

## APPLICATION EXAMPLES

### TERMOREK heat recovery unit – installation in aluminum melting furnaces



**Before installation**



**During Installation**



**After installation**

The heat recovery unit is made of two recovery modules and provides a total heat exchange surface of **19.2 m<sup>2</sup>** and an average recovered thermal power of **200 Kw**.

The recovery unit was mounted on the common piping that collects gases from 4 aluminium melting furnaces, with average annual operating hours of approx. **8000 h/year**. The recovered heat is used for hot water preparation and space heating.

Under these conditions, the heat recovery unit produces/save:

$$200 \text{ KW} \times 8000 \text{ h/an} = 1600000 \text{ KWh/an} = \mathbf{137,6 \text{ TEP/an}}$$

$$1600000 \text{ KWh/an} \times 0,3 \text{ RON/KWh} = \mathbf{480000 \text{ RON/an}}$$

$$480000 \text{ RON/an} : 5 \text{ RON/EURO} = \mathbf{96000 \text{ EURO/an}}$$

## TERMOREK heat recovery unit – installation on an industrial tunnel oven



**Before installation**



**During Installation**



**After installation**

The heat recovery unit from the tunnel kiln provides a heat exchange surface of **6.4 m<sup>2</sup>** and an average recovered thermal power of **65 Kw**.

The kiln to which the heat recovery unit was installed has average annual operating hours of approx. **8400 h/year**. The recovered heat is used for hot water preparation, in two different locations, independent from the point of view of hydraulic circuits.

Under these conditions, the heat recovery unit produces/save:

$$65 \text{ KW} \times 8400 \text{ h/an} = 546000 \text{ KWh/an} = \mathbf{47 \text{ TEP/an}}$$

$$546000 \text{ KWh/an} \times 0,3 \text{ RON/KWh} = \mathbf{163800 \text{ RON/an}}$$

$$163800 \text{ RON/an} : 5 \text{ RON/EURO} = \mathbf{32760 \text{ EURO/an}}$$



## **TERMOREK heat recovery unit – installation on an industrial steam boiler**



**Before installation**



**During Installation**



**After installation**

The heat recovery unit from the steam boiler provides a heat exchange surface of **9.6 m<sup>2</sup>** and a recovered thermal power of approx. **110 Kw**. Thermometers were installed at the flue gas inlet and outlet of this device and, when the boiler is operating at **80 %**, the flue gases enter the recovery unit at **160 °C** and exit at **120 °C**. The length of the flue gas path through the recovery unit is **1.2 m**.

For average annual operating hours of **7000 h/year**, the heat recovery unit produces/save

$$110 \text{ KW} \times 7000 \text{ h/an} = 770000 \text{ KWh/an} = \mathbf{66 \text{ TEP/an}}$$

$$770000 \text{ KWh/an} \times 0,3 \text{ RON/KWh} = \mathbf{231000 \text{ RON/an}}$$

$$231000 \text{ RON/an} : 5 \text{ RON/EURO} = \mathbf{46200 \text{ EURO/an}}$$

## TERMOREK heat recovery unit – installation on an industrial furnace



The heat recovery unit provides a heat exchange surface of **2.6 m<sup>2</sup>** and an average recovered thermal power of **30 Kw**.

The furnace to which the recovery unit was installed has average annual operating hours of approx. **4000 h/year**. The recovered heat is used to heat two **2000 l** acid solution tanks and maintain the solution at a temperature of **50 °C**.

Under these conditions, the heat recovery unit produces/saves

$$30 \text{ KW} \times 4000 \text{ h/an} = 120000 \text{ KWh/an} = \mathbf{10 \text{ TEP/an}}$$

$$120000 \text{ KWh/an} \times 0,3 \text{ RON/KWh} = \mathbf{36000 \text{ RON/an}}$$

$$36000 \text{ RON/an} : 5 \text{ RON/EURO} = \mathbf{7200 \text{ EURO/an}}$$

## **TERMOREK heat recovery units – installation on industrial hot water boilers**



The heat recovery unit provides a heat exchange surface of **3.0 m<sup>2</sup>** and an average recovered thermal power of **35 Kw**.

The hot water boiler to which the heat recovery unit was installed has average annual operating hours of approx. **5000 h/year**. The recovered heat is used to preheat the boiler return, thus contributing to reducing fuel consumption.

Under these conditions, the heat recovery unit produces/saves

$$35 \text{ KW} \times 5000 \text{ h/an} = 175000 \text{ KWh/an} = \mathbf{15 \text{ TEP/an}}$$

$$175000 \text{ KWh/an} \times 0,3 \text{ RON/KWh} = \mathbf{52500 \text{ RON/an}}$$

$$52500 \text{ RON/an} \times 4,7 \text{ RON/EURO} = \mathbf{10500 \text{ EURO/an}}$$

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