



U.S. Department  
of Transportation

Pipeline and Hazardous Materials  
Safety Administration

1200 New Jersey Avenue SE  
Washington DC 20590

FEB 07 2019

Mr. John P. Maitino  
Regulatory Compliance Manager  
Praxair  
200 Strang Road  
LaPorte, TX 77571

Dear Mr. Maitino:

In an August 10, 2018, letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), you requested an interpretation of 49 Code of Federal Regulations (CFR) Part 192. Specifically, you requested interpretation for welding requirements under § 192.225.

You stated Praxair currently utilizes a Praxair-owned Welding Standard (W-40) that requires the contract welder to meet certain requirements before they are qualified to weld on a Praxair Hydrogen pipeline. You listed electrode and rod types and standards, stated the welding procedure, and stated how welders would be qualified.

You seek an interpretation whether § 192.225 requires Praxair to have its own written welding procedures or whether it is adequate to ensure that the qualified welder has compliant welding procedures if the welder meets the standards you listed in your request.

Section 192.225 is specific in its requirements. The section states:

**§ 192.225 Welding procedures.**

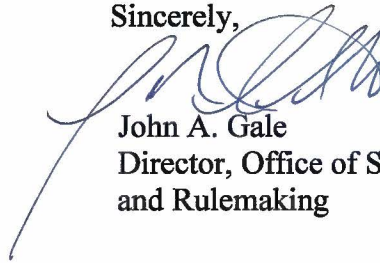
(a) Welding must be performed by a qualified welder or welding operator in accordance with welding procedures qualified under section 5, section 12, Appendix A or Appendix B of API Std 1104 (incorporated by reference, *see* § 192.7), or section IX of the ASME Boiler and Pressure Vessel Code (ASME BPVC) (incorporated by reference, *see* § 192.7) to produce welds meeting the requirements of this subpart. The quality of the test welds used to qualify welding procedures must be determined by destructive testing in accordance with the applicable welding standard(s).

(b) Each welding procedure must be recorded in detail, including the results of the qualifying tests. This record must be retained and followed whenever the procedure is used.

The pipeline operator is required by § 192.225(a) to require welding using welding procedures qualified under one of the specified standards for a qualified welder or welding operator. Also, § 192.225(b) requires the pipeline operator to retain welding records and written welding procedures. Therefore, at a minimum, it is Praxair's responsibility, as pipeline operator, to keep welding written procedures and records.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

A handwritten signature in blue ink, appearing to read 'John A. Gale', is written over the typed name and title.

John A. Gale  
Director, Office of Standards  
and Rulemaking



HYCO Operations

AUG 10 2018

200 Strang Road  
LaPorte, TX 77571  
Phone – (281) 478-1944  
Fax – (281) 478-1937

August 10, 2018

Alan Mayberry  
Associate Administrator for Pipeline Safety  
U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration  
1200 New Jersey Avenue, SE  
Second Floor, East Building  
Washington, DC 20590

Re: Request for Interpretation

Dear Sir:

Praxair, respectfully submits this Request for Interpretation from the Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety pursuant to 49 C.F.R. § 192.225.

## **I. Background**

Praxair current utilizes a Praxair owned Welding Standard (W-40) that requires the contract welder to meet the requirements noted below before they are qualified to weld on a Praxair Hydrogen pipeline.

**Excerpts from Praxair W-40 “Welding of Cross Country Pipelines in Hydrogen Service in Compliance with ASME B31.8”.**

### **Sec. 2.0 Applicable Documents and Standards**

The applicable design codes will be specified in the contract documents. Only US codes are listed below. Local codes and standards may be used, provided the Praxair Pressure Vessel Consultant evaluates these codes and standards and provides written confirmation that they are equivalent to the codes listed below.

- MPS-103, High Strength Pipeline Welding Fittings for High Pressure Hydrogen Service
- API Specification 5L, Specification for Line Pipe
- API Standard 1104, Welding of Pipelines and Related Facilities
- ASME B31.8, Gas Transmission and Distribution Piping Systems
- ASME B31.12, Hydrogen Piping and Pipelines



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- ASME Code, Section IX – Welding and Brazing Qualifications
- AWS Specifications:
  - AWS A5.1, Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding
  - AWS A5.4, Specification for Stainless Steel Electrodes for Shielded Metal Arc Welding
  - AWS A5.5, Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding
  - AWS A5.9, Specification for Bare Stainless Steel Welding Electrodes and Rods
  - AWS A5.18, Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding
- DOT Title 49, Part 192 - Transportation of Natural and Other Gas by Pipeline: Minimum Safety Standards
- NACE MR0175/ISO 15156-1, General Principles for Selection of Cracking-Resistant Materials

#### **Sec. 4.1 Welding Procedure Qualification**

Weld Procedure Specifications (WPS) shall be qualified in accordance with API Standard 1104 or ASME Code, Section IX. The Procedure Qualification Record (PQR) shall meet requirements in Sections 6.5 and 6.6 in this Standard for hardness and for toughness, respectively, or as defined in the construction specification. A WPS template is found in Attachment 1. This form or a form meeting all ASME requirements and also of this Standard shall be completed. The weld procedure shall be qualified before the start of construction. If standard ASME formatted WPS are submitted, they shall include the line-up clamp information required in Section 6.3 of this Standard and time limit between root and hot passes in Section 6.4. This information may be included as an addendum to the WPS. Welding procedures shall be qualified by an independent testing laboratory or by Praxair at Praxair's option. The testing laboratory shall be employed and paid for by the contractor and shall be approved by Praxair. WPSs and PQRs shall be submitted to Praxair for approval two weeks before the start of any welding.

#### **Sec. 4.2 Welder Qualification**

Welders shall be qualified by Praxair or a testing laboratory in accordance with API Standard 1104 or ASME Code, Section IX, as defined in the construction specification for the qualified welding procedure. Limitations on welder qualifications shall also include the requirements of DOT Title 49, Part 192.229. A weld test report found in Attachment 2 shall be transmitted to Praxair before the start of the construction. A report shall be completed for each welder and the applicable welding procedure followed. Welder qualifications shall be performed using mechanical destruction testing. The contractor shall provide the necessary pipe for welder qualification. The testing laboratory shall be employed and paid for by the contractor and shall be approved by Praxair.



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## II. Request for Interpretation

We believe the standard described above meets the requirements of 49 C.F.R. §192.225. By this request, Praxair seeks interpretation from the Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety as to whether §192.225 requires the operator (Praxair) to have its own written welding procedures or whether it is adequate to ensure that the qualified welder has compliant welding procedures..

Praxair respectfully requests that the Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety issue an interpretation regarding this question so that we can ensure that Praxair is fully compliant.

Thank you for your attention to this matter. Please contact the under signed if you have any questions or require further information.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John P. Maitino", written over a horizontal line.

John P. Maitino  
Regulatory Compliance Manager  
200 Strang Road  
LaPorte, TX 77571  
Phone: 281-478-1944  
Email: john\_maitino@praxair.com

cc: