

# Impuls-welding control "B" for Packaging Machinery, --works with variable heating power.

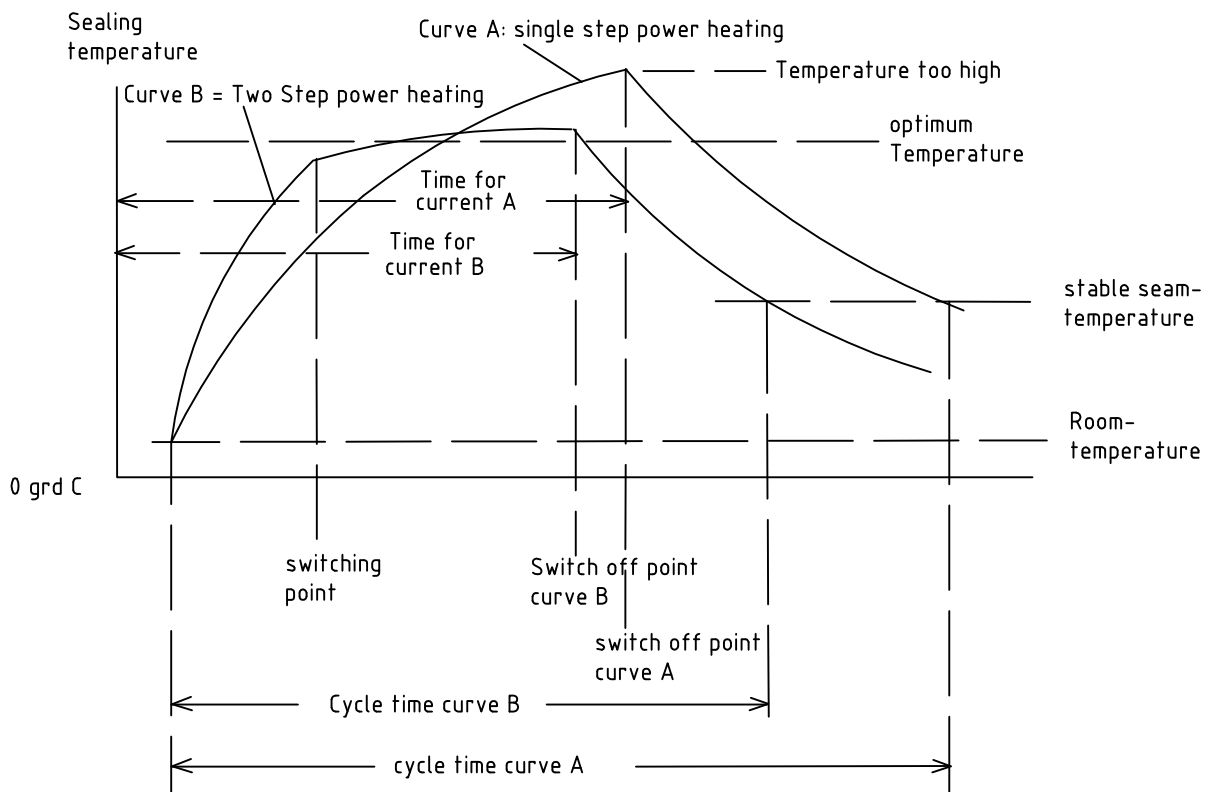
Foil packaging machines are not always equipped with electronic measuring and control of the temperature of the sealing wire. Good sealing quality can be obtained using reasonable low-priced electronic. A time dependent single setting heating electronic can produce good results using the time setting with constant heating power. See curve A below. However the welding time must be continuously be reset after some sealing operations, as the welding temperature does not always remain constant.

A novel impulse welding control unit results in the following improvements, see curve B below:

- 1.) Faster heat up, with shorter heat up time, due to greater transformer voltage,
- 2.) No overshooting of the welding temperature as the heating power is reduced after time depend heating up,
- 3.) A reduction in the heatup temperature and therefor a better control of the welding temperature
- 4.) due to reduced overheating, a reduced cycle time results.

Curve B: First the heating transformer is switched fully on, resulting in a fast heat up time. Then the heating transformer is operated in a pulsed mode so as to maintain the temperature. Using a Dip Switch, the heatup time can be set to one of four values. The pulse - pause proportion can be adjusted continuously using a potentiometer.

Graphical representation of the temperature course of a sealing operation using two different methods.



Using a patented transformer switching procedure it is possible to frequently switch on and off the welding transformer in a pulse mode without bothersome inrush currents arising. In addition, higher induction, low loss and therefore smaller sized transformers can be used, resulting in reduced transformer costs. Fuse protection of the transformer is nevertheless not a problem. The normally used contactor is replaced by electronic control. The current time control is still set by the machine control. The control elements of the sealing electronic, dip switch and potentiometer, are set only once during initial commissioning.

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SEALING-CONTROL-B

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Ausgabe	Blatt
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