## Steam Z Case Study



# Cardboard factory



**Steam · Z** is introduced to more than 70% of corrugator machines that manufacture cardboard. Good reason for the evaluation is that all the heating units that make up the process are heated as expected and the process stabilizes. The yield has increased and productivity has improved.

The corrugator consists of a heating cylinder and a heating plate, and the number of attached traps is 30 to 40 pieces.

Normally, the exit side of each trap is connected to one same recovery pipe.

The steam pressure used is relatively high, 1.0 - 1.2 MPa, the trap is likely to malfunction and break down. The owner has a blowout trouble trap. Therefore, the temperature of the heat transfer surface is low.

In many cases there are heating units whose degrees do not match. But, accustomed to such a phenomenon

In addition, when starting operation by adjusting the setup to a new lot, the temperature of each heating unit is stable. The item that came out later is a defective item, and even when making the same product, the amount of that product is rose each time.

#### It was a big issue how to stably reduce defective products at the beginning of operation.?

#### After exchanging the existing trap for **Steam · Z**;

- There are no blowout troubles at that time.
- Since it is impossible to cause a breakdown failure also in terms of material and structure, the heating of the whole heating unit is good, and the temperature of the whole process has been stable for a long period of time.
- It is unnecessary to adopt the technique of interdependence that was dependent on the intuition of the individual.
- It is possible to create a driving manual for each product, making management very easy.
- The time to stabilize the product quality is shortened after starting the operation and the feeding speed of the raw material paperboard is increased.
- Initial defective products decreased and yield improved.
- Productivity per hour also improved dramatically.
- Business hours have been shortened.

Excellent durability in the longest example of the corrugator, there are no failures for 20 years, and now it is moving smoothly.



### STEAM· Z Best Solution to Fuel Cost Saving and Reduction of CO<sub>2</sub>

Steam consumption reduction  $\rightarrow$  Fuel reduction  $\rightarrow$  CO2 reduction