



ROBERT BOSWELL RESUME

Summary of Experience

Mr. Boswell is a Project Manager, AWS Certified Welding Inspector, ASNT Non-Destructive Examiner, Protective Coating Specialist and NACE Protective Coatings Inspector Level III, with over 40 years of diverse technical and management experience in construction and materials testing and inspection projects. He has served as a Specialty Leader for Welding Inspector and Non-Destructive Testing Practice Groups Nationally. Over the years Mr. Boswell has been involved in the steel and industrial protective coatings industries and has provided consultation services on dam gates, structural steel, steel piping, and steel water tank projects as well as management and supervision of inspectors on various construction materials testing and inspection projects. For many years he has been performing analysis of welds on all types of steel and other metals, and inspection of water tanks. Over the years, Mr. Boswell has also performed inspections of wood framed buildings, fire stop and smoke stop caulk placement in wall penetrations, intumescent fire proofing coating applications and cementitious fire proofing applications.



Over the past twenty-one years Mr. Boswell has performed corrosion evaluation for the City of Austin on their steel and concrete water tanks. He has also performed inspection and testing during rehabilitation projects on many of the City's water storage tanks. Mr. Boswell has performed tank interior evaluations underwater with SCUBA diving equipment ranging in size from 500 thousand to 11 million gallons. These types of evaluations have been performed as a better value to the City and have been used as the sole data collection process for interior rehabilitation. In these twenty-one years he has also provided Specialist services to the City of Austin for rehabilitation of their steel water tanks. These services have been specific to coating systems, writing bid forms, and scopes of work, Contractor experience requirements, and many other project documents with regard to welding, corrosion and painting. Mr. Boswell also provided assistance to the City with the pre-bid, bidding and Contractor selection phases of the projects. He also managed the rehabilitation projects including review of Contractor submittals, managing and negotiating Contractor change orders, review of Contractor payment applications, managing progress meetings, close-out phase of the projects and assisted the City with the Anniversary phase of the projects.

Over the past twenty six years Mr. Boswell has provided consultation for inspection stainless steel materials, mitigation of corrosion issues on stainless steel materials, has developed cleaning, and pickling and passivation procedures for stainless steels and has developed inspection processes for stainless steel.

Mr. Boswell is a member of the NACE International Coatings and Water Councils and is certified by multiple agencies. He is a Certified Welding Inspector, Certified Radiograph Interpreter, NACE Level III Coatings Inspector, NACE Certified Corrosion Technician and an ASNT Nondestructive examiner. He also maintains numerous diving-related certifications. In October of 2010, Mr. Boswell set up the Central Texas NACE Section in Austin, Texas and served as the Trustee for the Section for 10 years.

Following is a list of Presentations Mr. Boswell has Made

- How to Extend the Life of Your Reservoir Systems, San Antonio Water Systems, San Antonio, Texas June 2005.
- Green Coating systems Technology - Improvements for Steel Water Storage Reservoirs, NACE Corrosion Conference, Houston March 2011.
- Writing Successful Coating and Lining Specifications for Steel Water Reservoirs, NACE Corrosion / NAI Conference, Cincinnati, Ohio, August 2011.
- Writing Successful Coating and Lining Specifications for Steel Water Reservoirs, NACE Corrosion Conference, San Diego, California, September 2011.
- Water Storage Tanks Rehabilitation CIP and Green Technologies, Dallas Water Utilities, Dallas, Texas, December 2011.
- Water Storage Tanks Rehabilitation CIP and Green Technologies, San Antonio Water Systems, San Antonio, Texas, March 2012.
- Saving 11 Million Gallons of Drinking Water, Technical Seminar, Denver, Colorado, February 2013.
- CIP Rehabilitation Program for Water Storage Facilities, AWWA Conference Galveston, Texas April 2013.
- Cost of Corrosion and Green Coating systems Technology - Improvements for Steel Water Storage Reservoirs, ASCE Conference, Dallas, Texas, August 2013.
- CIP Rehabilitation Program for Water Storage Facilities, City of Round Rock, Texas November 2014.
- Solutions for Tomorrow Existing Water Storage Tank Facilities, NACE Corrosion Conference, March 2015.
- Corrosion and Protective Coatings, SSPC Conference, New Orleans Louisiana February 2018.
- NACE Water Council Forum, NACE Corrosion Conference, San Antonio, Texas March 2017.
- NACE Water Council Forum, NACE Corrosion Conference, Phoenix Arizona April 2018.
- NACE Coating Council Forum, NACE Corrosion Conference, Phoenix Arizona April 2018.

