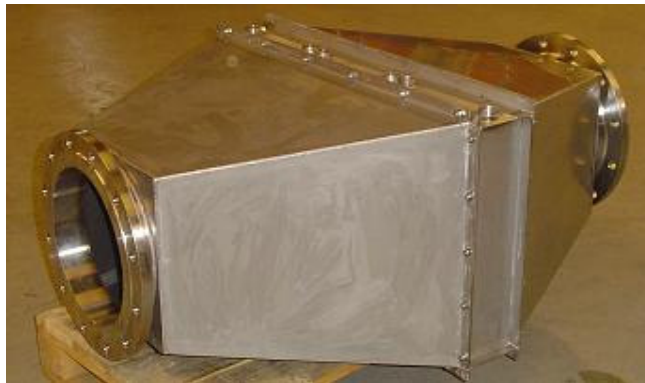


## Cooling of recirculating gas with water as cooling medium

### The problem

In many process systems is quick and controlled cooling of parts and material required to assure short production cycles and a correct quality.

Harjavalty, Finland in the OM Group Inc. is a leading manufacturer of semi-manufactured nickel based products. One of the products is nickel briquets in size of normal eggs.



The production process includes cooling of the briquets from 900 to 150°C in a twelve meter long tunnel with a conveyor belt.

The cooling with a surrounding water jacket has only 150 kW effect and needs upgrading.

### The solution – AirCross reduced cooling time with 60%

As cooling medium is non oxidizing and re-circulating nitrogen used, which in AirCross 21 is effectively cooled.

The nickel briquets and the nitrogen move in counter flow to each other. The results with AirCross have been proven to be excellent.

Not only was cooling time reduced with 60%. The transferred energy to the water is used in the heating system. Due to the nitrogen inside the cooling tunnel was temperature much more even between different parts of the tunnel. This increased the quality of the nickel briquets. Harjavalty has after the positive results equipped other nitrogen cooling systems with AirCross 21.