

THE SASKATCHEWAN CODES OF PRACTICE

CODE FOR THE FIELD APPROVAL OF FUEL-BURNING APPLIANCES AND EQUIPMENT

CSA-B149.3 - 20



Gas Installation Supplement

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The following clauses have been amended, noted, explained, or added and are a supplement to the B149.3 Field Approval of Fuel-Burning Appliances and Equipment.

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3 DEFINITIONS

Protected inlet pressure - the maximum inlet pressure to any component of a gas piping system caused by a failure of a single upstream pressure regulator and as limited by the setpoint and capacity of an overpressure protection device.

7 PILOT SAFETY SHUT-OFF VALVES AND BURNER

7.1 Safety shut-off valves

- 7.1.3.1** All oilfield appliances approved under the Saskatchewan Field Approvals Program having a pilot train with an input up to and including 20 000 btu/hr (6 kW) shall either
- be part of a circuit controlled by a combination control in accordance with clause 7.1.3 (b), or
 - be equipped with safety shut-off valves in accordance with clause 7.1.4.

10 APPLICATIONS

10.4 Pressure ratings and overpressure protection devices

- 10.4.4.1** Overpressure protection on an unmanned oilfield installation shall be provided by any one of the following:
- pressure relief valve per clause 10.4.5; or
 - overpressure shut-off device.

10.6 Atmospheric Bleed vents for valves, combination controls, pressure regulators, relief vents and other control devices

- 10.6.10.1** Where burners are required to operate constantly, then a locked-open, or sealed-open, manual valve to isolate a safety limit control may be installed for servicing, maintenance or testing purposes. This valve may only be unlocked, or unsealed, and then closed, if the gas-fired equipment under the protection of the safety limit control has constant manual supervision while the safety limit control is out of service. A documented work procedure submitted and acceptable to Gas Inspections shall be followed during use of each such isolation valve. Under no circumstances are input lines to relief valves to be isolated, or have isolation valves installed, except as specified in clause 10.6.10.2.
- 10.6.10.2** In a plant environment, where a relief valve terminates into a common flare header, a locked-open, or sealed-open, full port manual valve may be used to isolate the operational flare header from the relief valve discharge for maintenance purposes of the equipment under the protection of the relief valve. In this situation, the TSASK Pressure Relief Path (PRP) Stop Valve Control Program may be utilized. The requirements for application and the PRP Stop Valve Control program manual are available from TSASK. Copies must be made available to both TSASK Boiler and Pressure Vessel and to Gas Inspections for approval.



10.9 Supplementary requirements for controls and valves subjected to low ambient temperatures

10.9.3.1 The low limit temperature control specified in 10.9.3 is not required on an oilfield tank heater rated under one million btu/hr.

12 SAFETY CONTROLS

12.3 Low Fire Start

12.3.1 Where the Low-Fire start required in clause 12.3 is accomplished by means of a separate Low-Fire valve train, the Low-Fire valve train shall meet the requirements for a pilot valve train.

12.4 Temperature and pressure safety limit controls

12.4.1.1 In oilfield facility applications, tank heaters that are mounted in tanks which are not equipped with a visual tank level indicator, shall be controlled with an operational low liquid safety device, the function of which is to shut off the fuel supply upon low level and automatically enable the fuel supply when the level is regained. This operational low liquid safety device shall be installed at a level above the low liquid level safety device required in 9.4.1(a) which requires a manual-reset before resuming operation.

12.5 Gas pressure safety limit control

12.5.1.1 In oilfield applications, where all components on the manifold are rated above the working gas pressure, tank heaters rated up to 1 million btu/hr, at remote single wellhead battery sites only, a high gas pressure safety device is not required.

12.5.2.1 In oilfield applications, once confirmed through a combustion analysis that the burner design at full turndown does not result in the formation of carbon, tank heaters rated up to 1 million btu/hr, at remote single wellhead battery sites only, do not require a low gas pressure safety device.

12.5.3.1 In oilfield applications, tank heaters rated up to 1 million btu/hr, at remote single wellhead battery sites only, which do not require a low gas pressure safety device on the main burner per Saskatchewan Code of Practice 12.5.2.1, do not require a low gas pressure safety device on a multi-fuel pilot.

ANNEX J - MOBILE OUTDOOR FOOD SERVICE UNIT

J.1.1 Annex J of CSA B149.3-20 is adopted in Saskatchewan as mandatory for inspections of mobile outdoor food service units.

J.5.4 Gas cooking appliances shall be mounted to a mobile food service unit in accordance with J.5.3 and shall be connected by a gas connector that is certified to ANSI Z21.69/CSA 6.16.