Following is a list of Articles Mr. Boswell has Written

- Writing Water Reservoir Rehabilitation Specifications for the NACE Coatings Pro Magazine, March 2011 Edition and the NACE Material Performance Magazine June 2011 issue.
- Specifying Water Tank Rehab for the NACE Coatings Pro Magazine, June 2011 issue.
- Managing the Challenges of Maintenance of Protective Coatings on Critical Assets for Materials Performance October 2012 issue.
- Specifying Success for Water Tank Rehabilitation for the NACE Coatings Pro Magazine, March 2013 issue.
- Inspector's Corner, Water Tank Coating and Lining and Inspection for the NACE Coatings Pro Magazine, May 2014 issue.
- Coatings 101 for the NACE Coatings Pro Magazine, May 2014 issue.
- Inspectors Corner, Maintenance Programs for Water Tanks for the NACE Coatings Pro Magazine, September 2015 issue.

Following is a list of Boards, Committees and Councils Mr. Boswell is a Member of

- Austin Community College Welding and Inspection Training Program Advisory Board
- AWWA's National Committee for Asset Management for Water Facilities
- AWWA's National Committee for the D101 Steel Water Tank Inspection Standard
- AWWA's National Committee for the D102 For Coating Steel Water Tanks
- ASTM's A01 Committee on Steel, Stainless Steel and Related Alloys
- ASTM's D01 Committee on Paint and Related Coatings, Materials and Applications
- NACE International's Coating Council
- NACE International's Water Advisory Council (Past Chair)
- NACE Specialty Board of Protective Coatings Inspector Certifications
- NACE Central Area Board Secretary (Past Member)
- NACE Central Area Board Treasurer (Past Member)

Follows is a list of Mr. Boswell's Education, and Certifications

Education

- Austin Community College, 1995-2007

Certifications

- AWS – CWI #96020121
- ASNT – UT Level I and II
- ASNT – MT Level I and II
- ASNT – PT Level I and II
- ASNT – Certified Radiograph Interpreter
- ASNT ACCP Level II
- NACE – Level III Coatings Inspector
- NACE – Certified Corrosion Technician
- NACE Certified Bridge Coatings Inspector
- Certificate Welding Inspection Technology
- Certificate in Layout, Fabrication and Erection of Steel Structures
- FAA Licensed Unmanned Aircraft Pilot
- PADI Open Water Diver
- SSI Open Water Diver
- SSI Advanced Open Water Diver
- SSI Stress and Rescue Diver
- SSI Search and Recovery Diver
- SSI Master Dive
- SSI Dive Control Specialist Diver
- SSI Dive Leader
- SSI Open Water Instructor #15948
- American Heart and Lung Association Certified First Aid / CPR / Oxygen Administration / Automatic External Defibrillator Administration

Following is a List of Organizations Mr. Boswell is a Member of

- American Society of Mechanical Engineers (ASME)
- The American Society for Nondestructive Testing (ASNT)
- American Water Works Association (AWWA)
- American Welding Society (AWS)
- ASTM International (ASTM)
- American Institute of Steel Construction (AISC)
- NACE International (formerly: National Association of Corrosion Engineers)
- The Society for Protective Coatings (formerly: Steel Structures Painting Council)
- Professional Association of Diving Instructors (PADI)
- Scuba Schools International (SSI)

Following is a List of Mr. Boswell's Select Project Experience

1979 to 1986

Exxon Company USA, Various Projects

Mr. Boswell performed welding of high pressure pipelines for water and carbon dioxide injection in oil wells, installation of well heads on casing for new oil wells, maintained and repaired welding for oil storage tanks, oil-water separators, heater treaters and fire tubes, and performed welding repair of corrosion leaks in oil and water injection pipelines. He managed and directed workers in roustabout crews for daily activities of safety coordination, pipeline placement, production schedules and quality control.

