



■ DAIRY

# What Profit Squeeze? The Savings are in Your Production Process!

*By Richard Bull, Managing Director of Enercon Industries*

## Induction Contact Sealing offers:

- Significant energy savings
- 50% less foil used
- Seal quality improved
- Reduced running costs
- Reduced maintenance costs
- Up the line speed
- Reduce the scrap.

### **A bold claim? It's fact!**

For many years products such as; food, milk, water, coffee, ketchup, yoghurts, pharmaceutical tablets, oils (olive & mineral), automotive brake fluid, household, healthcare, etc. have been foil sealed in a variety of different ways.

The high speed rotary table industry, lateral indexing lines, single shot and 2 head/4 head/8 head indexing tables generally use hot plate sealing heads for this function. However, this process has its limitations on speed and seal integrity, due to the hotplate heat sealer, time factor and the unregulated thermal and pressure control.

Manufacturers are aware how critical it is that they operate modern production facilities due to the current uncertainty with the global economy. They are circumspect of unit cost, efficiency (especially with the escalating price of energy) and a continual rise in general overheads. All of which have an impact on a company's profitability.

New regulations bring additional amounts of pressure on suppliers and contract packers to reduce packaging weight, reduce the use of energy, increase ability to recycle and to become ever more efficient in their working practises – and, in the short term, it is not predicted to get any easier!

Manufacturers of Induction heat sealing equipment have recently provided a variety of sealing systems to improve efficiency and speed with varying degrees of success, but none, until now, have been able to take on the high speed lines in contact sealing due to technical limitations such as;

- Reflected heat from the foil being sealed
- Heating time cycle
- Contact / Pressure
- Foil thickness.

Current rotary table units can run up to 450 seals per minute. However, the industry is keen on working towards 600 units per minute and a 'couple' of companies are nearly there! This means that the hotplate sealers are running out of heating time as



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the dwell time for the seal is now too long and is restricting the top speed that the fillers can be run at.

A solution to the process of running a contact sealing head powered by induction energy has been found which will alleviate this situation posed by conventional hotplate. To realise the higher efficient line speeds, contact induction sealing heads need to be able to cycle at 40 units per minute 24 hours a day – 360 days a year from one head.

Enercon's development programmes have now achieved heat cycles of over 40 units per minute from one power source and just one induction head – continuously.

### **In trials some astonishing facts resulted:**

- A cycle rate of 40 units per minute equates to 1440 seals per minute on a 36 head filler. (Not practical but achievable. In reality 800 to 900 units per minute).
- The energy used by an induction contact sealer saves at worst 125Watts per head, per Kilowatt hour, over hotplate and possibly more.
- Resulting in a 25% reduction in the use of energy.
- Reducing CO<sub>2</sub> emissions and consequently carbon footprint by at least 25%.
- The foil thickness can, in general, be reduced from 60 micron down to 20 micron - a saving of more than 50% on the amount of foil being used.

- The sealing head and power unit can be retro fitted to existing lines.
- The maintenance on induction contact sealers is substantially less than contact heating plates.

In fact everyone saves money and uses less of everything! But faster with a better quality seal and a much reduced unit cost of the product being packed.

### **Saving Foil**

Halving the amount of foil required or used will save a massive amount of foil used and reduces the cost of the sealing process by up to 50%.

### **Saving Energy**

The Induction contact sealing heads will save a tremendous amount of energy used in the process. For each head it is possible to save at least 125Watts of energy per Kilowatt hour or more per head. For every 1000 conventional heads that's equal to 125KiloWatts of energy saved every hour of every working day. Equal to 5MegaWatts per week and 240MegaWatts per year and there are thousands of conventional hotplate sealing heads out there!

### **Saving Maintenance Costs**

The Induction contact sealing heads require less maintenance, will outlast conventional hotplate heads and will give a much more controlled and superior seal without blistering or damage to the neck of the container being sealed.

To find out more about Hermetic Induction Foil Sealing email: [info@enerconind.co.uk](mailto:info@enerconind.co.uk). □



Induction Contact Sealing.