

CASE STUDY: Spiral Freezer

Reduce defrost cycles & ice build up in spiral freezer by implementing a desiccant dehumidification rental system

Industry: Food Manufacturing

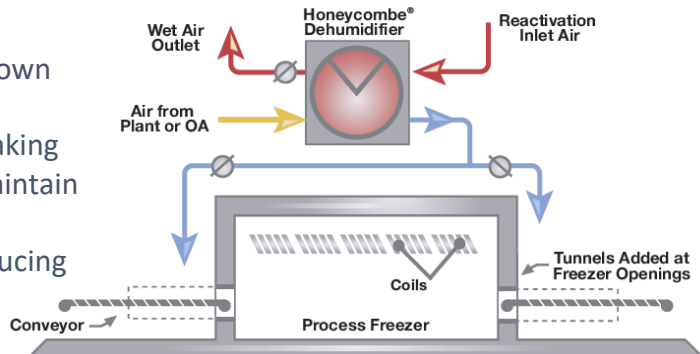
Application: Spiral Freezer

End User: America's top seller of surimi seafood

Product: Rental desiccant dehumidification system with 5-ton DX cooling unit

The Challenge – Uncontrolled humidity causing expensive and unproductive interruptions because of the need to defrost evaporators and remove ice from conveyors, floors and walls:

- Defrost Cycles occurring 3-4 times per day:
 - Done manually, causing production slow down and/or stoppage
 - Defrosting is adding heat load to freezer, taking coils off-line and limiting their ability to maintain temperature
- Frost build up on evaporator coils significantly reducing their cooling capacity



The Solution:

Rental desiccant dehumidification system provided on a monthly basis to remove moisture from the air before it can form frost and ice on the equipment, to significantly reduce defrost cycles and operate more efficiently year-round, regardless of season.

- Install rental DH equipment outside factory with flex duct discharging dry air into the freezer inlets & outlets
- Spiral freezer did not include vestibules, so custom plenum boxes were built around the freezer inlet & outlet conveyors.



The Results:

Following installation & startup of the rental dehumidification equipment, customer reports significant reduction in defrost cycles:

3-4 defrost cycles per day reduced to 1 defrost cycle per day!