Amoco Production Company, Various Projects

Mr. Boswell performed welding of oil and gas pipelines, maintenance welding and “shut down” work in oil refinery plants that included “hot work” in areas of the refineries that were in production, construction of oil storage tank batteries, oil-water separators, heater treaters, welding repair of corrosion leaks in oil pipelines and oil storage tanks and installed “hot taps” in existing oil and gas pipelines. He managed and directed workers in roustabout crews for daily activities of safety coordination, pipeline placement, production schedules, and quality control.

1987 to 1994

Big 3, Various Projects, Richardson, Texas

Mr. Boswell managed the welding personnel, and safety and quality control programs for construction of piping systems for liquid and gaseous oxygen, nitrogen and hydrogen systems, and fabrication of portable skids for gas compressor and pumping systems.

He performed fabrication welding, hydrostatic and pneumatic testing of high-pressure gas systems up to 15,000 psi, silver soldering of stainless steel tubing systems that operated at a pressure of 10,000 psi and wrote procedures for welding and for pressure testing of the systems.

He managed installation of gas systems for Liquid Oxygen plants for Big 3 and Air Liquide nationally and internationally, and for Border Steel in El Paso, Texas. Installation of these systems included rehabilitation of liquid oxygen towers, compressor and piping systems, managing construction crews, and testing and inspection of the completed systems.

Ft. Worth Transit Authority, Ft. Worth, Texas

Mr. Boswell supervised and was responsible for the construction, installation and testing of compressed natural gas systems for this mass transit system and was certified by the Texas Rail Road Commission for installation of natural gas compression and delivery systems.

1995 to 2000

Ontario International Airport, Ontario, California

Mr. Boswell was the leader of a 3rd party testing program at the Hirschfeld Steel Fabrication facility in San Angelo, Texas during fabrication of 6,000 tons of structural steel for this project. During the project he supervised 12 steel inspectors and was responsible for maintaining the quality control testing program.

Centex Marine, Smithville, Texas

Mr. Boswell performed ultrasonic testing on piping systems and structural assemblies in the pressure vessel shop, including magnetic particle and liquid penetrant testing of welds. He also provided consulting for the quality control department at this facility for testing requirements and welding procedures.

Max Starke Dam Renovations, Lower Colorado River Authority, Smithville and Marble Falls, Texas

Mr. Boswell provided quality control services and development of welding procedures for the fabrication of ten, 60-foot long dam gates at an LCRA fabrication facility. He performed ultrasonic testing of complete joint penetration welds and magnetic particle testing of fillet welds in the gates. He provided quality assurance inspection at the dam during installation of the gates, and consultation to the owner's engineering firm for welding issues that the installation contractor experienced. He also assisted the engineering firm in developing a procedure for preventing cracking of welds in maximum restrained weld joints.

2000 to Current

City of Austin

Visual inspection and ultrasonic testing of structural steel welds in multiple buildings in Austin, Texas including projects at the University of Texas and many schools within Austin, Round Rock and surrounding cities.

City of Houston

Visual inspection and magnetic particle testing of 30 inch diameter water pipe welding repair, 1800 South Sgt. Macario Garcia Drive, Houston, Texas.

Visual inspection and magnetic particle testing of 24 inch diameter pipe welding repair, 6800 Telephone Road, Houston, Texas.

Visual inspection and ultrasonic testing:

- South Hampton Apartments, Houston
- Jefferson Heights Apartments, Houston
- Medistar and Vision Park, Houston

City of Austin Convention Center Expansion

This project was a multi-level 1.5 million square foot project with approximately 300,000 high strength bolts that were installed and tensioned in hundreds of slip critical connections. He led a team of inspectors for testing of the high strength bolts in the connections for these trusses. This project also included over 500,000 welded Nelson shear studs, 500,000 square feet of welded structural metal decking, 500,000 square feet of welded roof metal decking and hundreds of full penetration welded moment connections, all of which Mr. Boswell was responsible for leading a team of inspectors for welding inspections and ultrasonic testing on the project.

