



June 18-19, 2014 - San Francisco

Moving from Freon to Natural Refrigerant

Family Owned Business

Founded in 1960

Produce 20 000 pounds/hr of
frozen products for restaurants,
hotels and institutions

Total : 130 000 ft²

Process: 82 000 ft²

120 employees

May 7th 2009



The need

- **New construction 25 % bigger than the original burn down facility**
- **Offices and dry storage, 33 000 sq feet on second floor**
- **Production area 80 000 sq feet at ground level**
- **1 spiral at - 40 °F**
- **5 blast freezers (-40 °F to-10 °F)**
- **1 freezer - 10 °F** **88 TR**
- **24 medium temperature rooms (36 °F to 50 °F)** **175 TR**
- **4 hygienic preparation room at 36 °F** **56 TR**
- **Ventilation, heating and air conditioning of the offices and production area** **38 TR**

1327 KW of Heat

The wish list

- **New technology , No ammonia**
- **Innovative design**
- **Energy reduction/ heat reclaim with Hydro grant.**
- **Reliable and performing equipment.**
- **Low maintenance.**
- **Extended life equipment for the new generation.**
- **Integrated design with the building HVAC.**

“We might live in the country but we have internet”

The Refrigeration Package



The Hot Thermal pack



The mechanical room



The cold storage

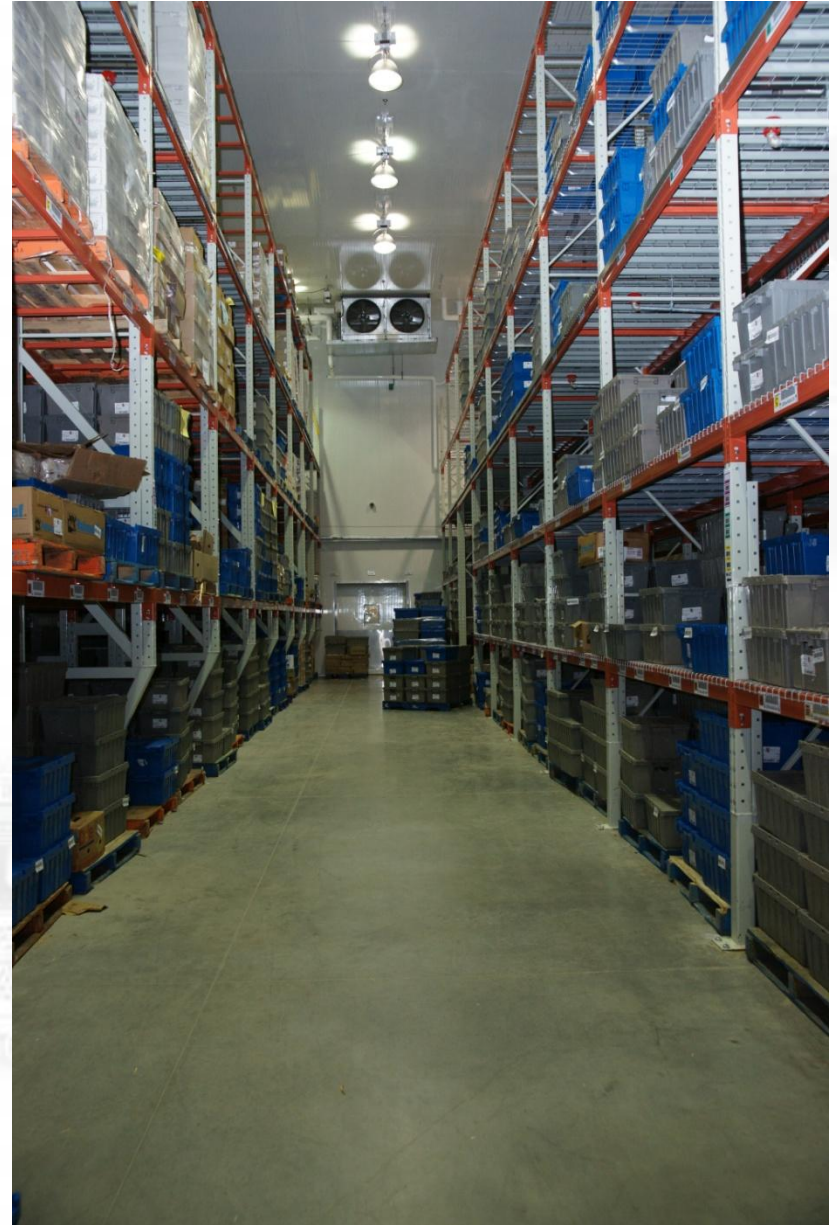




Glycol Piping



Cold rooms



Process Rooms



