

THE CODE & COMMON ARC

Assuring Integrity While Bringing
Efficiencies to
American Industry

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Common Arc

What Is Common Arc?

- ▣ Formed by NACBE – January 1988
- ▣ Not-for-profit corporation formed to:
 - Foster and advance interests of Construction BM employers
 - Promote and further high standards and quality of construction industry welders
 - Develop and maintain voluntary system for certifying welders
 - Collect and distribute information regarding certification status of welders (i.e., continuity)

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- ▣ Managed by a Board of Directors
- ▣ Executive Administrator – day-to-day operations
- ▣ Committees assisting BOD and Executive Administrator
 - Executive Committee
 - Operating Committee

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How Did It Get Started?

- ▣ Mid 1980s – Owners, contractors, Boilermakers met to discuss ways to increase efficiencies
- ▣ Agreed that , with cooperation by all, multiple test sessions and maintenance of welder continuity was doable and would benefit all

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The NBIC and ASME Code

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The Code - Can You Do That?

- ▣ It's new! It must not be allowed!
- ▣ 1986 - The National Board was consulted and advised that "it isn't prohibited"
- ▣ Process initially restricted to repairs performed in accordance with the NBIC

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1986 – BPV IX substantiates National Board's Opinion - Issues Interpretation IX-86-25

Question (1): Per QW-300.2, may several contractors simultaneously conduct the performance qualification test(s) of a welder?

Reply (1): Section IX does not address this situation.

Question (2): Per QW-301.2, may a welder simultaneously weld performance qualification test coupons in accordance with the Welding Procedure Specification of several contractors when only the essential variables are documented as equivalent?

Reply (2): Section IX does not address this situation.

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1989 – BPV I supports process for Section I Construction - Issues Interpretation I-89-50

Question (1): In accordance with PW-28 and PW-1.2, can several contractors or assemblers simultaneously conduct performance qualification test(s) of a welder?

Reply (1): Yes.

Question (2): In accordance with PW-28 and PW-1.2, can a welder simultaneously weld performance qualification test coupons in accordance with Welding Procedure Specifications of several contractors or assemblers when the essential variables are documented as identical?

Reply (2): Yes.

Process used for Section I construction and alterations and repairs performed in accordance with the NBIC

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The Code - Yes, You Can Do That

1992 – BPV IX revises Section IX, QW-300.3

- Rules for simultaneous testing established
- WPS essential variables to be identical except for pre- and post-heat treatment
- A single WPS may be used – contractors must have supporting PQR
- When welder changes employers, new employer must verify continuity has been maintained
- When a welder's qualification is revoked by a contractor, other participating contractors to be advised

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Assuring Integrity

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- ▣ The Code established rules, thus a level playing field.
- ▣ How is conformance to the rules and program integrity assured?

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Each Participating Contractor:

- Signs agreement to abide by the program requirements
- Certifies having a written QC system with provisions for assuring welder qualification and maintenance conform to ASME Code, Section IX

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Each Participating Contractor:

- Has a NB or ASME Certificate of Authorization
 - Copy of current CoA maintained on file
 - NB and ASME assure conformance with triennial reviews and renewal of CoA

Or;

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- Contractor has an ISO program certified by a registrar recognized by the Registrar Accreditation Board
 - Copy of current certificate maintained on file
 - Registrar assures conformance via periodic reviews and recertification

Or;

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- Contractor has a 10CFR50 Appendix B quality program addressing welding control in accordance with ASME Code, Section IX
 - Copy of portion of program addressing welding control maintained on file
 - Program reviewed and accepted by AIA selected by Operating Committee
 - Copy of AIA approval letter maintained on file

Or;

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- Contractor has a written QC system meeting the program requirements and addressing welding control in accordance with ASME Code, Section IX
 - Contractor's program audited on a triennial basis by an AIA selected by the Operating Committee
 - AIA audit report maintained on file

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Test Session Proctors

- About 30 Proctors report to the Executive Administrator
- Provide orientation and instructions to the contractors and welders
- Assure adequate equipment and supplies are available
- Monitor process to assure witness points observed, test coupon identity and traceability, completion of paperwork, etc.

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Internal Reviews

- Periodic reviews and assessments of multiple test sessions performed by the Operating Committee
- Copy of report maintained on file
- Action to correct deficiencies taken by Executive Administrator

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Annual Program Audit

- Annual audit of program performed by independent team comprised of representatives of
 - Contractor - Lead
 - Jurisdictional Authority
 - Boilermaker
 - Authorized Inspection Agency
- Copy of report maintained on file
- Response to report by Executive Administrator maintained on file

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Efficiencies To American Industry

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- ▣ Over 200 participating contractors
- ▣ Over 12,000 welders in program (over 10,000 of which have both GTAW & SMAW certs)
- ▣ Over 60,000 qualifications maintained

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- ▣ Facilitates compliance with QW-300.3
 - Multiple testing sessions
 - Monthly Welder Qualification Maintenance reports
 - Advise contractors when welder is removed from list by a participant
- ▣ Provides access to records via internet – Host On Demand

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- ▣ Tested 5,216 welders in 2010
- ▣ Costs about \$22.70 to test and \$4.84 to maintain welder qualification the first year
- ▣ Costs about \$4.84 a year to maintain qualification in subsequent years
- ▣ Costs to test at site estimated to be \$865.18 per qualification test

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What is the actual impact to a project through utilizing a Contractor participating in the Common Arc program?

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Typical Project: 200,000 Man-hours
(\$10 million in Payroll Cost at \$50/mh)

100 Boilermakers:
40 hours per week for
50 weeks

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Crew: 100 Boilermakers

Consisting of:
55 Mechanics and Supervision
45 Welders

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Without Common Arc

- Test on Jobsite
Welder Passing Rate (current about 47.5%)
would require testing 95 welders to
certify 45.
- \$865.00 per test x 95 welders = \$82,175

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Without Common Arc

\$82,175.00

760 hours lost production

With Common Arc

\$ 0

0 hours

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Moving forward

- Continue assisting industry in testing and maintaining qualified welders by facilitating compliance to Section IX rules
- Program integrity maintained via internal and external conformity assessment practices
- On-going efficiencies to industry benefiting participating contractors, welders and owners
- 11 multiple testing sessions already schedule for 2011- 45 expected for year

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