

## CASE STUDY LIMAGRAIN



**Client's Field of Activity** Seeds storage and production

**Business Challenges** Avoid the risk of seed germination losses during the storage period

### Technical Challenges



- Control the hygrometry for several warehouses storing seeds
- Maintain a 50% humidity level throughout the year with a constant temperature of 46°F, i.e. a water vapor content of less than 23,1 grains.water/lb.dry air
- Maintaining conditions of infiltrated air from neighboring rooms: 77°F/50% RH or 100 grains.water/lb.dry air
- Air infiltration considered in global building 1500 CMH (closed doors, doors opening, walls)

### Products – Solutions And Services brought by DESSICA



### Products

- Supply of a set of air desiccants dryers with silica gel adsorption rotor regenerated by electrical heater for a total capacity of 100 lbs.water/h, with an air condition to be treated of 46°F/50 %
- The machines are controlled by electronic hygrostats with temperature and humidity digital display for a permanent check control
- A remote monitoring for temperature and humidity has been installed to alert the customer if the threshold is exceeded in the premises
- The dehumidification capacity required to implement the system has been divided into several units to provide a minimum 60% humidity guarantee in the event of an undesired shutdown of one of the units for an extended period

**Products – Solutions and Services brought by DESSiCA**



**Installation**

- The devices and units have been installed outside of the premises requiring treatments
- Dry air duct network made with galvanized steel was installed for each unit to aspirate the process air and bring back the dry air to the rooms
- The use of textile ducts for dry air allows a homogeneous diffusion in the volumes

**Support and services**

- Technical solution with low maintenance requirements apart from changing air filters 1 to 2 times a year
- Desiccant wheel life : 80% minimum yield after 10 years

**Key benefits and return on Investment (ROI) for LIMAGRAIN**



- LIMAGRAIN is fully satisfied with the installation and operation of DESSICA' dryer units
- Due to Dessica's dryers' installation, evaporative systems are now only solicited for sensitive heat, as the residual heat is now handled by the air dryers
- The units are now in operation since May 2015, so far, no product loss or negative feedback from the customer has been reported



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