

## CASE STUDY NUTRIBIO



**Client's Field of Activity** Milk powder production

### Business Challenges

- Avoid the risk of clogging or caking in spray drying tower
- Increase the flow rate of product injected into the tower to increase production

### Technical Challenges



- Maintain an absolute humidity of the fresh air at the entry of the drying tower at 2g.water / kg.air in all seasons
- Fresh air flow to treat : 105 000kg.air/h
- Critical fresh air conditions : 40°C/34% whether 16g.eau/kg

### Products – Solutions And Services brought by DESSiCA



### Products

- Supply of air desiccant system DIA type using a silica gel desiccant wheel regenerated by a steam heater for a total capacity of 1 470 kg.water / h
- The DIA dehydrator integrates all the regulation and piloting system allowing to assure a constant humidity blowing as well as a permanent visual control of the temperatures and hygrometry of the dry and humid air circuits.
- The control cabinet includes a MODBUS communication module allowing the customer to send all the information they want to their Building Management System
- This installation also includes our patented system allowing operation at optimized wheel speed according to outside temperature and humidity conditions. The saving generated by this system is about 5%

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



**Installation**

- Installation of a desiccant wheel 3.8 m high
- Construction of a suitable building around the system

**Support and services**

- DIA systems require relatively little maintenance apart from changing the air filters once or twice a year as well as visual inspection of the various elements
- The lifespan of a desiccant wheel is 10 to 20 years depending on the use. The efficiency of DESSICA installations is 80% minimum after 10 years

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



- Nutribio is fully satisfied with the installation and operation of DESSICA' dryer units
- The installation of the DIA system has enabled NUTRIBIO to increase its production volume by 35 to 45% per turn. Return on investment is less than 1 year
- The NUTRIBIO company, satisfied with its first investment in 2012 and its relations with DESSICA, renewed its confidence: a new DIA was installed in early 2018 on a second drying tower



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