



NATIONAL CERTIFIED PIPE WELDING BUREAU



**Tools to reduce the cost
and risk associated with
welding and brazing**



TOOLS TO REDUCE THE COST AND RISK ASSOCIATED

What is the NCPWB?

The National Certified Pipe Welding Bureau (NCPWB) is a subsidiary of the Mechanical Contractors Association of America (MCAA). NCPWB was established to keep contractors informed about welding and brazing technology, and to simplify welding and brazing qualification practices.

Save Time by Using Qualified Welding and Brazing Procedures

As a contractor installing welded and brazed piping systems in accordance with ASME B31 Piping Codes, you are required to have welding and brazing procedure specifications and qualified welders and brazers as required by Section IX of the ASME Boiler and Pressure Vessel Code. Writing and qualifying welding and brazing procedures to meet Section IX requirements is complex and time-consuming. You can save time by utilizing over 100 welding and brazing procedure specifications (WPSs and BPSs) that are qualified to ASME Section IX and are available for immediate use on piping without further qualifications.

Lower Your Cost of Qualifying Welding and Brazing Procedures

Qualifying a WPS or BPS can be expensive, particularly if you are inexperienced in the process. The cost of materials for welding, testing, and completing the paperwork can run thousands of dollars. Should a test specimen fail to meet Section IX requirements, the costs can more than double. NCPWB WPSs and BPSs are already qualified in accordance with Code, and they are also proven by decades of use by NCPWB members.



Reduce Your Risk of Noncompliance

Your risk of noncompliance is reduced because WPSs and BPSs:

- ▶ are written by experts whose primary job is working with ASME Section IX,
- ▶ are reviewed by the entire NPCWB 43-member Technical Committee, and,
- ▶ are reviewed by a third party—Hartford Steam Boiler Insurance and Inspection Agency.

NCPWB procedures have been used successfully by members to make thousands of welds in piping systems from power plants and refineries to heating, air conditioning, and refrigeration systems. You further reduce your risk because NCPWB procedures are submitted for customer review—and typically accepted without comment.

Access Qualified Welders Nationwide

NCPWB works closely with the United Association (UA) in conducting welder qualification testing. This testing is done under a program that is accredited by the Hartford Steam Boiler Insurance and Inspection Agency and is in full compliance with ASME Section IX. Testing has been standardized and test information is stored in a national database, making it easy to find a welder locally. These welders are qualified to use the process and to weld on the materials that a contractor needs for a job.

Access Technical Experts in Welding and Brazing

Members of NCPWB serve on a variety of ASME Committees, including ASME Subcommittee IX, B31.1, B31.3, B31.5, and B31.9. These members are available to answer questions about these codes and to provide guidance on how to comply with them. The NCPWB technical consultant will respond to any questions from customers about the NCPWB WPSs and BPSs. There are 43 local chapters of NCPWB, and each has a designated technical representative who can also provide technical support on welding and brazing.

WITH WELDING AND BRAZING



Access Local and National Educational Programs

NCPWB chapters conduct a variety of educational seminars for your management staff. At the national level, NCPWB offers a variety of welding guides and publications, including the popular *NCPWB Welding Talks*, as well as an annual Technical Committee meeting that provides a forum for you to discuss technical issues and keep abreast of ever-changing code requirements.

NCPWB Offers Over 100 WPSs and BPSs to its Members

The WPSs cover processes such as Gas Tungsten Arc Welding (GTAW), commonly known as TIG or Heliarc; Gas Metal Arc Welding (GMAW), commonly known as MIG; Shielded Metal Arc Welding (SMAW), commonly known as stick; and Flux Cored Arc Welding (FCAW). The WPSs are qualified for welding carbon steel, low alloy steel (including Cr-Mo and nickel alloy steels), stainless steels (types 304, 304L, 316, etc.), aluminum, copper nickel, nickel alloys, and even titanium and dissimilar metal combinations. In addition, NCPWB has BPSs covering copper, steel, and combinations of these metals and copper alloy brazing for medical gas installations. See www.mcaa.org/ncpwb/wps for a complete list of WPS/BPS.

What is a Welding Procedure Specification (WPS)

A WPS is a written document that provides detailed instructions to the welder about how to make a weld. These instructions cover the permitted base metals, the welding process, the filler metals or electrodes, preheat, postweld heat treatment, etc. Prior to use of a WPS, a test piece has to be welded following the instructions on the WPS. Once the test specimen passes certain mechanical tests, that WPS is “qualified in accordance with the Code.”

What is Certified Welding?

The term “Certified Welding” is widely misunderstood. Certified welding requires that three conditions be fulfilled:

- 1) The WPS has been written to address specific requirements of ASME Section IX and that WPS has been qualified as described above.
- 2) Welders who make production welds have been tested following a qualified WPS, including all of the variables specified by that WPS.
- 3) All qualification records have been signed by a contractor “certifying” that welding of test pieces was done in accordance with the requirements of ASME Section IX.

Cost of Membership

Initiation into NCPWB is \$250, with annual dues of \$475, plus local chapter fees if applicable. These costs are quickly recovered by hiring one or two welders who have already been tested under the joint UA/NCPWB program.

For more information on NCPWB, please contact Dariush (Nick) Nikpourfard at nnikpourfard@mcaa.org or by phone at 301-990-2211.

**Learn more about NCPWB membership
by contacting your local NCPWB chapter listed at
www.mcaa.org/ncpwb/NCPWB_Contacts.pdf.**

**Or, you may contact NCPWB Executive Director Dariush
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