Heat reclaim



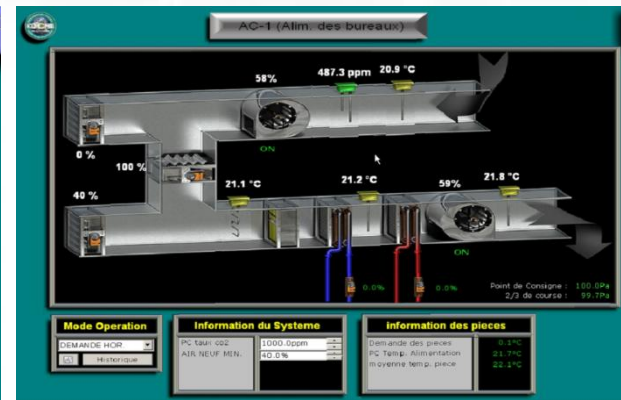
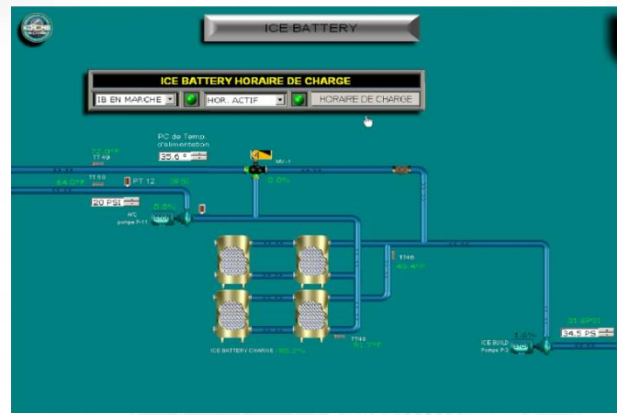
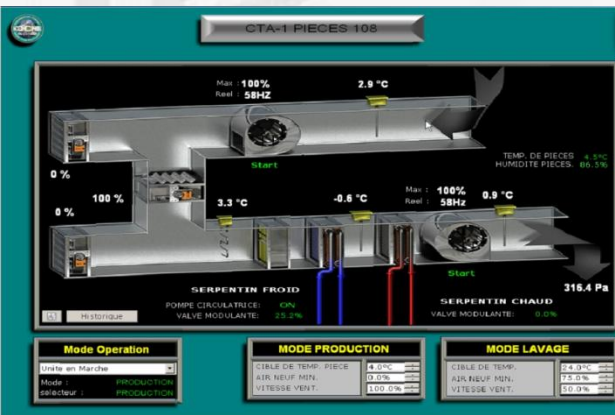
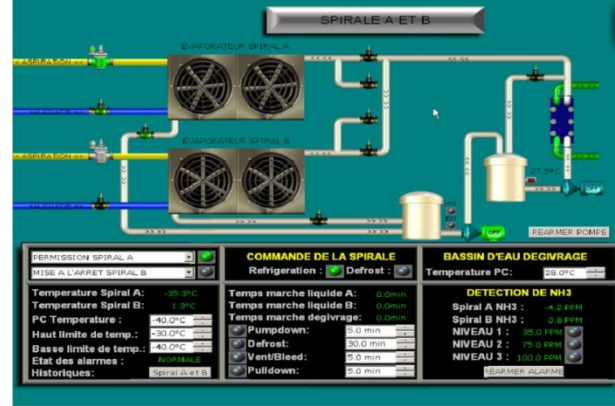
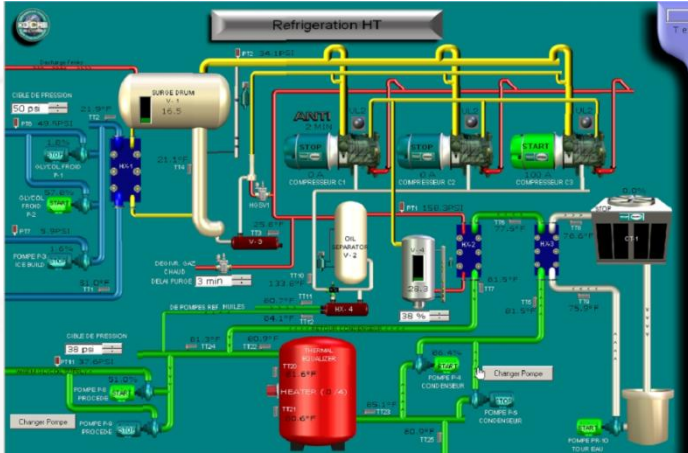
Air Conditioning



Luxury options



Fully Integrated Controls



Original electrical entry **2800 amp**

New electrical entry **2000 amp**

Reduction:

- Hot water heating 260 KW
- Electric heat 1200 KW
- Air Conditionning 62 Kw
- Refrigeration system 200 Kw

Original pack 700 HP

New system 450 HP

- 2 500 000 kW/hr
and

Grant from Hydro Québec
500 000\$

No Boilers,
No supplemental system

- Being the sole source of Cold, Heat and comfort is crucial , design and equipment has to be reliable and top of the line
- Project is scalable and applicable for any similar construction
- Integrated approach including heat reclaim provide exceptional results, better than expected
- Owner is leading the market with advance technology
- Results were measurable base on the prior building built and mechanical system installed
- For future construction, we would replace propylene glycol as the secondary fluid by liquid pump CO₂, pump power reduce by 75 %

ATMO
AMERICA **sphere**
business case
natural refrigerants

VIANDES **VP** MEATS

2012





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Thank you very much!