



UL FUS Procedure





File MH60306

Vol 1

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Issued: 2014-07-31

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FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

ABOVEGROUND FLAMMABLE-LIQUID TANKS
(EEEV)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

Applicant: 1088582 (Party Site)
Watkins Metal Fabrication Inc
PO Box 1268
Mineral Wells TX 76068

Listee/Classified Co.: 1088582 (Party Site)
SAME AS APPLICANT

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party and any applicable Service Terms. The UL Contracting Party for Follow-Up Services is listed on addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

UL further defines responsibilities, duties and requirements for both Manufacturers and UL representatives in the document titled, "UL Mark Surveillance Requirements" that can be located at the following web-site: <http://www.ul.com/fus> and in the document titled "UL and Subscriber Responsibilities" that can be located at the following website: <http://www.ul.com/responsibilities>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the applicable Service Terms, please contact UL's Customer Service at <http://www.ul.com/global/eng/pages/corporate/contactus>, select a location and enter your request, or call the number listed for that location.

The Applicant, the specified Manufacturer(s) and any Listee/Classified Co. in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable agreement is a Global Services Agreement ("GSA") with an effective date of January 1, 2012 or later and this Follow-Up Service Procedure is issued on or after that effective date, the Applicant, the specified Manufacturer(s) and any Listee/Classified Co. will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of use of the prescribed UL Mark, acceptance of the factory inspection, or payment of the Follow-Up Service fees which will incorporate such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking here: <http://www.ul.com/contracts/Terms-After-12-31-2011>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

It is the responsibility of the Listee/Classified Co. to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

This Follow-Up Service Procedure contains information for the use of the above Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Manufacturer with the understanding that it will be returned upon request and is not to be copied in whole or in part.

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the above named Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

UL LLC has signed below solely in its capacity as the accredited entity to indicate that this Follow-Up Service Procedure is in compliance with the accreditation requirements.

William R. Carney
Director
North American Certification Program

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Authorization Page Revised: 2014-08-12

LOCATION

1120832 (Party Site)
WATKINS METAL FABRICATION INC
544 Grant Rd
Mineral Wells TX 76067

Factory ID: None
UL Contracting Party for above site is: UL LLC

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Models	Section	Report Date
Aboveground tank for flammable liquids. (Single wall vertical cylindrical tanks)	1	2014-07-31

ISSUED: 2011-03-28
REVISED: 2012-01-01

STANDARDIZED APPENDIX PAGES
SUBJECT 142

ABOVEGROUND FLAMMABLE LIQUIDS TANKS (EEEV)

ABOVEGROUND FLAMMABLE LIQUIDS TANKS CERTIFIED for CANADA (EEEV7)

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STANDARDIZED APPENDIX PAGE (SAP)
Controlled Document: Direct Request for Revision to PDE for Category

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**ABOVEGROUND FLAMMABLE LIQUID TANKS (EEEV)
ABOVEGROUND FLAMMABLE LIQUID TANKS CERTIFIED FOR CANADA (EEEV7)**

**APPENDIX A - FIELD REPRESENTATIVE'S RESPONSIBILITIES AND INSTRUCTIONS FOR
EXAMINATION OF PRODUCTS**

I FIELD REPRESENTATIVE'S RESPONSIBILITIES

The Field Representative's responsibilities include, but are not limited to:

- A.** Examine the construction of all tanks bearing, or intended to bear, the UL Mark or Markings to determine compliance with the product description and any other requirements expressed in this Procedure.
- B.** Where so specified by Appendix B, select samples to be forwarded to the appropriate UL Testing Laboratory for Follow-Up Tests. The packaging and shipment of samples are the responsibility of the manufacturer.
- C.** Where so specified by Appendix C, take action on non-complying test results of samples forwarded per Appendix B to the UL Testing Laboratory in accordance with the FUS Sample Testing Manual.
- D.** Where so specified by Appendix D, inspect the test records and facilities of the manufacturer to verify that:
 - 1. The proper number of samples are undergoing the required tests,
 - 2. The required tests are being performed correctly and appropriate records are maintained,
 - 3. The proper sample and test information are being recorded and is up-to-date,
 - 4. The instruments being used for the tests have been calibrated at the prescribed interval and are in good working order.

