



FTPI RP 2007-1 Recommended Practice for the In-service Inspections of Aboveground Atmospheric Fiberglass Reinforced Plastic (FRP) Tanks and Vessels ©

The Fiberglass Tank & Pipe Institute has published FTPI 2007-1 Recommended Practice for the In-service Inspections of Aboveground Atmospheric Fiberglass Reinforced Plastic (FRP) Tanks and Vessels©. This Recommended Practice was developed over three years in response to requests by aboveground fiberglass tank users, engineering companies and governmental bodies. Members of the Institute and an industry peer review group have shared their fabrication, operation and maintenance expertise on aboveground fiberglass tank in corrosion resistant applications to make this publication possible.

The Institute was incorporated in 1987 as a non-profit organization. Its purpose is to provide a forum through which the fiberglass reinforced thermoset plastic (FRP) industry can work together effectively toward the common goal of advancing the use of all fiberglass products in the tank and piping marketplace, i.e., coordinating studies and statistics, combining talents and resources to provide standard-setting organizations with superior technical data, and disseminate information to the government, industry and the public.

The Recommended Practice peer review group included the Environmental Protection Agency US Office of Emergency Management; N. Y. State Dept. of Environmental Conservation Spill Response & Bulk Storage Tank Section, Lyondell Chemical Inc., two fiberglass Inspection companies, three fiberglass Consultants and Engineering companies and both Institute and non-Institute aboveground fiberglass tank manufacturers.

FTPI 2007-1: The Recommended Practice is a 27 page document that includes recommended inspector qualifications, periodic preventive maintenance inspections, certified external inspections, certified integrity inspections, internal inspections and alternate non-intrusive inspection methods. The document also includes report forms for monthly, annual and periodic preventive maintenance and certified inspections and a section on aboveground fiberglass tank fabrication information.

The purpose of this Recommended Practice is to provide procedures for conducting periodic preventive maintenance (PM) inspections and certified inspections of fiberglass reinforced plastic (FRP) atmospheric tanks and vessels in corrosive industrial and commercial service after a set period of time and when there is a change of service. The procedures are intended to:

- minimize maintenance costs,
- ensure compliance with environmental and safety requirements,
- minimize system failures and
- ensure that proper engineering, construction and maintenance practices are in place.

PM Inspections: The Preventive Maintenance inspections are required to document tank or vessel inspections in written reports using where applicable the minimum information included in FTPI 2007-1 standardized check lists. In addition, the reports shall contain conclusions, recommendations and supplemental sketches with dimensions and/or photographs. The photographs shall have a minimum resolution of 3 mega pixels with the photograph locations identified.

PM Inspector Qualifications: The Preventive Maintenance (PM) inspector shall be a person familiar with the equipment to be inspected, this FTPI 2007-1 Recommended Practice, and is designated by the equipment owner or operator. Periodic preventive maintenance tank and vessel inspections are the process of ongoing data collection through exterior inspections using investigative tools and methods. The inspection data should be documented in a manner that provides for a long-term trend evaluation.

Qualified inspectors shall have education and experience equal to at least one of the following:

- a. A degree in engineering plus one year of experience in the inspection of FRP tanks or vessels.
- b. A 2-year certificate in engineering or technology from a technical college, and two years of experience in manufacturing, repair, operation or inspection of FRP tanks or vessels manufactured in accordance with applicable standards or codes.
- c. The equivalent of a high school education, and three years of experience in manufacturing, repair, operation or inspection of FRP tanks or vessels manufactured in accordance with applicable standards or codes.

Certified External Inspections: Certified external tank and vessel inspections shall be performed by a certified tank or vessel inspector as follows:

- every 5 years for tanks or vessels in Hazardous Substance service, or
- every 10 years for tanks/vessels greater than 10,000 gallons capacity and in other service, or

- if evidence of material stress appears, or
- tank or vessel leaks occur, or
- before there is a change in service to a dissimilar stored material, or
- if a tank or vessel is relocated.

Certified Integrity Inspections: Certified integrity tank and vessel inspections shall be performed by a certified tank or vessel inspector as follows:

- every 20 years for tanks/vessels in Hazardous Substance service, or
- every 20 years for tanks/vessels greater than 10,000 gallons capacity and in other service, or
- if evidence of material stress appears, or
- tank or vessel leaks occur, or
- before there is a change in service to a dissimilar stored material. or
- if a tank or vessel is relocated.

Certified Inspector Report: The report of Certified Inspections shall be delivered to the owner. These reports shall include the inspector's recommendations, which shall include one or more of the following:

1. No remedial action
2. Further investigation or analysis
3. Repairs
4. Changes in tank or vessel operation
5. Replacement

FTPI RP 2007-1 Applications and Availability: Recommended Practice FTPI 2007-1 may be used for the inspection of aboveground fiberglass tanks or vessels in Animal Fats, Vegetable Oil (AFVO) oily water, or other materials subject to the SPCC Rule or in Hazardous Substance service. Those interested in purchasing a copy of the FTPI 2007-1 Recommended Practice for the In-service Inspections of Aboveground Atmospheric Fiberglass Reinforced Plastic Tanks and Vessels by credit card via the download link: http://www.storagetanks.info/fiberglass_tank_inspection_rp.html