



# Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications



**AWS D18.3/D18.3M:2015**  
**An American National Standard**

**Approved by the**  
**American National Standards Institute**  
**August 21, 2015**

**Specification for**  
**Welding of Tanks, Vessels,**  
**and Other Equipment in**  
**Sanitary (Hygienic) Applications**

**2nd Edition**

**Supersedes AWS D18.3/D18.3M:2005**

Prepared by the  
American Welding Society (AWS) D18 Committee on Welding in Sanitary Applications

Under the Direction of the  
AWS Technical Activities Committee

Approved by the  
AWS Board of Directors

## **Abstract**

This specification provides the requirements for welding of tanks, vessels, and other equipment used in food processing plants and other areas where sanitary (hygienic) applications are required. The document addresses qualification, fabrication, extent of visual examination, acceptance criteria, and documentation requirements.



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This standard is subject to revision at any time by the AWS D18 Committee on Welding in Sanitary Applications. It must be reviewed every five years, and if not revised, it must be either reaffirmed or withdrawn. Comments (recommendations, additions, or deletions) and any pertinent data that may be of use in improving this standard are required and should be addressed to AWS Headquarters. Such comments will receive careful consideration by the AWS D18 Committee on Welding in Sanitary Applications and the author of the comments will be informed of the Committee's response to the comments. Guests are invited to attend all meetings of the AWS D18 Committee on Welding in Sanitary Applications to express their comments verbally. Procedures for appeal of an adverse decision concerning all such comments are provided in the Rules of Operation of the Technical Activities Committee. A copy of these Rules can be obtained from the American Welding Society, 8669 NW 36 St, # 130, Miami, FL 33166.

## Dedication

The D18 Committee on Welding in Sanitary Applications dedicates this edition of the D18.3/D18.3M:2015, *Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications*, to Mr. Richard Smith, a charter member of the D18 Committee from its inception in 1995. Dick was a true friend and advocate of the American Welding Society and the sanitary industry. His dedicated efforts did much to advance the art and science of welding stainless steel materials for the food processing industry. He enthusiastically contributed to the three D18 specifications, including AWS D18.1, *Specification for Welding of Austenitic Stainless Steel Tube and Pipe Systems in Sanitary (Hygienic) Applications*, AWS D18.2, *Guide to Weld Discoloration Levels on Inside of Austenitic Stainless Steel Tube*, and AWS D18.3, *Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications*. The D18 Committee remembers Dick's wisdom and efforts with appreciation.

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## Foreword

This foreword is not part of AWS D18.3/D18.3M:2015, *Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications*, but is included for informational purposes only.

The formation of the D18 Committee was approved in October and November 1995 by the Technical Activities Committee and the Board of Directors, respectively. The Committee was formed to respond to the request of the 3-A Sanitary Standards Committee (now the 3-A Sanitary Standards, Inc. or 3-A SSI)<sup>1</sup> for help in preparing welding standards for use in the manufacture and construction of dairy and food product processing plants. The 3-A SSI develops sanitary design standards for dairy and food processing, packaging, and handling equipment and systems. Several members of the Committee are active members of 3-A SSI, and the Committee has maintained liaison with 3-A SSI.

This is the second edition of the D18.3/D18.3M specification and supersedes AWS D18.3/D18.3M:2005, *Specification for Welding of Tanks, Vessels, and Other Equipment in Sanitary (Hygienic) Applications*. This specification was prepared because a need was seen by the D18 Committee to address welding issues on tanks, vessels, and other equipment in sanitary applications not addressed by D18.1, *Specification for Welding Austenitic Stainless Steel Tube and Pipe Systems in Sanitary (Hygienic) Applications*.

A vertical line in the margin or underlined text in clauses, tables, or figures indicates an editorial or technical change from the 2005 edition. The following is a summary of the most relevant revisions to the D18.3/D18.3M specification:

- The scope was clarified to point out that applicable portions could be used as needed.
- Several definitions, figures and text were changed to more closely align with AWS A3.0M/A3.0, *Standard Welding Terms and Definitions* and AWS D1.6/D1.6M, *Structural Welding Code—Stainless Steel*.
- Welding procedure qualification requirements and sample forms were changed to be more consistent with AWS B2.1/B2.1M, *Specification for Welding Procedure and Performance Qualification*, where possible.
- Qualification and verification variables for Procedure Qualifications in Table 1 were modified to eliminate overlap with AWS B2.1/B2.1M.
- The essential and nonessential variables for performance qualification in the first edition were eliminated and performance qualification is now totally in accordance with AWS B2.1/B2.1M.
- Several metric conversions were harmonized to current AWS guidelines.

### SUGGESTIONS

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS D18 Committee on Welding in Sanitary Applications, American Welding Society, 8669 NW 36 St, # 130, Miami, FL 33166.

<sup>1</sup> 3-A standards are published by 3-A Sanitary Standards Inc., 6888 Elm Street, Suite 2D, McLean, Virginia, USA 22101.

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