# PRESSURE & VACUUM SOLUTIONS

# **CASE STUDY**

## Hibon Positive Displacement Blowers ATEX SNS 806 B1 unit is used in France for Energy recovery process of gas to fuel steel furnaces.

### Application

The blower is mounted on a system of recirculation of the atmosphere (nitrogen-hydrogen mixture) of an annealing furnace. The mixture consists of hydrogen and nitrogen (amount of hydrogen variable from 0 to 100% depending on the quality of the sheet to be treated). There may be small amounts of CO, CO2, CH4, ... gas from the treatment carried out in the furnace.

The goal is to get the hot mixture to the furnace (1100 ° C), to cool in a heat exchanger so that it reaches a temperature of 40 ° C. It is then sent to the inlet of the dryer by means of a blower through filters and exchangers

#### Solution

Blower type: SNS 806 B1 AD with enclosure

- Gases: H2+N2
- Inlet Pressure: 1050 mbar abs
- Outlet Pressure: 1250 mbar abs •
- Differential pressure: 200 mbar
- Flow: 200 Nm3/h
- Blower speed with speed variation: 903 -2443 RPM
- Blower shaft absorbed Power: 7.7-8.94 kW
- ATEX Zone 2 Cat.3 EX II 3G c IIC T=160°C







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