City of Austin Water Tank Rehabilitation Projects

Mr. Boswell performed coatings and corrosion evaluations on multiple elevated water tanks ranging in size from 500 hundred thousand to 3 million gallons capacity and ground storage tanks ranging in size from 500 hundred thousand to 34 million gallons capacity for the City. Mr. Boswell performed evaluations on the interior of several of the tanks, underwater using SCUBA diving equipment. He provided Specialist Services that included requirements for the use of specific equipment and abrasive materials that reduced the abrasive blasting waste approximately 99% from that of conventional abrasive blasting practices, requirements for exterior coating systems that have volatile organic compound (VOC) content reduced 75% from that of conventional exterior coating systems and no VOC coatings for the interior of water tanks. Mr. Boswell also provided requirements for removal and disposal of Lead Based tank exterior coating systems. He has supported the City on multiple City of Austin Water Tank Projects for Pre-bid, Contractor Selection and Construction Phases. During the construction phase of the projects, he served as the liaison to the general public, home owner's, schools and day care centers that were near the projects. He also provided project management that included review of submittals, managing change orders, contractor payment applications, progress meetings and supervision of multiple inspectors on the projects. At the end of the projects Mr. Boswell provided support to the City for project closeout and anniversary observations of the contractor's work.

City of Austin Water Tank Evaluation Program, Austin, Texas

Mr. Boswell administered an Asset Management evaluation program for the City of Austin on their steel and concrete tanks. This program included collection of data on the structural condition of the interior and exterior of the water tanks, evaluation of the coating systems, and evaluation the current safety compliance of the tank ladders, hatches, landings and anchor points. Valves, venting systems, overflow systems and piping providing water flow into and out of the tanks were also evaluated in this program. Mr. Boswell managed the Owner's team and provided assistance with evaluations on the tanks and tank properties in the program. The evaluations were followed up with comprehensive reports that included extensive photo documentation of the tanks, thickness testing results of the steel and paint, and testing results of the paint for heavy metals. These reports also included a comprehensive condition assessment of the assets on the tanks and valves at the tanks and contractor cost analysis for rehabilitation of each tank and costs for tank replacement. After the program was finished, Mr. Boswell advised the City of which tanks were in need of rehabilitation, the cost for rehabilitation and set the individual priorities up for tank rehabilitation.

City of Austin Wastewater Treatment Facilities, Austin, Texas

Mr. Boswell provided consulting to the Owner's Inspection Team for rehabilitation of corroded concrete in the Blend Tank and Digesters at the Hornsby Bend Water Treatment Plant. He also provided inspection and supervised inspectors for the rehabilitation work and for installation of steel roofs on the Digesters.

Mr. Boswell provided coating system details for the concrete and spill containment walls at the Chemical Storage area inside the Walnut Creek Wastewater Treatment Plant.

City of Austin Water Treatment Facilities, Austin, Texas

Mr. Boswell provided consulting and inspection at Water Treatment Plant #4 for cleaning, pickling and passivation of the stainless steel at the clarifiers. He provided consulting for coating repairs on the drive mechanisms, motors and pumps for the impellers and rake arms in the clarifiers. Mr. Boswell also provided 3rd Party NACE Level III pipe exterior polyurethane coatings inspections and tests on the 84 inch diameter transmission main at Hanson Pipe in Dallas, Texas for the City of Austin Water Treatment Plant #4.

Mr. Boswell provided inspection and testing along with consulting for repainting of the Galley pipes and valves, Lime Silos and rake arms in the Clarifiers at the Davis Water Treatment Plant.

Tarrant County, North Texas

In the late winter/early spring of 2015 Mr. Boswell provided 3rd Party NACE Level III inspections and tests, and supervision of NACE Level II inspections and tests at Jindal Tubular in Bay St. Louis, Mississippi for the polyurethane coating applications on the IPL 110 inch diameter water transmission main.

Aqua Water Supply, Bastrop, Texas

In 2009, Mr. Boswell set up a rehabilitation program for Aqua Water Supply on their 84 steel water tanks. This process included providing and supervising a team of inspectors to collect data on each of the tanks with photos and spread sheet data collection. Corrosion assessment and evaluation of the coating was performed for each of the tanks. The roof hatches, shell manways and ladders were also evaluated for current safety standards. Once the evaluation program was completed, Mr. Boswell set up the priority for each one of the tanks for rehabilitation. Each year a quantity of tanks are placed in the rehabilitation program. He developed Contractor cost analysis and provided Specialist services coating systems for each rehabilitation project. On projects that had Lead based coatings Mr. Boswell provided requirements for removal and disposal of hazardous materials. Due to the quantity of Aqua Tanks this rehabilitation program will go far beyond the year of 2030.

