



Air conditioning and refrigeration

Loss bulletin

Risk Solutions

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Air conditioning and refrigeration systems represent the number one source of claims and account for around half of all equipment breakdowns.

Failures are common because these systems contain a variety of components such as pressure vessel, mechanical, electrical and electronic. If one component does not work properly, the whole system may fail.

Seafood processors

The water jackets and cylinder heads of four reciprocating ammonia refrigeration compressors suffered freezing and cracking.

- Insured losses, including business interruption, extra expense and spoilage, amounted to \$305,000.

A fish processing plant had 4.5 million pounds of cod at risk when a flange on a suction strainer in the refrigeration system broke and 500 pounds of ammonia leaked into the cold storage room.

Workers managed to save most of the fish.

- Total paid loss: \$96,108

Meat packing plant

Water seeped through deteriorated insulation on a feeder bus and caused arcing, which knocked out power and damaged refrigeration compressors in a meat packing plant. Generators were rented to prevent spoilage of \$4 million in product.

- Repair cost: \$49,894
- Extra expense: \$69,498
- Total paid loss: \$119,392

Seniors' residence

The air conditioning motor burned out in a high-rise apartment building that houses senior citizens. Temperatures in excess of 32-degrees required the set-up of four rented spot coolers. Weekend overtime was required to get the motor back on line.

- Direct damage: \$83,557
- Extra expense: \$16,794
- Total paid loss: \$100,351

Bank branch office

The air conditioning compressor broke down in a bank branch office. The fans stopped working because of a controller problem. This in turn caused the pistons and connecting rods to break because of excessive pressure in the system.

- Total paid loss: \$29,721



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Hockey arenas

The freezing and rupture of a refrigeration system's chiller tubes at a municipal arena caused brine contamination of its compressors and system.

- Total paid loss: \$100,000

The freezing and rupture of an ammonia refrigeration system's chiller and brine piping at a hockey arena caused escape of brine and ensuing burn-out of a lighting transformer and switchgear.

- Total paid loss: \$290,000

Hospital

In the middle of summer, a hospital's centrifugal air conditioning compressor suffered breakdown due to the failure of a thrust bearing cage, damaging the impeller and seals. A substitute chiller was rented for the rest of the summer.

- Total paid loss, including extra expense: \$155,000

Wine warehouse

The failure of an inexpensive thermostat at a refrigerated wine storage warehouse resulted in the raising of its ambient temperature, causing the spoilage of wine stocks. Spoilage made up almost 100% of the loss.

- Total paid loss: \$350,000

Veterinary clinics

The burn-out of a refrigeration unit's temperature limit control resulted in its breakdown and resulting spoilage of vaccines.

- Total paid loss: \$18,900

The continuous operation of a refrigeration unit at a veterinary clinic resulted in the freezing of vaccines.

- Total paid loss: \$27,500

Hotels

A water cooled chiller serving a hotel with two large ballrooms leaked, damaging two reciprocating compressors in the air conditioning system. The hotel was fully booked for the weekend, with two groups planning events.

- Repairs: \$32,966
- Business interruption: \$138,051
- Total paid loss: \$171,017

A compressor motor broke down, causing a partial loss of air conditioning at a hotel during a July convention, resulting in a loss of 50% occupancy.

- Business interruption: \$43,854
- Total paid loss: \$73,366

Office buildings

A 600-ton chiller motor shorted and a rental unit was installed to keep the building habitable. Initially, it appeared that the motor could be repaired. However, once the machine was dismantled, inspectors discovered that the core had melted. The rental unit stayed on line until the new motor arrived – six months later.

- Property damage: \$100,364
- Extra expense: \$130,392
- Total paid loss: \$230,756

With summer heating up, a high-rise office tower lost its air conditioning when a power cable shorted out and damaged pumps and motors. Crews worked through a statutory holiday to repair the damage.

- Total paid loss, including parts, labour and extra expense: \$119,256.