# Energy

## New Standards & Editions

**B365-01, 6th edition**
*Installation Code for Solid-Fuel-Burning Appliances and Equipment* . . . . . $95

This standard provides requirements for installing, altering, and maintaining solid-fuel-burning appliances and equipment intended to supply heat to air or water or to be used for cooking. Recommendations for the storage of solid fuel and of ash are also included.

For the purpose of this standard:

- Solid-fuel-burning appliances include furnaces boilers, stoves, ranges, space heaters, factory-built fireplaces, and service water heaters.
- The term "solid fuel" includes coal and biomass fuels such as cordwood, wood chips, sawdust, peat logs, wood and other biomass pellets, and kernel corn.

This standard does not apply to the installation of incinerators, site-built fireplaces, or process equipment.

**C191-00, 3rd edition**
*Performance of Electric Storage Tank Water Heaters for Household Service* . . . . . $75

This standard applies to stationary storage tank water heaters having a capacity of 175 or 270 L and intended for use on pressure systems in residential premises and similar locations.

The standby loss calculation may be applied to stationary storage tank water heaters having a capacity of 50 to 454 L.

This standard specifies delivery and standby performance for electric water heaters, rated tank capacities, heater element ratings, and markings.

**C652-00, 2nd edition**
*Installation of Electric Storage Tank and Heat Pump Water Heaters for Residential Use* . . . . . $40

This standard specifies requirements for installing electric storage tank and heat pump water heaters intended for residential use.

This standard applies to electric storage tank water heaters with:
- volumes of 50–454 L (13–120 US gal); and
- electrical heaters with power inputs up to 12 kW.

It also applies to heat pump water heaters that have:
- a maximum current rating of 24 A;
- a single maximum voltage of 250 V; and
- ancillary equipment necessary for the device to function.

## Proposed Reaffirmation of Standards

For more information about the proposed reaffirmation of the following standard,
contact Ted Shin at 416-747-2642 or ted.shin@csa-international.org:

- **N292.2-96**
  *Dry Storage of Irradiated Fuel*

## Proposed New Projects

For more information about the proposed development of the following new editions,
contact Sam Loggia at 416-747-2575 or sam.loggia@csa-international.org:

- **C358, 4th edition**
  *Energy Consumption Test Methods for Household Electric Ranges*
- **C361, 4th edition**
  *Test Method for Measuring Energy Consumption and Drum Volume of Electrically Heated Household Tumble-Type Clothes Dryers*
- **C744, 2nd edition**
  *Standard for Packaged Terminal Air Conditioners and Heat Pumps*
- **F326, 2nd edition**
  *Residential Mechanical Ventilation Systems*

## Drafts

**Please note:** Public comments about the draft standards and proposed amendments listed in this issue are due by April 26, 2001.

To receive copies of the following draft, or to offer comments, contact Lidwina Kumar at 416-747-4188 or lidwina.kumar@csa-international.org:

- **C820, 1st edition**
  *Performance of Small Fluid Pumps*

To receive copies of the following draft standards, or to offer comments, contact Laura Pelan at 416-747-2590 or laura.pelan@csa-international.org:

- **N290.13, 1st edition**
  *Requirements for Environmental Qualification of Equipment for CANDU Nuclear Power Plants*
  (formerly "Environmental Requirements for the Design of CANDU Nuclear Power Plants")

## Drafts (cont'd)

- **Z245.1, 7th edition**
  *Steel Line Pipe*
- **Z245.6, 3rd edition**
  *Coiled Aluminum Line Pipe and Accessories*
- **Z245.20/.21, 4th edition**
  *External Fusion Bond Epoxy Coating for Steel Pipe/External Polyethylene Coating for Pipe*
- **Z341, 3rd edition**
  *Storage of Hydrocarbons in Underground Formations*

## Proposed Adoption of Standards

For more information about the proposed adoption of the following IEC standard, contact Sam Loggia at 416-747-2575 or sam.loggia@csa-international.org:

- **IEC 61215 (1993)**
  *Crystalline Silicon Terrestrial Photovoltaic (PV) Modules–Design Qualification and Type Approval*
  Note: This standard will be published as CAN/CSA-C61215, and is intended to supersede CAN/CSA-F380-M87 (R1999), *Photovoltaic Modules*.

## Formal Interpretations

The following interpretations have been approved by the Oil and Gas Pipeline Systems Technical Committee.

