Case study
Positive displacement blowers

Erdenet—Mongolia
Wastewater Treatment plant

June 2010

Five packages of positive displacement blower Silentflow SF 4.70 PC are used for the aeration of biological tank in a wastewater plant of Erdenet in Mongolia.

Context

Erdenet is the second-largest city in Mongolia, with a population of 102.000 inhabitants. The city was built in 1975 to exploit Asia's largest deposit of copper ore and has the fourth largest copper mine in the world..
Plant extension of the wastewater was build by DEGREMONT.

Challenge

Erdenet extension wastewater plant will be designed for and average flow of 1 000$m^{3/}$h with a peak flow of 2 000 $m^{3/}$h.

Solution

Blower : Silentflow SF 4.70 PC
Gas : Air

Inlet Temperature: 30 ℃
Relative humidity: 80 %
Height: 1234 m

Inlet Pressure: 873 mbar abs.

Outlet Pressure: 1624 mbar abs

Flow at normal conditions: 4500 $m^{3/}$h

Flow at inlet conditions: 6028 m^3/h

Blower speed: 1636 t/min

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