II PROCEDURE IN THE EVENT OF NONCONFORMANCE

- A.** When a product does not comply with the Follow Up Service Procedure requirements, the Field Representative shall report the nonconformance to the manufacturer by means of a Variation Notice (VN), and shall also explain to the manufacturer that a VN is a means of communication with the manufacturer and forms a record of those items where nonconformance with the Procedure has been encountered.
- B.** Following notification and explanation of the nonconformance, the manufacturer shall implement appropriate actions to address the nonconformance and respond to the VN.

Details of the above VN responsibilities, processes and actions are outlined in the "UL Variation Notice and Corrective Action Requirements" document available on UL's website at: www.ul.com/fieldservices/requirements.html

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III SPECIAL INSTRUCTIONS FOR STEEL TANKS

A. The Field Representative shall pay particular attention to the critical items and/or perform special tasks related to inspection of steel tanks as described below:

1. Periodically witness (at least one shipment/year) manufacturer measurement and acceptance procedures of incoming steel plate and pipe stock as described in Appendix D - Steel Stock Verification.
2. Periodically witness (at least one test/year) manufacturer production tests on completely fabricated tanks as described in Appendix D - Tank Production Tests.
3. Periodically review (at least once/year) manufacturer records for 3rd party verification of a certified welding procedure, and qualification and/or training of each welder working on tanks intended to bear the cUL or cULus Marks for compliance with ULC-S601 Sec 3.3.

Manufacturers shall have specifications and procedures to ensure that welders are trained and qualified. Records to verify each welder's qualifications shall be acceptable if 3rd party approved by any one of the following or their equivalents:

- a) American Welding Society (AWS) for AWS B2.1 Weld Procedure Specification and D Series Structural Codes,
- b) American Society of Mechanical Engineers (ASME) for ASME Sec 8 Pressure Vessels "U" or "H" Stamps,
- c) American Society of Mechanical Engineers (ASME) for ASME IX
- d) Canadian Welding Bureau (CWB) for CSA W47.1 Div 2 or 3,
- e) Alberta Boiler Safety Association (ABSA),
- f) Technical Safety Standards Association (TSSA),
- g) Mechanical Contractors Association of America,
- h) A PE who is Licensed for steel tank design,

The manufacturer shall maintain the 3rd party approved welding quality procedures, and a current list of qualified welders along with a copy of applicable Certifications.

In the event there is disagreement between the field representative and manufacture related to compliance of the 3rd party approved welding quality procedures, the VN process shall be used for the UL engineer to assess the procedures and determine compliance.

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B. The Field Representative shall apply the following general guidelines for accessories and components that are shipped attached to or separately from the tank:

1. Tanks are permitted to have either listed or unlisted accessories and/or components attached directly to, or shipped with the tank assembly as follows:

a) Accessories and components that are covered by the Standard (such as tank supports, lift lugs and heating coils) shall comply with all applicable constructions and/or performance requirements, shall be Procedure covered, and shall subject to inspections.

b) Accessories and components that are not covered by the Standard requirements (such as an e-vents, pressure/vacuum vents, overfill prevention devices, leakage monitors, sensors, etc.), shall not be subject to inspection.

c) If tanks are used as a component in construction of a more complex end product (such as generators) at the same manufacturing location, only the tank shall be subject to inspection.

2. Tanks shall be shipped from the manufacturer as a completely assembled unit with all procedure covered mechanical accessories and components attached, except as permitted below:

a) If the complete assembly is too large and/or too heavy for transportation, major accessories (such as access devices, supports, or dikes) may be shipped disassembled from the base tank.

b) If components (such as pressure/vacuum vents, emergency vents, overfill preventers, etc.) could be damaged during transport if assembled to the base tank, they may be shipped disassembled.

c) Where accessories or components are shipped disassembled, assembly instructions, hardware and any other information supplied by the OEM shall be provided.

