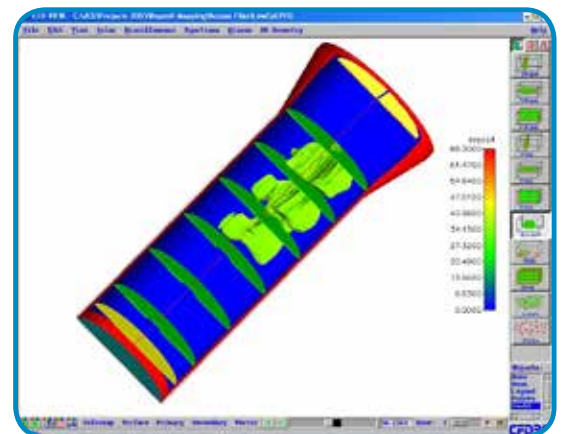
Challenge

Although great care is taken to maintain the high purity of water entering your SG, the massive amount of contaminants converted to steam tube-support-plate (TSP) deposits every hour results in reduced efficiency of heat transfer and fluid flow.

Solution

Framatome Deposit Mapping Services use available ET inspection information obtained in conjunction with thermal-hydraulic and chemistry models to develop an SG program for predictive and preventive strategies.

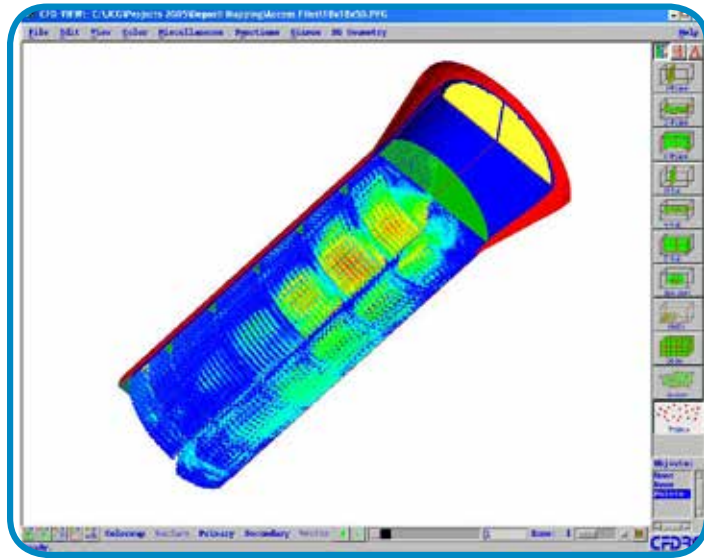
- Pinpoints deposit loading and flow blockage
 - The technique developed by Framatome measures deposit thickness in freespan and TSP locations using eddy current inspection data
- Existing SG tube inspection data is analyzed for deposits along the complete length of each tube based on specialized calibration standards
- A proven algorithm converts the thickness measurements to “mass of deposit” and integrates these results by region to target problem areas
- Deposit loading can be visualized in 3-D models for an insightful look at actual conditions



Customer benefits

- Eliminate the guesswork of eddy current noise assumptions and visual inspection
- Use the valuable information obtained in conjunction with thermal-hydraulic and chemistry models to develop SG program predictive and preventive strategies
- Enhance the efficiency of other maintenance actions

In addition to creating the CFD View image files, Framatome's Deposit Mapping ACCESS database also converts the thickness measurements into an estimated mass of deposit material (using the density of the deposit simulation on the deposit reference standards), and integrates all of the mass by region as shown in the following tables. This allows for targeting the deposit for removal with one of Framatome's proven removal methods, as well as trending and future prediction of when SG performance will become degraded.



Span	Cold Leg (pounds)	Hot Leg (pounds)
1	41	48
2	71	24
3	106	26
4	111	67
5	88	122
6	80	135

**Data-driven decisions
enhance the efficiency of
maintenance actions.**

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