EPRI

STEAM GENERATOR MANAGEMENT PROGRAM (SGMP) PRODUCT CATALOG

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THE EPRI SGMP PROGRAM

Many factors affect materials degradation in steam generators, including water chemistry, inspection limitations, material performance issues, and the presence of foreign objects. Greater understanding of these factors and their integrated impacts can inform the development of more effective tools for predicting degradation and more effective inspection and mitigation techniques for identifying and addressing degradation.

The Electric Power Research Institute's (EPRI's) Steam Generator Management Program (SGMP) conducts research to inform decisions regarding the safe, reliable, and economic operation of steam generators in pressurized water reactor plants. Research activities target identification and mitigation of various forms of steam generator degradation, foreign object assessments, optimized operation of replacement steam generators, water chemistry, in-service inspections, and tube integrity.

Besides the products that follow, SGMP maintains a QA website, epriq.com. Eddy Current Examination Technique Specification Sheets, site eddy current data, and presentations from all past NDE Workshops are available on this site.

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1016915	Steam Generator Management Program: Inspection of Steam Generator Divider Plate Weld Mockups Using Ultrasonic Phased Array Technology
1016554	Measuring and Monitoring Noise in Steam Generator Tubing Eddy-Current Data for Tube Integrity Applications
1016776	Steam Generator Management Program: Peer Review of Catawba Unit 2 Steam Generator Tube-End Indications
1016553	Model Assisted Probability of Detection (MAPOD) Software, Version 1.0
1015126	Development of a Process for Determining Examination Technique Equivalency
1014756	Update on the Tools for Integrity Assessment Project
1014567	Tools for Integrity Assessment Project Technical Report
1012985	Beaver Valley-1 Noise Pilot Project Results, Experience, and Recommendations
1012988	User Manual - Crystal Ball Monte Carlo POD Simulator
1011803	Flaw Profile Tool (FPT) Version 1.0

INSPECTION (CONTINUED)	
1007346	Performance Based Inspection for Steam Generators: A Case Study for Determining Inspection Intervals for Tube Wear
1007314	Eddy Current Data Quality Parameters for Inspection of Steam Generator Tubes: Volume 4: Array Probes
1003145	Performance-Based Steam Generator Inspection Program for Indian Point 3 Nuclear Plant
1001521	Eddy Current Data Quality Parameters for Inspection of Steam Generator Tubes: Volume 1: Bobbin Coil Probe
1001522	Eddy Current Data Quality Parameters for Inspection of Steam Generator Tubes: Volume 2: Rotating +Point Probe
1001523	Eddy Current Data Quality Parameters for Inspection of Steam Generator Tubes: Volume 3: Application of Data Quality Parameters
TR-114206-V1	Eddy Current Data Quality Specification for Inspection of Steam Generator Tubes
NP-6990	Eddy-Current Probe Characterization

AUTO ANALYSIS	
3002020897	Steam Generator Management Program: Automated Analysis Performance Demonstration Database Qualification Program Protocol
3002015984	Steam Generator Management Program: Considerations for Implementing Single-Pass Automated Data Analysis for Steam Generator Eddy Current Inspections
3002013009	Steam Generator Management Program: Approach for Assigning a Confidence Measure to SG Auto Data Analysis Results
3002007710	Steam Generator Management Program: Development of Automated Data Analysis Algorithms for Assessment of SG Tube Degradation
3002007712	Steam Generator Management Program: Assessment of Processes for Implementation of Automated Data Analysis
3002000591	Steam Generator Management Program: Development of Automated Data Analysis Algorithms for Assessment of SG Tube Degradation
1015125	Automated Analysis of Array Probe Eddy Current Data
1025126	Steam Generator Management Program: Evaluation of Eddy Current Data Analysis Algorithms
1022823	Steam Generator Management Program: Evaluation of Steam Generator Eddy Current Analysis Algorithms
1019293	Steam Generator Management Program: Automated Analysis Performance Demonstration Database
1018558	Automatic Eddy Current Data Analysis Software, Version 5.0
1018559	Steam Generator Management Program: Automated Analysis of Array Probe Eddy Current Data
1018560	Steam Generator Management Program: Automated Analysis of Rotating Probe Eddy Current Data
1015124	Automated Analysis of Rotating Probe Eddy Current Data
1013386	Automated Analysis of Rotating Probe Eddy Current Data
1013514	Automated Analysis of Array Probe Eddy Current Data
1011799	Automated Analysis of Array Probe Eddy Current Data
1011801	Automated Analysis of Rotating Probe Eddy-Current Data
1011802	Automated Analysis Performance Demonstration Database
1011304	Automated Analysis Performance Demonstration Database: Qualification Program Protocol – Rotating Probe Data
1009540	Automated Non-Destructive Testing Array Evaluation System
1007865	Automated Analysis of Bobbin Coil Probe Eddy Current Data
1002786	Automatic Analysis of Rotating Probe Eddy Current Data
1002785	Automated Analysis of Bobbin Coil Probe Eddy Current Data
1003140	Assessment of Automated Data Analysis for Steam Generator Tubing: Eddy Current Bobbin Coil Probes
TR-111463	Steam Generator Automated Eddy Current Data Analysis: A Benchmarking Study
NP-5773	Signal Processing for Steam Generator Inspection