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APPENDIX B - INSTRUCTIONS FOR FIELD REPRESENTATIVE'S SAMPLE SELECTION

RESERVED FOR FUTURE USE

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APPENDIX C - INSTRUCTIONS FOR FOLLOW-UP TESTS AT UL

RESERVED FOR FUTURE USE

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**APPENDIX D - MANUFACTURER'S RESPONSIBILITIES AND REQUIREMENTS FOR
CONSTRUCTION CONSIDERATIONS AND PRODUCTION TESTS**

The FUS Procedure covering these tanks are loaned to the manufacturer and constitutes the basis on which these tanks are judged for continued Dual Certification compliance. Some construction, marking/instruction and other requirements may reference Standards applicable for the specific tank type, as identified in the Section General or each Descriptive Section.

I MANUFACTURER'S GENERAL RESPONSIBILITIES

The manufacturer's responsibilities include, but are not limited to:

- A. Control of the UL Mark(s) -** Restrict the use of markings that reference UL (either directly by use of name, an abbreviation of it, or the UL symbol, Listing Mark, Classification Mark or Recognized Component Mark, or indirectly by means of agreed-upon markings that are understood to indicate acceptance by UL) to those products that are found by the manufacturer's own inspection to comply with the FUS Procedure description. Use of such markings is further limited by the agreements that have been executed by the Subscriber and UL. Confine the application of markings referencing UL to the location or locations authorized in these Appendix Pages or the FUS Procedure.
- B. Access to Factory -** During hours in which the factory is in operation, provide the Field Representative with free access to any portion of the premises where the product or components thereof are being fabricated, processed, finished or stored, and to the test areas when testing is required in this document. The Field Representative shall be permitted to inspect and witness prescribed tests, prior to shipment, any product bearing or intended to bear markings referencing UL. If product disassembly is required, it shall be undertaken by the manufacturer. Tests required, as part of this Procedure, shall be conducted by the manufacturer.
- C. Corrective Action -** Perform a root cause analysis of nonconforming test results reported by UL in order to determine and implement appropriate corrective actions. Upon request, the manufacturer shall submit findings of their analysis and action plan for review and/or monitoring by UL. For those cases involving questionable test and measuring equipment, the manufacturer shall evaluate and document the equipment effects on previous inspections or tests. The manufacturer shall evaluate if the equipment condition could have significantly affected previous inspection or test results and take corrective action as appropriate. The equipment in question shall be removed from service by segregation or prominent labeling and marking.

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D. Required Records - Maintain records of test performance. Unless indicated otherwise in the Procedure, the information to be recorded should include the model or catalog number, identification of the product, the test conducted, the test date, and the results. The record for a specific lot or group of products may consist only of a statement, without specific details, that the entire lot or group was tested and found acceptable. Generally, a form record sheet should be used to assist in and expedite the record-keeping task. Records are to be retained for at least 12 months and shall be readily available for review by the Field Representative.

Note: It is not necessary to keep complete test records when 100% production is tested, if the manufacturer has an auditable system in place to confirm production is always subjected to the required tests. Instead, exception reports indicating noncompliance and corrective action should be retained.

E. Samples for Follow-Up Testing at UL - If Appendix B specifies that samples are required to be forwarded to UL for Follow-Up Testing, the manufacturer shall forward the samples selected by the Field Representative, to the specified UL Testing Laboratory, within five working days of the Field Representative's inspection visit. Packaging and shipment of the samples are the responsibility of the manufacturer.

F. Test Equipment and Personnel - Provide, at a convenient location, all required test equipment and facilities and any required personnel for conducting all tests that are to be performed at the factory. These shall be available when needed so that the inspection work can proceed without undue delay.

