ENESCO industrial

Industrial Energy Efficiency Services & Combustions Optimizations

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APPLICATION EXAMPLES

TERMOREK heat recovery unit – installation in aluminum melting furnaces

Before assembly

During assembly

After assembly

The heat recovery unit is made of two recovery modules and provides a total heat exchange surface of **19,2 m^2** and an average recovered thermal power of **200 kW**.

The waste heat recovery unit from flue gases was installed on the common piping that collects gases from **4** aluminium melting furnaces, and has an 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 KW x 8000 h/an = 1600000 KWh/an = **137,6 TEP/an**

1600000 KWh/an x 0,3 RON/KWh = **480000 RON/an**

480000 RON/an : 5 RON/EURO = **96000 EURO/an**

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TERMOREK heat recovery unit – installation on an industrial tunnel oven

Before assembly

During assembly

After assembly

The heat recovery unit from the tunnel kiln provides a heat exchange surface of **6,4 m^2** and an average recovered thermal power of **65 Kw**.

The furnace to which the recuperator was installed has an average annual operating hour 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 the hydraulic circuits.

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

65 KW x 8400 h/an = 546000 KWh/an = **47 TEP/an**

546000 KWh/an x 0,3 RON/KWh = **163800 RON/an**

163800 RON/an : 5 RON/EURO = **32760 EURO/an**

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TERMOREK heat recovery unit – installation on an industrial steam boiler

Before assembly

During assembly

After assembly

The heat recovery unit from the steam boiler provides a heat exchange surface of 9,6 m^2 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%** capacity, the flue gases enter the recovery unit at **160 ^{0}C** and exit at **110 ^{0}C**.

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

110 KW x 7000 h/an = 770000 KWh/an = **66 TEP/an**

770000 KWh/an x 0,3 RON/KWh = **231000 RON/an**

231000 RON/an : 5 RON/EURO = **46200 EURO/an**

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TERMOREK heat recovery unit – installation on an industrial furnace

The heat recovery unit provides a heat exchange surface of **2,6 m^2** and an average recovered thermal power of **30 Kw**.

The furnace to which the recuperator was installed has an average annual operating hour 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 ^{0}C**.

Under these conditions, the heat recovery unit produces/save

30 KW x 4000 h/an = 120000 KWh/an = **10 TEP/an**

120000 KWh/an x 0,3 RON/KWh = **36000 RON/an**

36000 RON/an : 5 RON/EURO = **7200 EURO/an**

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TERMOREK heat recovery unit – installation on an industrial hot water boiler

The heat recovery unit provides a heat exchange surface of **3 m^2** and an average recovered thermal power of **35 Kw**.

The hot water boiler has an average annual operating hour of approx. **5000 h/yea**r. The recovered heat is used to preheat the boiler return, thus contributing to reducing fuel consumption.

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

35 KW x 5000 h/an = 175000 KWh/an = **15 TEP/an**

175000 KWh/an x 0,3 RON/KWh = **52500 RON/an**

52500 RON/an : 4,7 RON/EURO = **10500 EURO/an**