ENGINEERING ISSUES/TUBE INTEGRITY

3002023852	Steam Generator Management Program: SG Tube Ding/Dent Characterization and Stress Corrosion Cracking Sizing Study
3002022466	Plus Point to X-Probe Amplitude Transfer Function and Probability of Detection: Development of a Transfer Function for Prediction of X-Probe Signal Amplitudes from Plus Point Probe Amplitudes and Development of X-Probe Probability of Detection Curves
3002021140	Steam Generator Management Program: Technical Bases for the Integrity Assessment Guidelines: Stress Corrosion Cracking (SCC) Default Growth Rates, Structural Minimum Method, and SCC Leak Rate Equations Technical Bases
3002019984	Steam Generator Management Program: Extended Inspection Interval Analyses of Axial ODSCC at Tube Support Plate Intersections on High Residual Stress Tubes for Steam Generators with Alloy 600TT Tubing
3002018258	Feasibility Study for Multi-Cycle 600TT Operational Assessments
3002012947	Steam Generator Flaw Handbook Calculator for Excel (SGFHC), v2.0
3002010643	2017 Review of the Pressurized Water Reactor Primary Water Chemistry Guidelines—Revision 7: Committee Meeting Minutes
3002007856	Steam Generator Management Program: Steam Generator In Situ Pressure Test Guidelines, Revision 5
3002007565	Steam Generator Management Program: Generic Elements of U-Bend Tube Vibration Induced Fatigue Analysis for Westinghouse Model 51F Steam Generators
3002007562	Steam Generator Management Program: Generic Elements of U-Bend Tube Vibration Induced Fatigue Analysis for Westinghouse Model 44F Steam Generators
3002005426	Steam Generator Management Program: Steam Generator Degradation Specific Management Flaw Handbook, Revision 2
3002005429	Steam Generator Management Program: Steam Generator Tube-to-Tube Support Plate Burst Test Results
3002005424	Generic Elements of U-Bend Tube Vibration Induced Fatigue Analysis for Westinghouse Model D5 Steam Generators
3002002850	Steam Generator Management Program: Investigation of Crack Initiation and Propagation in the Steam Generator Channel Head Assembly
3002003048	Steam Generator Management Program: Flaw Handbook Calculator (SGFHC) for Excel 2010 v1.0
3002001991	Steam Generator Management Program: Generic Elements of U-Bend Tube Vibration Induced Fatigue Analysis for Westinghouse Model F Steam Generators
3002000636	Steam Generator Management Program: Assessment of Steam Generator Tube Plugs
3002000473	Steam Generator Management Program: Steam Generator Channel Head Degradation Failure Modes and Effects Analysis
3002000411	Steam Generator Management Program: Flaw Tolerance Evaluation of the Steam Generator Channel Head
1025133	Steam Generator Management Program: Assessment of Channel Head Susceptibility to Primary Water Stress Corrosion Cracking
1022831	Steam Generator Management Program: Onset of Fatigue Cracking in Steam Generator Tubes With Through Wall Flaws
1020988	Steam Generator Management Program: Phase II Divider Plate Cracking Engineering Study (Revised February 2022)
1021224	Steam Generator Management Program: Flaw Handbook Calculator
1021131	Steam Generator Management Program: Steam Generator Engineering Training Course 2 Handbook
1018888	Steam Generator Management Program: Thermal-Hydraulic and Flow-Induced Vibration Analyses of a Representative Model F Steam Generator
1018640	Steam Generator Management Program: Steam Generator Engineering Training Course 1
1018047	Steam Generator Tubing Outside Diameter Stress Corrosion Cracking at Tube Support Plates Database for Alternate Repair Limits: Addendum 7
1016560	An Evaluation of Time Dependent Leak Rates in Degraded Steam Generator Tubing
105123	An Evaluation of Time Dependent Leak Rates in Degraded Steam Generator Tubing
1014982	Divider Plate Cracking in Steam Generators
1014661	Impact of Non-Pressure Loads on Leakage Integrity of Steam Generator Tubes
1014660	Effect of Bending Loads on Leakage Integrity of Steam Generator Tubes
1012984	Technical Basis for Steam Generator Tube Integrity Performance Acceptance Standards
1011803	Flaw Profile Tool (FPT) Version 1.0
1011456	Steam Generator Tubing Outside Diameter Stress Corrosion Cracking at Tube Support Plates Database for Alternate Repair Limits: Update 2004
1009541	Impacts of the Structural Integrity Performance Criterion on Steam Generator Tube Integrity Evaluations

