



no pollution *Industrial Systems Ltd.*

heading silently towards zero emissions

Cardboard Industry - Heat Recovery from Single Facer Enclosures

Single Facers in cardboard production require steam to heat the rolls to temperatures in excess of 100°C, and generate noise levels which can be above 110dB(A).

Soundproofing enclosures are a necessity, as well as careful ventilation to control temperature inside them.

Typically 35.000 m³/h of air are expelled at 45°C.

This equates to thousands of kW expelled every hour, and a very unfavourable air balance inside the plant.

Specifically designed heat recovery units have been installed in a plant in Sweden, to recover the expelled energy and use it to warm up an incoming flow of fresh air, to be integrated in the existing plant heating system.



The result was a partial shut off of the plant heating system during autumn and spring, and a considerable reduction in energy used for heating during the colder months.

This translated to a net saving of more than €100.000 after the first winter season, guaranteeing a payback time of less than two seasons of operation.

- **Waste energy is re-used for winter heating**
- **No cross contamination between the two flows**
- **Better air balance inside the plant, with less cold drafts**
- **Fully automated control of airflows and operating parameters**
- **Net reduction of Winter Heating Costs, in excess of €100.000 each season**

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