

# Case study

## Increase of boiler combustion air temperature



ARMSTRONG CASE STUDY

### Case summary

Energy savings	
Increase of boiler efficiency	2%
CO <sub>2</sub>	66 tons/year
Financial savings	€ 16,000/year
Investment	19,000 €
Payback time	14 months

### Suck up hot air at heights

The temperature of combustion air from a steam boiler influences its efficiency. If incoming air is cold, it must be preheated before use to facilitate combustion in the boiler burner.

For one plant, the boiler air inlet was located right in front of grates leading outside. The incoming air temperature varied by season. Naturally, it was lower in the winter when steam production was the highest.

Installation of a 5-meter high suction duct on each of the boilers optimized the efficiency of the boilers. As a result, air was sucked up right below the boiler room ceiling, where temperature is clearly higher.

This optimization was rather simple to perform. In this specific case, the improved efficiency of the boilers made it possible to recover the investment made in 14 months.

