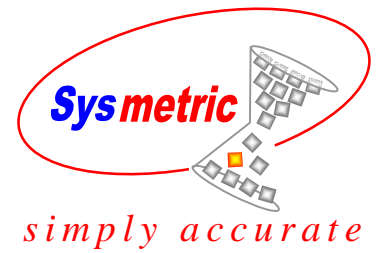


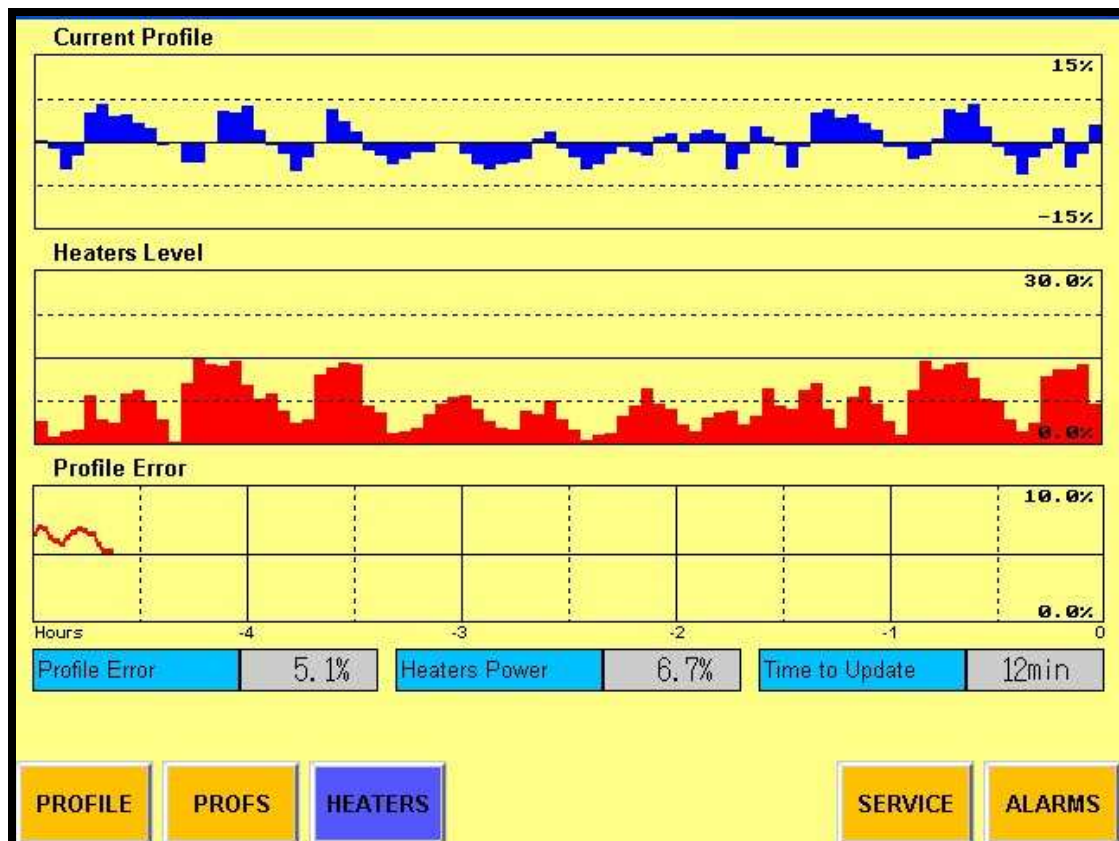
Line Control



Profile Control

Optimizing thickness uniformity in blown film production

The following picture shows typical graphs when the control system starts to work.

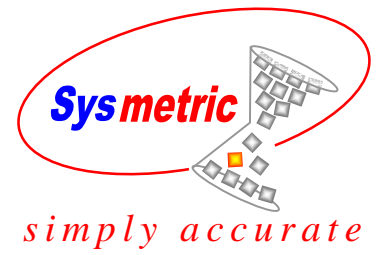


The graphs include the following data:

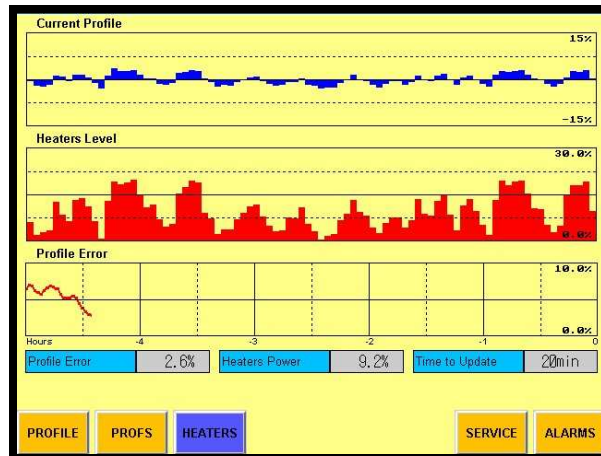
- The *Current Profile* of the lay-flat. The profile shows the uniformity of the lay-flat thickness.
- The *Heaters Level* which shows how much heating the system adds to each zone of the die.
- The *Profile Error* graph which indicates how much error there is in the profile. The error decreases when the thickness becomes more uniform.

Note: these examples are of a control system for an 88 zones heating ring.

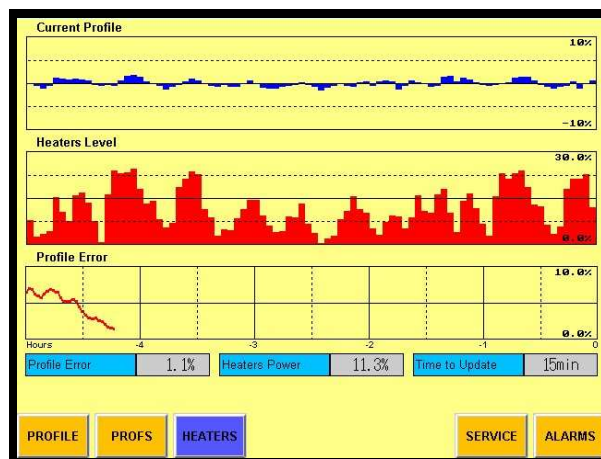
Line Control



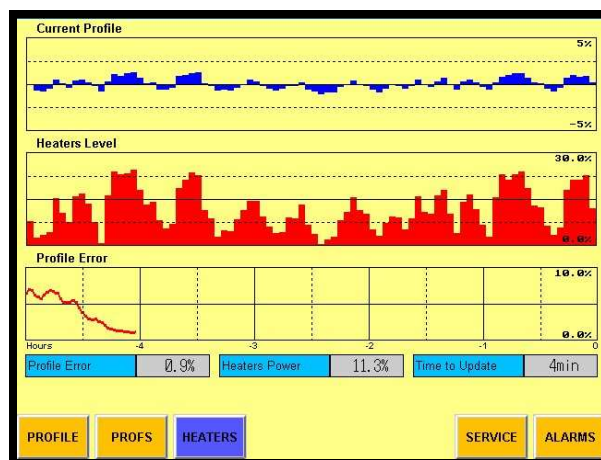
The following pictures show a track over the profile of the lay-flat as the system changes the heating levels to improve the uniformity of the thickness.



Profile 10 minutes after starting the control



Profile 20 minutes after starting the control



Profile 30 minutes after starting the control