

FORM Q-106
RECOMMENDED FORM FOR QUALIFYING THE VESSEL DESIGN AND THE PROCEDURE
SPECIFICATION USED IN FABRICATING BAG-MOLDED AND CENTRIFUGALLY CAST
FIBER-REINFORCED PLASTIC PRESSURE VESSELS (CLASS I)
(Revision C — 2017)

Specification No. _____ Process _____

A change in any of the essential variables denoted by an asterisk below requires a new Procedure Specification.

*Fiberglass _____
(Manufacturer and Designation)

*Sizing _____
(Manufacturer and Designation)

Form of Reinforcement _____
(Cut Strand, Mats, or Preforms)

Binder for Mats and Preforms _____
(Polyester Emulsion, Polyester in Alcohol, Polyester Powder, etc.)

Weight of Binder _____ Solubility _____
(Percent) (High or Low Resistance to Styrene)

Mats _____
(oz/sq ft; 1¹/₂, 2, 3) (gr/m²; 450, 600, 900)

Preforms _____
(Weight of Binder)

*Resin _____
(Type, Manufacturer, and Designation)

*Curing Agent _____
(Type, Manufacturer, and Designation)

Viscosity of Resin System _____

*Cure

Mandrel _____
(Time) (Temperature) (Pressure)

Mold _____
(Time) (Temperature) (Pressure)

*Post Cure

Furnace _____
(Time) (Temperature)

*Percent Glass in Composite _____

Specific Gravity of Composite (ASTM D 792) _____

*Initial Bag Pressure _____

*Final Bag Pressure _____

Resin Injection Pressure _____

*Weight of Vessel _____

*Barcol Hardnesses and Location _____

Temperature During Lay-up _____

Pumping Procedure _____

FORM Q-106 (CONT'D)
(Revision C — 2017)

*Volumetric Expansion _____ in.³ (mm³)

*Mandrel Rotation, rpm (Centrifugal Casting) _____

Liner _____
(Material) _____ (Thickness)

Qualification

Vessel(s) Serial Number(s) _____

Design Report Number _____

Test Report Number _____

ASME Section X _____
Edition and Addenda (if applicable) Date _____ Code Case No. _____

We certify that the statements made in this Specification are correct.

Date _____ Signed _____
(Fabricator)

By _____

Certificate of Authorization No. _____ Expires _____

**CERTIFICATION BY SHOP INSPECTOR
OF QUALIFICATION OF DESIGN AND FABRICATION PROCEDURE**

Procedure Specification of _____ at _____
for _____ process of fabricating vessel(s) described in
_____ Design Specification and _____
(User) _____ (Fabricator)
_____ Design Report Number _____

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____ of _____ have witnessed the tests by which the design of the vessel(s) and the fabrication procedure have been qualified and state that, to the best of my knowledge and belief, these tests of the prototype vessel(s) and the fabrication procedure employed in constructing the vessel(s) satisfy the requirements of Section X of the ASME BOILER AND PRESSURE VESSEL CODE, Fiber-Reinforced Plastic Pressure Vessels.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the design or procedure covered by the Fabricator's Design Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or loss of any kind arising from or connected with this inspection.

Date _____ Commission _____
(National Board Authorized Inspector Number)

(Authorized Inspector's Signature)