TECHNICAL SAFETY BC

INFORMATION BULLETIN

AMMONIA LEAK DETECTION IN ICE RINKS

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Topic

This information bulletin is directed to owners of ice rinks that utilize an ammonia refrigeration system of the indirect type. These systems utilize a secondary coolant medium. This information bulletin is being released to raise the awareness of the importance to detect the presence of ammonia in secondary coolants.

Important Information

In an indirect refrigeration system, the ammonia refrigerant side and the secondary coolant side are constructed as independent systems. The secondary coolant is cooled by the refrigeration system and is then circulated under the arena which removes heat and causes the formation of ice. The presence of ammonia in the secondary coolant is an indication that there is the possibility of an ammonia leak in the chiller heat exchanger.

Ammonia is both a toxic and a flammable substance. Accidental releases of ammonia may cause serious injuries to any person that is in the immediate vicinity, and can create adverse conditions in the surrounding area.

Detection of ammonia leaks

Owners of ammonia refrigeration systems are responsible to ensure that all components are tested for ammonia leaks on a periodic basis by fully trained and qualified persons in accordance with written procedures. Evidence of an ammonia refrigerant leak from any part of the system must be reported to Technical Safety BC in accordance with Information Bulletin IB-BP-2017-01 posted on our website at www.technicalsafetybc.ca

It is very important that the secondary coolant system be tested for the presence of ammonia on a scheduled and periodic basis. The presence of ammonia in the secondary coolant system is of immediate concern because it is indication that there is the possibility of an ammonia leak in the chiller heat exchanger. It is critical that any indication of an ammonia leak is detected at the earliest opportunity and that corrective action is taken immediately.

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