READY TO INSPECT — FIELD CHECKLIST

Electric heat trace system quarterly maintenance checklist

A quarterly heat trace system round is short on purpose: it catches the wear items that fail between annual services. This checklist is sized for a tech with a phone. Every item says what to look at and the photo that proves the round happened. Work is commonly verified against NEC (NFPA 70), manufacturer's published instructions. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The electrician or maintenance tech on the quarterly round. When: Every quarter, with the round before the first hard freeze treated as the one that matters most for the tracing.

Controller and circuits

- [ ] Setpoints and alarms checked at the controller
  Maintain temperature and alarm settings as intended, no standing alarms, each circuit showing energized on its own indicator.
  1 photo required
- [ ] Each circuit's control mode matched to its duty
  Freeze-protection circuits armed on ambient or pipe sensing ahead of the freeze season, process maintain circuits controlling year round, none forced on or off in manual.
  1 photo required
- [ ] Pipe or ambient sensor placement checked where the circuit has one
  Pipe sensor lead entering the lagging at the point on the installation record, ambient sensor shaded and clear of exhaust or other heat, readings plausible at the controller.
  No photo required
- [ ] Ground-fault protection status verified per circuit
  GFEP not tripped or bypassed on any circuit, trip history noted where the controller logs it.
  1 photo required

Current and coverage

- [ ] Energized-work procedure set before the current readings
  Clamp readings taken at the heat trace panel or controller under the site's energized-work procedure with its PPE, covers removed only as that procedure allows.
  No photo required
- [ ] Per-circuit current draw read
  Draw measured on each circuit and compared against the expected value for its length, a low or zero reading flagged as a break.
  1 photo required
- [ ] Insulation and lagging condition over the run checked
  Cladding intact and dry along the traced run, no crushed or water-logged insulation, coverage present at valves, flanges and hangers.
  2 photos required

Along the traced run

- [ ] Power connection kits closed, glanded and dry
  Each power connection box lid closed and gasketed, cable gland tight, conduit or pigtail intact, no water staining or rust at the box. Left closed on the round.
  1 photo required
- [ ] End seals and splice or tee kits sound where they exit the lagging
  Each end seal, splice and tee kit visible at the cladding is intact, not crushed or pulled, cap or boot in place and no bare cable showing. Opened only on the annual.
  1 photo required
- [ ] Electric traced labels present on the insulation
  Caution labels marking the pipe as electrically traced visible on the cladding along the run and at valves as the installation record shows, legible and not painted over.
  1 photo required

Panel, alarms and handback

- [ ] Heat trace panel or controller enclosure closed and dry
  Door latched and gasketed, circuit schedule posted on or beside it, no water, heat staining or odor at the enclosure.
  1 photo required

- [ ] Remote alarm or monitoring point matches the controller
  Where circuits report to building automation or a remote annunciator, alarms and circuit status shown there match the controller, with nothing suppressed.
  No photo required

- [ ] Owner's reports of frozen or cold lines collected
  Owner's staff asked about frozen lines, slow drains or low process temperatures since the last round, each tied to its circuit number on the schedule.
  No photo required

- [ ] Every circuit left in service and findings reported
  All circuits back at their setpoints with none forced off, and any tripped circuit, low current or damaged lagging reported to the owner by circuit number.
  No photo required