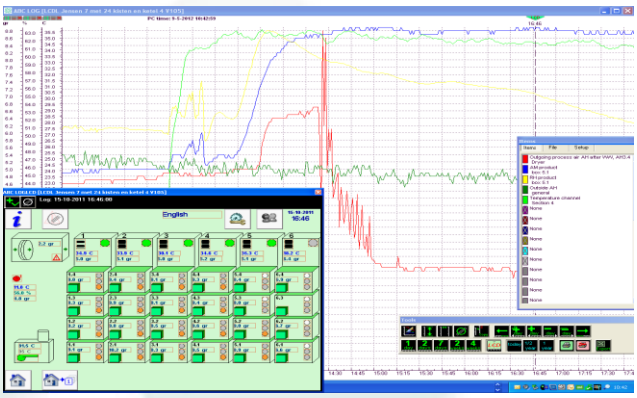
Automatisation of existing installations

Optimize drying installations to dry seeds economically with the ABC drying processor of Agratechniek.

Automatically drying is the basic principle of every control unit which Agratechniek installed Measuring and modulated controlled steering is a must by automatism a drying installations. The modification costs would be recovered by more economical drying with a better result.



Upgrading of installations:

- Modulated heating system.
- Modulated air flow capacity
- Measuring and controling air flow
- Modulated air valves incase of more separated drying sections
- Sensor by incoming/outgoing air flow
- Optimal integration of air dryers (dehumidifiers)
- One control unit can control more than one installation.
- Monitoring and Log by ABC PC-software.

Basic principle to dry with the ABC processor:

- Seeds would be dried to the required moisture content.
- Savings on costs and time; only drying with the right climate conditions.
- Constant or dynamic air temperature / depends on drying process and installation
- Dynamic airflow by drying different products, volumes and drying phases
- Measuring of T° and RH, define Absolute Moisture (AM).
- Read out measuring and parameter settings on a control screen and PC. All parameters are logged.
- Drying process is visual by means of graphics. Overview in Excel.

Example of drying process in containers. Airflow would be automatically controlled and on the amount of containers.

A modulated motor controlled valve would be installed in front of the air opening.

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The required drying conditions (T° and RH) which compare with the equilibrium moisture of the seeds can be programmed per drying section. The airflow through the seeds is dynamic; In the beginning of the process a lot of moisture would be evacuated with much air. The remaining moisture shall be removed at the end of the process with less air. The total amount of air of all sections would be automatically adapt to number of active sections and the drying phase of the different sections.

Sensor in the outgoing airflow of a drying box. Measuring T° and RH per section (box, tray, container).

Example of upgrading an existing drying installation with boxes. The boxes with seeds can be dried individually to the required moisture content.

By this principle treated seeds can be dried rapidly and continues in different phases.

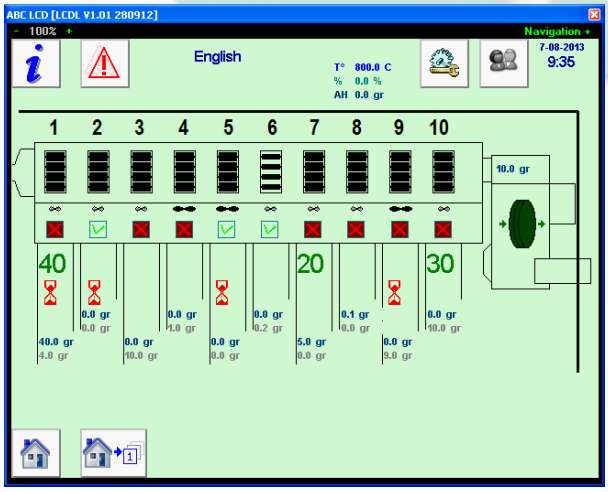
Existing installation for drying treated seed in boxes in 10 sections/lines.

New air duct on plenum to distribute dried air per section.

Air duct connected to new adsorption air dryer.

Benefits:

- Safe and sensible drying process
- Process control and 'traceability'
- Savings on energy costs
- Quick and efficient drying



Touch screen with ABC software to control distribution of dried air over 10 drying sections.

Per section a valve register to let dried air into the section that requires dried air.

The adsorption drier is also controlled by the ABC software to reach desired moisture content and airflow.