G. Test and Measuring Equipment and Standards Calibration - All test and measuring instruments required as part of the Follow-Up Services Procedure or used by UL Field Representatives in the conduct of inspection activity at the factory shall be calibrated in accordance with UL's published calibration requirements for manufacturers. The published document is titled, "UL Calibration Requirements: Equipment Used for UL/C-UL/ULC Mark Follow-Up Services", and is available on UL's website at the following address, "www.ul.com/fieldservices/requirements.html". Manufacturers that do not have internet access may obtain the current version from their local UL Customer Service representative in the same manner as other requests for requirements.

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II MANUFACTURER'S SPECIAL RESPONSIBILITIES FOR STEEL TANKS

- A.** Steel Stock Verification - All base stock steel used for the fabrication of certified tanks shall be verified to comply with the material requirements of UL 142 Sec 5.1-5.3, ULC-S601 Sec 3.2.1-3.2.2 and/or other specific steel tank standards referenced in each description for the tank type. Steel Mill Specifications, Bill of Materials or other proof of compliance shall be kept with records for review by the UL Field Representative.
- B.** Steel Thickness Measurement - Acceptance of all steel stocks in a lot for compliance with the minimum thickness requirements for specific tank types and sizes in referenced Standards before welding or coating shall use measurement methods per UL 142 Sec 5.4 and/or ULC-S601 Sec 3.2.3-3.2.4 with a calibrated micrometer accurate to at least 0.0001 in or 0.01 mm.
- C.** The above steel stock verification and thickness determination method shall also be used for acceptance of flanges, pipes, angles, channels or other pre-fabricated complex shapes or forms, or a calibrated caliper accurate to at least 0.001 in or 0.02 mm may be used.

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III MANUFACTURER'S RESPONSIBILITIES FOR TANK PRODUCTION TESTS

A. Tank Production Tests - Conduct all Tank Production Tests in accordance with the referenced test method and basis of acceptability as identified in Table A before painting and application of the UL Mark or other required markings. General information for test methods are specified below:

TABLE A

Sec #	Tank Type	Freq	Production Test	Test Method Reference
1	Primary	100%	Tank Leakage	UL 142 Sec 45 and ULC-S601 Sec 8
2	Secondary	100%	Tank Leakage	UL 142 Sec 45 and ULC-S601 Sec 8
3	Diked	100%	Dike Leakage	UL 142 Sec 46 and ULC-S653 Sec 7

1. Any pressure or vacuum supply source shall have manual or automatic control at the tank, and a safety relief device. The pressure or vacuum shall be determined on the tank by a calibrated gauge with accuracy of +/- 2.0% or better.
2. Unless other alternatives are allowed by the specific Test Method Referenced, the Leakage Test shall be conducted with positive air pressure and a soap/water solution applied to all welded tank joints, welded tank accessories, seams and gaskets.
3. Where vacuum testing is allowed as an alternate interstitial space leak detection method, no loss of vacuum after 30 min @ 5 in Hg (16.9 kPa) or 15 min @ 25 in Hg (84.7 kPa) are the equivalents for every 10 cu ft of interstitial volume.
4. All pressure tests shall be conducted with a calibrated pressure gauge with scale range from 0 to not more than 30 psi (200 kPa) and scale increments of not more than 1.0 psi (5 kPa).
5. All vacuum tests shall be conducted with a calibrated vacuum gauge with scale range from 0 to not less than 30 in Hg (100 kPa) and scale increments of not more than 1.0 in Hg (2.0 kPa).
6. Where pressure or vacuum testing of dike tanks is not possible, a Hydro Load Test where the dike is filled with water to maximum capacity while inspecting joints for leakage is an equivalent.

PRODUCT COVERED:

Aboveground tank for flammable liquids

GENERAL:

The products covered are vertical cylindrical single wall tanks designed for the aboveground storage of flammable and combustible liquids at atmospheric pressure. These tanks are intended for stationary installation and use in accordance with the Flammable and Combustible Liquids Code, NEPA 30; the Standard for installation of Oil Burning Equipment, NFPA 31; and the Standard for Automotive and Marine Service Station Code, NFPA 30A of the National Fire Protection Association.