### 1. Z662-99, Clause 4.14

**Question 1:** Does the following meet the definition of a pressure-control system as required by clause 4.14.1?

During the "flowback" operation of a wellhead, after steaming and soaking the wellbore, the reservoir has sufficient pressure to flowback to surface without artificial lift. The pressure is allowed to flow through satellite facilities (designed to ASME B31.3), and into a production pipeline (designed to CSA Z662). A manual choke valve located at the wellhead controls pressure. Pressure transmitters communicating to the Operations control room continuously monitor the performance of the choke valve. Well casing pressure transmitters are automatically monitored by the pad control system, and a rising casing pressure alarms through the Operations control room/field DCS system which initiates a field Operator response. The Operator will return to the satellite facility and manually adjust the choke valve to achieve the desired pressure.

Please note that because of the large pipeline system volume, and the multiphase characteristics of the production fluid, there is a significant length of time required to "pressure-up the pipeline" to 110% MOP. This length of time has been calculated to be at least 2 hours. The time required for operator response is less than one hour since the facilities are not remote from central control centres.

**Answer:** Yes.

**Question 2:** Does the following meet the overpressure requirements of clause 4.14.2?

Under normal operation of the pipeline system, for both flow back and pumping production phases, the pipelines are protected by an ESD valve (PV-410) at each satellite (i.e., the pressure source) and at its downstream end by a PSV at the central plant. The only time this is not the case would be in the rare instance of a plant emergency when the central plant ESD valve could close, isolating the PSV from the pipeline system. In the event that the central plant ESD valve closes, the central plant operator is able to shut down the wellheads (the source of pressure), close the satellite ESD valves (PV-410's) if not already closed, and also confirm their closing.

**Answer:** Yes.

**Question 3:** Does the following meet the general design requirements of clause 4.14.2 - item (a)?

For the rare instances, when the central plant PSV is temporarily isolated from the pipeline system, as described above, the following system controls are in place:

During production operations, when down-hole pumps are used, the pipeline is protected by two pressure-limiting systems. A high-pressure switch communicating with the pump motor will shut down the down-hole pump. The second system is the satellite ESD valve (PV-410), which will close in response to three transmitters located along the production piping: PT410, PSH410 and PT420. The open/closed status of the ESD valve (PV-410) can be monitored by the Operations control room.

During flow-back production operations, when the down-hole pumps are not in operation, and the wells are producing from formation pressure, the pressure allowed from the wellheads is controlled by the manual choke valve continuously monitored by the Operations control room. The field Operator responds to the monitoring of pressure by manually re-adjusting the choke valve. In this operation mode PV-410 **is also fully operational** as a pressure limiting system.

During emergency flow-back conditions, the field operator, who in this operating mode is continuously on-site, locally blocks PV-410 open. If the pressure rises above allowable, the operator will locally operate PV-410 and/or the manual choke valve, and shut-in flowing pressure using wellhead isolation valves if required.

**Answer**: Yes.

## 2. Z662-99, Table 4.3

**Question**: For the existing above ground pipeline a new design temperature of 237ºC is proposed. Pipe material is CSA Grade 359 Cat. 1. Table 4.3: Temperature Factor for Steel does not give values of T for temperature greater than 230ºC. We have performed a straight extrapolation of Table 4.3 to arrive at a temperature factor of 0.86. Is this acceptable?

**Answer**: No. The pipeline design described in the request for interpretation is outside the scope of CSA standard Z662.

## 3. Z662-99, Clause 7.2.4.2.2.2

**Question 1**: Does this mean that all basic electrodes may only be removed from a rod oven for 1 hour?

**Answer**: Yes.

**Question 2:** And, then they must return to the rod oven?

**Answer**: No. The re-drying requirement, prior to use, shall be in accordance with the applicable manufacturer's recommendation.

## 4. Z662-99, Clause 4.8.3

**Question:** Could you please provide an interpretation of CSA Z662-99, *Oil & Gas Pipeline Systems,* as it applies to parallel railways? Specifically does clause 4.8.3, Crossing of Roads and Railways, apply to a natural gas pipeline which parallels (but does not cross) a railway within 7 metres of the outside track?

**Answer**: No. Clause 4.8.3 does not apply to pipe that parallels (but does not cross) a road or railway; however, it should be noted that Table 4.1 contains requirements for pipe that is in parallel alignment within 7 metres of a road or railway.