



Instrumentation Inspection Checklist **(Part 2 of 7 - TEMPERATURE Instruments & Transmitters)**

NOTE - THIS CHECKLIST APPLIES ONLY TO TEMPERATURE INSTRUMENT SPECIFICS.

THIS CHECKLIST SHOULD BE USED IN CONJUNCTION WITH THE GENERAL CHECKLIST THAT APPLIES TO GENERIC CHECKS FOR ALL INSTRUMENTS.

- ENSURE SENSOR HOOKUP STYLE IS CORRECT (RTD: 3-WIRE, 4-WIRE, ETC. | TC: PROPER TYPE)

- FOR RTD INSTRUMENTS, VERIFY THE RTD TYPE AND 'ALPHA' VALUE MATCHES CONFIGURATION & SPEC (EXAMPLE: A PT100 COULD BE A 0.385 OR 0.392 OHM PER DEGREE ALPHA OR OTHERS...)

- ENSURE NO "ON TERMINAL" 'JUMPERS' USED TO CHANGE FROM 2-WIRE, 3-WIRE, OR 4-WIRE (THE EXACT WIRING MATTERS AND MUST MATCH THE CONFIGURATION OF TRANSMITTER OR ERRORS WILL BE INTRODUCED - SAME APPLIES TO SIMULATIONS DURING CALIBRATIONS/CHECKS).

- ENSURE USING PROPER RTD LOOKUP TABLE IF USING DECADE BOX FOR RTD SIMULATIONS.

- FOR TRANSMITTERS WITH HOT BACKUP, BE SURE TO VERIFY THE SETTINGS AND CONFIG MATCHES SPECIFICATIONS AND STANDARDS.

- VERIFY RTD GOOD THERMAL CONDUCTIVITY ON SENSOR (SPRING PRESSING SENSOR INTO THERMOWELL, CLEAN/REPLACE OLD THERMAL PASTE IF APPLICABLE - THERMAL CONDUCTIVITY IS CRITICAL FOR TIME RESPONSE AND IMPACTS BOTH PROCESS CONTROL/TUNING AND PROCESS SAFETY)

- FOR THERMOCOUPLE INSTRUMENTS, ENSURE THE PROBE AND ALL EXTENSION WIRING AND TB'S ARE OF PROPER TYPE (ONLY TC EXTENSION WIRE OR SPECIFIC TYPE TC TERMINAL BLOCKS SHOULD BE USED BETWEEN THE PROBE AND WHEREVER THE COLD JUNCTION COMPENSATION IS TAKING PLACE).

- ENSURE THE COLD JUNCTION COMPENSATION IS CONFIGURED AND INSTALLED CORRECTLY (CJC IS TYPICALLY APPLIED AT TRANSMITTER TERMINALS, OR AT THE INPUT CARD IF USING PLC/DCS TYPE TEMPERATURE INPUT CARDS.

ADDITIONAL CHECKS (IF ACCESSIBLE / APPLICABLE):

- CHECK FOR "GREEN-ROT" FOR TYPE K THERMOCOUPLES (WHEN ACCESSIBLE - ONLY APPLICABLE ON HIGH TEMP APPLICATIONS)

- CHECK BASELINE RESISTANCE OF ACTUAL THERMOCOUPLE PROBES AND COMPARE TO RECENT/PAST VALUES (VERY HELPFUL AT IDENTIFYING DEVELOPING PROBLEMS IN TC PROBES OVER TIME)

- VERIFY THERMOWELL NOT FOULED OR COATED EXCESSIVELY AS THIS CAN IMPACT TIME RESPONSE. ONLY APPLICABLE IF ACCESS TO THERMOWELL IS AVAILABLE.

- ENSURE NO LEAKAGE OR EXCESS WEAR ON THERMOWELL. ONLY APPLICABLE IF ACCESS TO THERMOWELL IS AVAILABLE.