The tanks are fabricated, inspected and tested for leakage before shipment from the factory as completely assembled vessels.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL indicates investigation to Standard for Safety for Steel Aboveground Tanks for Flammable and Combustible Liquids, 9th edition, with revisions through July 19, 2013.

Note: USL = United States Standards Listed.

REQUIREMENTS:

Details not specifically covered in the descriptive section of this Follow-Up Service Procedure shall conform to the current edition of the Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids, UL 142.

TESTS TO BE CONDUCTED BY THE MANUFACTURER:

Shall be as specified in Section 45 of the Standard.

MARKING:

Method of marking shall be in accordance with the Standard, UL142. If a UL Component Recognized pressure sensitive marking and labeling system label (PGDQ2) is used, it shall be suitable for use when exposed outdoors and to occasional exposure to gasoline when affixed to the appropriate substrate. All tanks provided with the US Listing Mark shall be marked with the following:

1. The manufacturer's name.
2. The following statements:
 - A. "This Tank Is Intended For Stationary Installation Only."
 - B. "This Tank Requires Emergency Relief Venting. Capacity Not Less Than (+) CFH Based on Installation within One Foot of the Tank Top"
(+) - See Table 8.1 of UL 142.
3. The emergency vent openings shall be identified.
4. The Listing Mark of Underwriters Laboratories Inc.

LISTING MARK:

(Label Account 58-2-1)

The Symbol of UL LLC

R

LISTED

ABOVEGROUND TANK FOR FLAMMABLE LIQUIDS

CONSTRUCTION DETAILS:

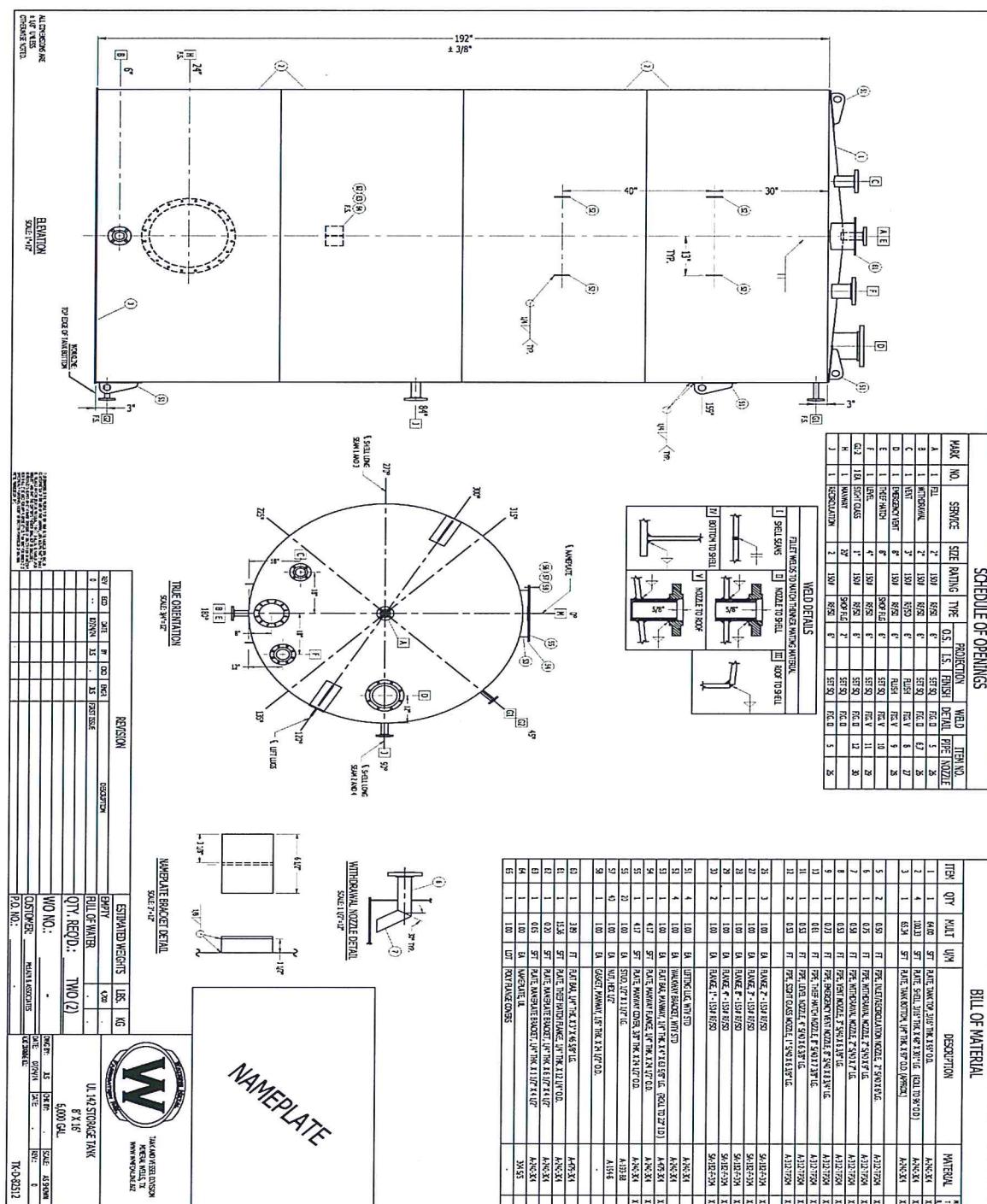
Maximum tank capacity 6020 gallons constructed as per ILL. 1. Minimum wall thickness of tank having capacity is 6020 gallon is 0.167 inches for shell, 0.240 inches for bottom and 0.123 inches for the roof. Tanks of smaller capacity may be construction provided the construction is similar to Ill. 1 and the construction meets the requirements of UL 142.

