BI 19-01
Remote Shutdown Switches for High Pressure, Power Boilers (E-stops)

Statement of Need: ECS Consulting, LLC requests the Board of Boiler Rules provide an interpretation on the requirements for manually operated remote shutdown switches (i.e. Emergency Stop, E-stop, etc.) assigned to high-pressure, power boilers installed & operated in the state of Tennessee.

Background: With the requirements listed in ASME® CSD-1 and NFPA® 85 that are adopted by the state of Tennessee within 0800-3-3-.02, there is some confusion in the industry as to the enforcement of the code for the installation of remote shutdown switches (i.e., Emergency Stop, E-stops, etc). ASME® CSD-1 and NFPA® 85 have requirements in Part CE-110 (b) and Chapter 4.11.7.9, respectively, as well as Part 1, Section 2.5.3.2 of the National Board Inspection Code (NBIC), that address the installation of such switches in the case of emergency.

Inquiry (1): Is it required that all locations operating a power (high-pressure) boiler in Tennessee be fitted with a manually operated remote shutdown switch?

Reply (1): Yes

Inquiry (2): If Inquiry (1) is Yes, is it required that a manually operated remote shutdown switch be installed at each means of pedestrian egress from the boiler location (e.g., boiler room)

Reply (2): Yes

Inquiry (3): Where a boiler is located indoors in a facility and not in an equipment room (e.g., boiler room, mechanical room, etc.) is it still required to have a manually operated remote shutdown switch installed?

Reply (3): Yes; the manually operated remote shutdown switch (E-stop) shall be located within 50 ft (15 m) of the boiler(s) along the pedestrian egress route(s) from the boiler.

Inquiry (4): For a fuel-burning power burner, is it required for the manually operated remote shutdown switch to disconnect all fuel and electrical power to the boiler?

Reply (4): No; the switch need only shut off the fuel input to the boiler (i.e., burner)

Inquiry (5): Is it required for all high-pressure boilers installed in a location (e.g., boiler room, mechanical room, facility location, etc.) to be electrically connected to a single manually operated remote shutdown switch (i.e., E-stop) installed at the point(s) of egress, where the activation of the switch shall actuate the master fuel trip relays on all boilers within the location.

Reply (5): Yes. However, the owner-user, or their designee, may apply for a waiver from the Chief Boiler Inspector during the permitting process.

Inquiry (6): For a manually operated remote shutdown switch where the boiler room door(s) is on the building exterior is it allowable for the switch to be located just inside the door(s) to the boiler room?

Reply (6): Yes

Inquiry (7): For a manually operated remote shutdown switch where the boiler room door(s) is on the building interior, leading to a place of assembly or foot traffic, and subject to tampering, is it allowable for the switch to be located just inside the door(s) to the boiler room?

Reply (7): Yes

Inquiry (8): When an existing high-pressure boiler installation do not include a manually operated remote shutdown switch, is it required that these switches be retroactively installed to boilers installed in the state of Tennessee?

Reply (8): Yes