

## CASE STUDY

# Sulzer Turbocompressors for Clever Wastewater Treatment in a Pulp and Paper Mill

Norske Skog Boyer Mill in Tasmania is a TMP newsprint mill that has produced paper continuously since 1949. A wastewater treatment plant comprising a central moving bed bioreactor (MBBR) and outer activated sludge tank (AST) treats up to 25,000 m<sup>3</sup>/d of process effluent. Four sets of turbocompressors type ABS HST play an essential role in the supply of air for efficient aerobic biological treatment. The compressors feed 9 units of Submersible aerator mixer type ABS OKI in the AST and the aeration grid in the MBBR.



HST 6000 feeds 9 units of OKIs with air in the activated sludge tank.

*“ The Sulzer turbocompressors HST play an essential role in the efficient supply of air in the biological treatment aeration reactors. ”*

Patrik Kolmodin, Business Development Manager General Industry

### The Sulzer difference

In the high speed turbo-compressor market, Sulzer is the leader in magnetic bearing technology. Clever aeration and mixing solutions ensure efficient treatment at low power consumption. The turbocompressor type ABS HST offers reliable operation and top efficiency at the lowest cost while minimizing the environmental impact.

### The challenge

To meet the requirements of highest reliability and efficiency:

- Highest reliable performance – minimal downtime and maintenance
- Simple operation – compressors are automatically controlled to achieve dissolved oxygen level
- Efficient operation – the compressors run with high efficiency and VFD drive
- Deep tank – compressors can meet the high pressure requirement

### The solution

Sulzer tailored a package of HST turbocompressors to meet the customer's requirements:

- Automatically controlled air flow to achieve the actual level of dissolved oxygen
- Very low power consumption with high efficiency and VFD drive
- Practically maintenance-free with magnetic bearing technology and no wearing parts
- Compact and simple design made installation easy and needed less space

## Customer benefit

Due to their innovative design, the turbocompressors type ABS HST are an excellent choice for industrial wastewater treatment:

- Compact design reduced the construction cost
- Perfectly achieved dissolved oxygen level by automatic control system with stable performance
- Absolutely easy operation and minimum work load for operators
- Maintenance-free, several years of trouble-free operation
- Power consumption is always at optimal level, reducing the operation cost considerably
- Quiet operation and no need for extra measurements to eliminate noise

## Product data

| 4 HST 6000-2-H-4 compressors |                        |
|------------------------------|------------------------|
| <b>Capacity</b>              | 6000 m <sup>3</sup> /h |
| <b>Pressure</b>              | 100-120 kPa            |
| <b>Motor</b>                 | 240 kW                 |



Turbocompressors  
type ABS HST

### Contact

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### Applicable markets

PPI, GI, CPI, wastewater

### Applicable products

Turbocompressors type ABS HST,  
submersible aerator mixer type ABS OKI