ENGINEERING ISSUES/TUBE INTEGRITY (CONTINUED)	
1008438	Three Mile Island Plugged Tube Severance: A Study of Damage Mechanisms
1006783	Steam Generator Tubing Burst Testing and Leak Rate Testing Guidelines
1007346	Performance Based Inspection for Steam Generators: A Case Study for Determining Inspection Intervals for Tube Wear
1006593	Steam Generator Tube Integrity Risk Assessment: Volume 1: General Methodology, Revision 1 to TR-107623-V1
1003145	Performance-Based Steam Generator Inspection Program for Indian Point 3 Nuclear Plant
1006252	Effect of Pressurization Rate on Degraded Steam Generator Tubing Burst Pressure: Revision 1
1001441	Effect of Pressurization Rate on Degraded Steam Generator Tubing Burst Pressure
1001406	Risk Informed Inspection for Steam Generators: Volume 2: AVB Wear -- A Case Study
TR-107623-V2	Steam Generator Tube Integrity Risk Assessment: Volume 2: Application to Diablo Canyon Power Plant
TR-114736-V1	Risk Informed Inspection for Steam Generators: Volume 1: Deterministic Performance Based Criteria
TR-107625	SG Indications Restricted from Burst (IRB) Leak Test Report
TR-105960-R1	PWR Steam Generator Sleeving Assessment Document Revision 1
TR-016743-V4R1	Guidelines for PWR Steam Generator Tubing Specification and Repair: Volume 4, Revision 1 Guidelines for Tube Section Removal and Examination
TR-105505	Steam Generator Management Project: Burst Pressure Correlation for Steam Generator Tubes with Throughwall Axial Cracks
TR-107197-P1	Depth-Based Structural Analysis Methods for Steam Generator Circumferential Indications
TR-107197-P2	Depth-Based Structural Analysis Methods for Steam Generator Circumferential Indications
TR-109495	PWR Steam Generator Tube Plug Assessment Document
TR-105371	Proceedings: Steam Generator Strategic Management Workshop
TR-103824-V1R1	Steam Generator Reference Book, Revision 1: Volume 1
TR-103566	Statistical Analysis of Steam Generator Tube Degradation: Additional Topics
TR-103498	Review of Steam Generator Girth Weld Cracking
NP-7493	Statistical Analysis of Steam Generator Tube Degradation
NP-7371-S	Destructive Examination of Tube R31C66 From the Ginna Nuclear Plant Steam Generator
NP-6865-LV2	Steam Generator Tube Integrity, Volume 2: Leak-Before-Break Analysis for Primary Water Stress Corrosion Cracking Near the Tubesheet (Framatome Data)
NP-6865-LV1	Steam Generator Tube Integrity, Volume 1: Burst Test Results and Validation of Rupture Criteria (Framatome Data)
NP-3065-V2	An Engineering And Probabilistic Analysis Of Tube Cracking

THERMAL PERFORMANCE	
3002020907	Steam Generator Management Program: Steam Generator Performance and Reliability Database (SG-PAR) Description: Pre-Release Beta Version 0
3002015985	Steam Generator Management Program: Steam Generator Thermal Performance Modelling Using Effectiveness Methods
3002000321	Steam Generator Management Program: Dynamic Analysis of a Steam Generator: Part 2 – Stability Analysis of Representative Steam Generators
1025134	Steam Generator Management Program: Dynamic Analysis of a Steam Generator--Part 1: Method Development, Steady-State Verification, and Steady-State Validation
TR-110018	Steam Generator Thermal Performance Degradation Case Studies
TR-100371	Steam Pressure Trends at R. E. Ginna

PRODUCTS

DATA	
3002023843	Steam Generator Degradation Database (SGDD) v8.1
3002023842	PRE-SW: Steam Generator Degradation Database (SGDD) Version 8.1 Beta
3002018257	Steam Generator Degradation Database (SGDD) v8.0
3002013120	Steam Generator Management Program: Steam Generator Progress Report, Revision 19
3002007856	Steam Generator Management Program: Steam Generator In Situ Pressure Test Guidelines, Revision 5
3002000639	Steam Generator Management Program: Steam Generator Foreign Object Task Force Review Material
1018561	Development of Eddy Current Data Analysis Guidance and Datasets for Detection of Foreign Objects and Foreign Object Wear

SGDD TRAINING

SGDD training can be accessed through the SGMP Program Home Page under *Links*.

TYPE	TITLE OF TRAINING
Webcast	Steam Generator Degradation Database (SGDD) Training: Reporting Features
Webcast	Steam Generator Degradation Database (SGDD) Training: Data Entry

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About EPRI

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