

Thermal energy storage tank annual maintenance checklist

The annual thermal energy storage tank service is the deep pass: the measurements, cleanings and tests a quarterly round doesn't reach. This checklist keeps the full service on record with the photos that make it defensible later. Work is commonly verified against IMC (mechanical code), manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The HVAC service lead on the annual plant service. When: Once a year during a plant shoulder period, when the tank can be taken through a full cycle without risking comfort.

Insulation and vapor seal

☐ **Insulation and vapor seal inspected and repaired**

Jacket opened where suspect, insulation dry to the core, vapor seal continuous and repaired at any breach, no hidden corrosion under the insulation. **2 photos required**

Water quality

☐ **Storage water sampled and treatment confirmed**

Water sampled and checked against the manufacturer's guidance, treatment confirmed, no scale, sediment or biological growth in the sample, results logged. **1 photo required**

☐ **Internal diffusers and connections inspected where accessible**

Diffusers or distribution headers clear of debris, no blockage that would short-circuit the thermocline, internal connections sound where they can be reached. **1 photo required**

Cycle verification

☐ **Full charge and discharge cycle run and capacity confirmed**

Tank driven through a complete charge and discharge, temperatures and level tracking as expected, usable capacity confirmed against the design and logged. **2 photos required**