

## **Summary ACI / B51 / B52 Meetings**

**Held August 21 - 24, 2017**

**(Submitted by Nordia Brown - BI&I)**

**February 14, 2018**

### **1 Association of Chief Inspectors:**

- Movements and changes
  - Tony Scholl, Chief Inspector BC – appointed Chair
  - Ryan DeLury, Chief Inspector MB – appointed Vice Chair
  - Donald Ehler – replaces Peter Dodge due to retirement. Peter Dodge is now an honorary member
- Atlantic provinces are working on a Welder Recognition program that is meant to increase mobility between the provinces of NFLD, NB, PEI & NS
- Next ACI Meeting – August 20 & 21, 2018 in Montreal, QC

### **2 B51**

- Relief valves
  - Relief valve maximum servicing intervals have been changed
  - Hot water storage tanks have been added. They should be tested 2 yrs with a maximum service interval of 6 yrs
  - Pressure vessel and piping systems- steam / air – 10 years (currently 5 yrs.)
  - Non flammable, cryogenic, non toxic gases – 5 yrs servicing may be extended to 10 years, if system pressure test is performed every 5 yrs
  - These new intervals will apply provided that there are annual lift tests otherwise they must be changed every 5 yrs.
- Nameplates
  - Looking at adding loadings to nameplate (this is already a requirement for B149.5, Installation code for propane fuel systems and containers on motor vehicles).
- Safety bulletin
  - Suggestion that the committee should put out a safety bulletin regarding the usage of propane tanks as air receivers
- Next edition
  - CSA 19<sup>th</sup> edition of B51 to be published January 2019. Public review will start May 2018 and last 2 – 3 months
  - Handbook that accompanies the code will be published June 2019
  - Next B51 meeting – August 23, 2018 in Montreal QC

### 3 B52

- Nearly 60 new refrigerants have been added to ASHRAE 34 since 2010, none of which have been added to B52. Of the new refrigerants,
  - 4 are pure fluids
  - The remainder (50+) are mixes
  - 21 of these new refrigerants are already commonly used in US & CAN
- ASHRAE 34 has addendums posted 3 -4 x/yr. and they are continuously maintained. How is this to be managed going forward?
  - Proposal 1 – adopt ASHRAE 34 as a normative (adopted and enforced) reference
  - Proposal 2 – appoint someone from B52 to ASHRAE 34 & 15 to ensure that code changes and updates are addressed
- 2L Refrigerants - a refrigerant that is flammable but does not burn fast
  - 2L refrigerants are not even recognized by B52. These also make up the bulk of those that are missing in B52
  - Table 1 in B52 does not specify what to do for refrigerants that are not listed. 2L refrigerants cannot be simply added as there are requirements related to installation /operation / maintenance that need to be considered
  - These refrigerants will show up in small equipment first (under 3 tons; packaged and split systems)
  - 2L refrigerants are also allowed for use in locations with human occupancy (i.e. homes, hotels, etc.)
  - 2L use in machine rooms
    - Plants
    - Office buildings
  - Big gaps are the ventilation ratios. Equations that are currently in use for calculating required ventilation are inadequate
  - 2L refrigerants are coming as they are already approved for use in the US
  - \*\*\* BIG ISSUE – the flammability limits for 2L refrigerants are lower than what is stated in ASHRAE 34 \*\*\*
- ASHRAE 15 - Safety Standard for Refrigeration Systems and Designation and Classification of Refrigerants
  - There is a section in this standard that deals with refrigerant use in human occupancy areas (home). This will be moved into a new standard
  - This new standard (ASHRAE 15.2 – Standard for Refrigeration in Human Occupancies) will be out for review in Fall 2017
  - This standard will deal directly with VRF (Variable refrigerant flow) systems
  - B52 exempts such systems in residences
- Copper tubing

- UL 207 (Standard for Refrigerant-Containing Components and Accessories, Nonelectrical) describes the performance test to be performed for copper tubing
- This does not comply with codes which are calculation based (ASME B31.5, Refrigeration Piping and Heat Transfer Components). Should installations be approved if tubing meets UL207 standard? UL 207 requires that tubing pass tests at 3x's and 5x's the tube rating
- Used in CO2 systems (Sobeys in QC has this tubing)
- Difference between UL207 and B31.5 calculation can differ by 50% (UL207 is 50% greater than calculated rating)
- Ammonia
  - Ammonia refrigerants - ammonia will be pulled out of ASHRAE 15. There will be a specific standard for Ammonia
  - In general ASHRAE 15 and B52 are inadequate for handling of Ammonia refrigerants
- New code edition
  - CSA 12<sup>th</sup> edition of B52 to be published Dec 2018. Public review will start in April 2018 and last 2 - 3 months
  - Handbook that accompanies the code will be published June 2019
  - Next B52 meeting - August 22, 2018 in Montreal QC