Mr. Boswell was called upon by Aqua Water Supply to personally evaluate specific tanks in their systems that were subjected to extreme heat from the fires in Bastrop County in September of 2011.

Holly Creek Water Treatment Plant, City of Ft. Worth, Texas

Mr. Boswell managed the evaluation, and design phases for a rehabilitation project for the Treatment Plant that included evaluations of a 600,000 gallon water storage tank and lime silos. The coating on the Lime Solos was Lead based and required abatement as a hazardous material during the removal and disposal process. Mr. Boswell provided requirements for removal of the Lead based coating. Mr. Boswell managed the Owner's team on this project. During the construction and painting phases, Mr. Boswell provided Specialist services to the Owner, the Design Team, the Testing and Inspection Team and the Contractor.

Westland Ground Storage Tank, City of Ft. Worth, Texas

Mr. Boswell managed the evaluation, and design phases for rehabilitation of the Westland 6 million gallon water storage tank for the City of Ft. Worth. Mr. Boswell also served as the consultant on this project for coatings, and testing and inspection of the Contractor's work.

Lake Country Elevated Storage Tank, City of Ft. Worth, Texas

Mr. Boswell provided Specialist services for the evaluation, and design phases for rehabilitation of the Lake Country 500,000 gallon elevated water storage tank. The coating on the exterior of the tank was Lead based and required abatement as a hazardous material during the removal

and disposal process. Mr. Boswell provided requirements for removal of the Lead based coating. During the construction and painting phases, Mr. Boswell provided Specialist services to the Owner, the Design Team, the Testing and Inspection Team and the Contractor.

Water Storage Facilities, City of Irving, Texas

Mr. Boswell worked with a team of Engineers for evaluations of 18 water storage tanks in the City of Irving. These evaluations included development of a Capital Improvements Program for rehabilitation and/or replacement of storage tanks if needed.

Water Storage Facilities, Town of Addison, Texas

Mr. Boswell worked with the Owner's team for evaluations of 3 water storage tanks in the Town of Addison. These evaluations include development of a Capital Improvements Program for rehabilitation and/or replacement of storage tanks if needed. Two of the three tanks were concrete (5 million gallons each) and could not be drained of water. Mr. Boswell with a "buddy diver" performed an underwater evaluation of the tanks using SCUBA diving equipment and collected data with still frame photos and video.

Water Storage Facilities, City of Arlington, Texas

Mr. Boswell worked with the Owner's team for evaluations of 3 elevated steel water storage tanks in the City of Arlington. One of the tanks had severely corroded steel members in the roof of the tank. Mr. Boswell provided Specialist Services for repair and replacement of the structural members.

Brazos River Authority

Mr. Boswell has provided coatings inspection, coating failure analysis and corrosion evaluation services on multiple BRA projects that have included, the East Williamson County Water Treatment Plant, East Williamson County Pump Station and Grainger Lake Pump Station.

Pflugerville Lake Pump Station, Pflugerville, Texas

Mr. Boswell provide coating failure analysis and specialist services for corrosion mitigation for the pump cans at the Pump Station and provided inspection and testing for installation of new pump cans at the station.

Training and Mentoring Programs

Mr. Boswell has trained and mentored multiple Owner's teams, other professional staff and inspectors in the practice of identifying corrosion, understanding the cause of corrosion, and inspection and testing of abrasive blasting and recoating of water storage tanks.

Expert Witness Services

Mr. Boswell has provided expert witness services for protective coating failures and for weld failures in weldments.

Continuing Services

Mr. Boswell continues to provide special inspection services on structural steel projects including everything from miscellaneous steel to complex structures.

Mr. Boswell also continues to provide Specialist and Consulting Services to municipalities and water supply corporations for evaluation of water tanks, corrosion mitigation, recoating and improvements to meet regulatory standards, some of which include:

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| City of Austin | City of Edmond, Oklahoma |
| Milam County | Ft. Sill, Oklahoma |

Lee County
Aqua Water Supply
City of Amarillo
City of Waco
City of Dallas
City of Frisco
Town of Flower Mound

Ft. Leavenworth, Kansas
City of Leander
City of Pflugerville
San Antonio Water System
Town of Prosper