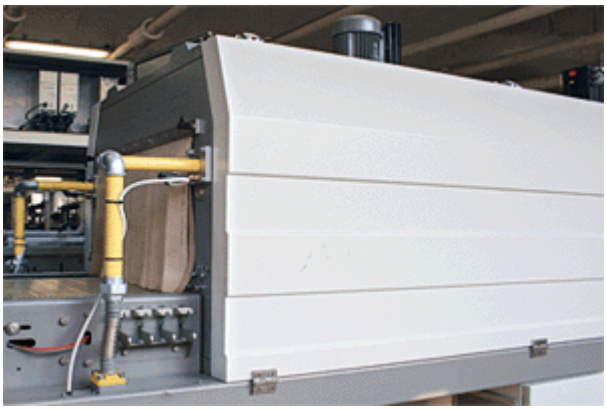
Eco-friendly solutions:
New natural gas-heated shrinking tunnel

All over the world thermoshrinking film has become the most used packaging material to pack food, beverages and non-food products.

New methane-heated shrinking tunnel

As a consequence, shrinkwrappers - e.g. secondary packaging machines outputting packs overwrapped in shrunk film - have become very popular in the bottling and packaging lines of large and small producers. This packaging process requires a thermoshrinking tunnel (positioned after the film-overwrapping module) which, by means of the heat generated by electric resistances, gets the plastic film shrunk around the bottles and thus makes a solid and compact pack.

Smiflexi shrinkwrappers - LSK and SK series - can be equipped either with a standard electrically powered shrinking tunnel or with a new methane-heated model. The new tunnel type is a state-of-the-art solution, which, thanks to the combustion of natural gas in place of the use of electric resistances, produces the heat required for the film-shrinking operation.



In comparison with the traditional combustibles used for electricity production, the methane features several advantages:
- its combustion is smogless and pollution-free;
- it is an environment-friendly product;
- in those countries where it is available at low price, it allows a dramatic cost-cutting in the energy procurement.

An actual example

In SMI machine testing department, our technicians have carried out several trials in order to calculate the actual natural gas consumption during the thermoshrinking process; then, the results of the whole testing plan have been compared with the electricity consumption required to perform the same testing operations.

Test parameters

Tests have been carried out according to the following parameters:
a) test time: **1 hour after reaching the oven temperature of 200° C**;
b) working mode: **idling**;
c) tunnel length: **3 meters**;
d) speed: **35 m/min;**
e) country: **Italy**;
f) period: **end of August 2009**;
g) average naturarl gas price: **0.33 Euro/m3**;
h) average electricity price: **0.13 Euro per Kw/h**
(operating costs not included).

Results

Under the same working conditions, the consumption monitored was equal to 3 m3 of methane and 25 Kw/h of electricity; such figures, multiplied by the two energy sources average market prices, have highlighted that the consumption cost of the **methane-heated tunnel** have been equal **to 1 Euro per hour** (3 m3 x 0.33 Euro = 1 Euro/h), versus a consumption cost of the **electricity-fed tunnel of 3.25 Euro per hour** (25 Kw/h x 0.13 Euro = 3.25 Euro/h).

Such analysis makes it clear that, at least in Italy, the use of the natural gas-heated shrinking tunnel ensures a **70% saving in the energy consumption costs**, in comparison with the traditional electricity-heated model. Furthermore, the time for reaching the working temperature is shorter by 75% in comparison with the electricity-powered tunnel (5 minutes with natural gas and 20 minutes with electricity).

If you are looking for a cost-cutting and ambient-friendly solution, from now on you can select Smiflexi's brand-new methane-heated shrinking tunnel to be joined to your Smiflexi shrinkwrapper.

For further information, do not hesitate to contact our Sales Department.

Marketing Department
SMI S.p.A.
E-mail: info@smigroup.it
www.smigroup.it