Gaskets used shall be UL Listed/ Recognized, meeting the requirements of Standard for Gaskets and Seals, UL 157 (CCN -JMST or JMST2) Evaluated/Recognized for Petroleum products and shall not be less than 1/8 inch (3.2 mm) thick.

Joints are described in ILL. 1.

Lifting Lugs are as constructed in Ill. 2. Lugs may be provided on the top and/or side of the tanks as shown in Ill. 1. A minimum of 2 lugs are required. If only 2 lugs are provided, the placement shall be either on the tank top or the shell.

Special constructions such as dikes, rectangular tank, ladders, and runways are not covered for the products described above. If these constructions are authorized, they will be described under supplementary or "Special Construction" sections of this Follow-Up Service Inspection Procedure.



N141189575

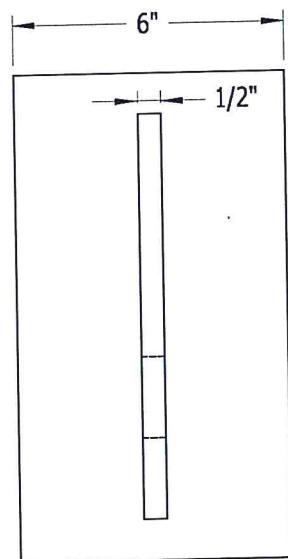
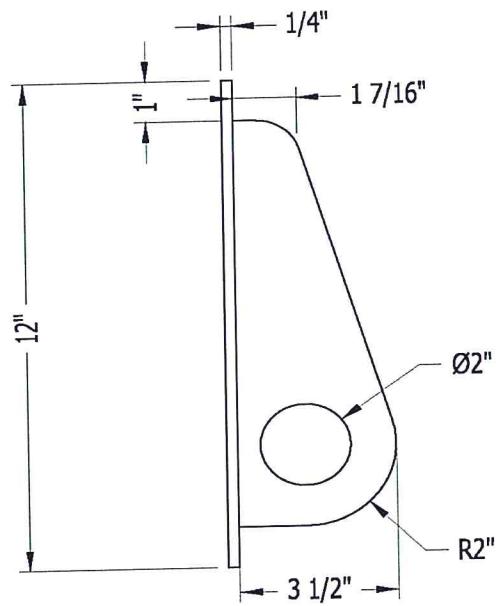
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