LS-LWT – Lineside Water Tower

This kit creates a typical steam-era water tank found alongside many mainline and branchline railroads through the early 1960's. These were typically around 50,000-65.000 gallon capacity. They were often spaced as close as 10 miles apart, especially in areas with steep grades.

Our kit comes in 3 versions - two "Lineside" tanks with 20' diameter tanks holding roughly 50,000 gallons, depending on whether the tank had straight or tapered sides. The third type is a larger, 85,000 gallon capacity that's 25' in diameter and usually found in engine terminals. These instructions apply to all three versions and any differences in construction will be noted when appropriate.

Preparation

Take a moment to familiarize yourself with the parts. Assembly is fairly simple and straightforward.

- Base - Molded in 1 or 4 colors, depending on your selection. The pre-colored base only needs weathering and blending into your layout while the all white base needs to be painted.
    - Base - paint a dirt color or cover with "Clean Dirt"
    - Concrete footers - paint a concrete color
    - Wood framing - paint an appropriate creosoted wood color - brown with black accents.
    - Iron Rods - usually painted black, including the nut/bolt/washers on the outer edge.
- Center Pipe Encloser & Tank - These are always pre-colored and generally need just a dark/dirt wash to accentuate the details.
- Roof - Usually gray, tan, or brown shingles with the black finial at the top.
- Spout - Generally a black color with rust at both ends and some rust along the length.
- Pipe and joint fittings, spout bracket - black, some rust is appropriate
- Ladder and other wood parts - a wood color as appropriate. Any metal parts (rings) would be painted black. **This detail paint is necessary even on a pre-colored model!**
- Refer to the exploded view for proper position and orientation of parts!

Assembly

- Paint the parts as suggested. Any plastic-compatible paint can be used. Be sure to scrape any paint away from surfaces that will be glued!
- We recommend using a good solvent-based liquid cement for joining the floor and wall assembly! Unlike styrene, the PLA material used to produce this kit will not craze when excess glue is applied. Still - apply with a brush or Q-tip to prevent affecting the paint.
- Refer to the exploded view to determine the correct position and orientation of the parts.
- Insert the pipe enclosure into the base and secure with glue at the 4 corners where it meets the base opening.

- Glue the two rings (elbow clamps) an equal distance above and forward of the bend in the discharge pipe using plastic solvent.
- Insert the short end of the pipe into the fitting on the tank support platform but do not glue at this time.
- Apply a drop of cement to the top of each support post, then place the tank support platform on top of the posts, ensuring that it fits over the pipe enclosure. You will need to pay attention to the discharge pipe as it should exit the frame about ¼" below the tank platform. Set aside to allow the glue to cure. If you are assembling the large tank without spouts, skip to the "**Large Tank**" section.
- Locate the roof, valve lever, valve pivot, and valve actuator. You may need to slightly file the two openings in the roof for these parts to fit. The pivot bar (flat bottom) is fixed and should be glued in place after inserting it through the opening. Make sure the slot faces out! If you wish to have the lever function, tie a weight, such as a small nut, to the valve actuator, then press it through the hole in the roof. This part should move freely through the roof opening. Slide the valve lever through both slots with the loop on the outer end facing down, then press a piece of wire through the hole in the actuator lever, securing it the the valve actuator. Note that when the roof is set onto the tank, the bottom of the valve pivot bar will set into the small notch in the tank.
- Return to the support structure and align the discharge pipe end with the end brace - the pipe should just touch the back of this brace. Trim the pipe if necessary, then glue the brace to the pipe and the two front support posts with the small post facing out. Allow this cross brace glue to fully set before proceeding. Apply a drop of glue to the short end of the pipe where it passed through the tank support platform.

- Locate the spout support assembly. This MAY have some support material protecting the spout pivot brackets at the center and two outer edges - these should just pop off with mild pressure. Bend a short piece of wire into an "L" shape (this size!) and thread the long end through the spout pivot brackets and the spout pivot. The short end can be secured to the outside of the spout pivot bracket with a drop of CA applied with a toothpick. The spout should pivot freely after assembly.
    - There is a tiny hole in the spout where the band is about ⅔ from the inlet. Enlarge this hole just enough to accept a piece of fine wire. Bend the end of the wire into a loop and secure the straight end into the hole in the spout with a drop of CA.
    - **The following parts are NOT supplied and will vary from road to road and often by site.**
        - Pass a piece of thread or fine chain roughly 6" long through the eye bolt on the spout and center it on the eye bolt.
        - Pass one end of the chain up and through the ring on the top crossmember of the spout support assembly and let it hang down. Repeat with the other half of the material on the other side.
        - Make sure that both sides are equal in length and attach a weight to the end. Small fishing weights, particularly the round or oval "squeeze-on" type are appropriate.
        - Attach a rope (thread) or fine chain to the loop on the valve lever. The bottom of the rope often had a ring, loop, or a simple knot to improve grip.
- Glue the spout and support assembly to the pin on the discharge pipe end brace, ensuring that the assembly is square and vertical - set aside to dry.
- Place the roof onto the tank, aligning the valve pivot bar with the small notch in the top of the tank rim. Apply some glue to the top of the tank support platform and place the tank onto the platform, ensuring that the tank and roof valve assembly is roughly centered with the spout. It can be 1-2 degrees offset to either side, allowing the rope that controls the lever to pass along side of the spout.
- Glue the ladder to the edge of the roof, near the hatch. It was usually canted at a slight angle.
- Allow all of the glue joints to thoroughly cure - 8-12 hours - before installing on the layout.

Large Tank

The large tank does not have a spout, so the spout and rooftop valve assembly process is eliminated. These tanks usually have one or more standpipes (one included) to serve multiple parallel tracks. Place the tank near your engine facility and install the standpipe along side or between a pair of service tracks.

Glue the tank to the tank support platform - orientation is not important. Place the roof onto the tank. Glue the ladder to the edge of the roof near the hatch.

Detailing

There is (obviously) a lot of water and moisture around this structure. Some ideas for detailing include:

- Green moss texture on the side of the tank and support posts and Gray-Green lichen growing in patches on the roof. Try the sample of Clean Dirt to add texture to the wet paint,
- Rust on metal parts, especially the spout and discharge pipe/plate.
- Wet spots on the ground, especially under the tank and the spout area. A darker color of paint than the ballast can color the ballast to make it appear wet, and a bit of gloss medium can enhance that illusion.