WE ARE GLASS PEOPLE

HEYE
PROCESS CONTROL 4.0

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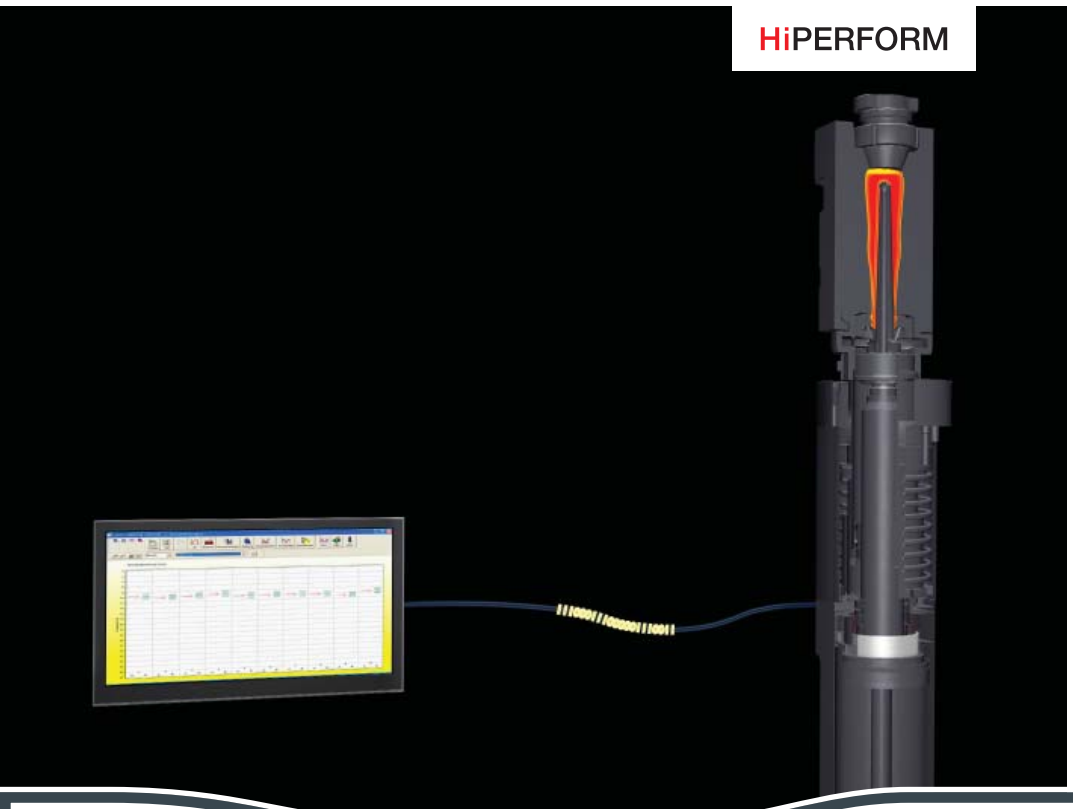


heye international

THE HEYE PROCESS CONTROL

is a closed loop solution for the pressing process of all plunger mechanisms of an IS-Machine, simultaneously it keeps the gob weight stable. It displays a number of forming events on several selectable charts and permits to improve the parameter setting by comparing data. Early recognition of beginning malfunctions and the automatic gob size and weight control increase the production efficiency.

Process supervision

New Features
- Simplified and intuitive operation
- User management
- Additional statistical evaluations
- Section assortment
- Recorder for sensor data
- Gob camera for blow & blow weight recording (option)
- Display of reject reasons
- Storage of the last 200 pressing curves
- Storage of the last 200 pressing curves that caused article rejects

Advantages
- Recognition of beginning malfunctions at the earliest moment
- Defective articles will be rejected
- Reject statistics shows the efficiency distribution by all cavities
- Message with possible reasons allows immediate specific remedy by the machine operator
- Easy handling
- Single and tandem feeder IS-Machines with up to 60 cavities
- Quick change of the pressing mechanism
- Displacement sensors for all commercially available pressing mechanisms on hand
- Practical experience with more than 900 systems

Controller functions
Up to 6 control loops are available. They can be used for tube height control and plunger position control as follows:

- At Single IS-Machines with up to 4 gobs per shear cut
- At Tandem IS-Machines with up to 3 gobs per shear cut

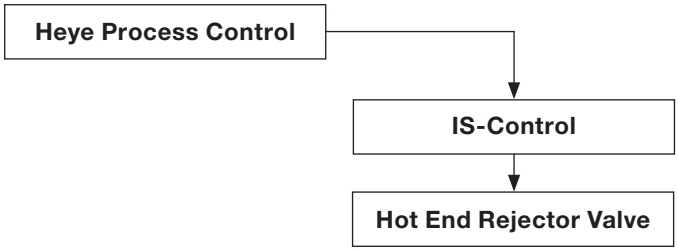
Database functionality
The Heye Process Control, a well-known and well proven tool for display and supervision of all pressing processes in the IS-Machine now has become much more comfortable in operation:

- The entire software was revised, new functions were added
- The operating surface of the software now in typical Windows® style
- There is only one software for all IS-Machine variants
- Extremely simplified job change by article database containing all article depending parameters
- Basic data of each pressing process are stored in a data base for future analyses and statistical evaluations
- Robust and durable industrial PC inside the cabinet housing
- Outwardly, the cabinet housing is pin-compatible with the previous system

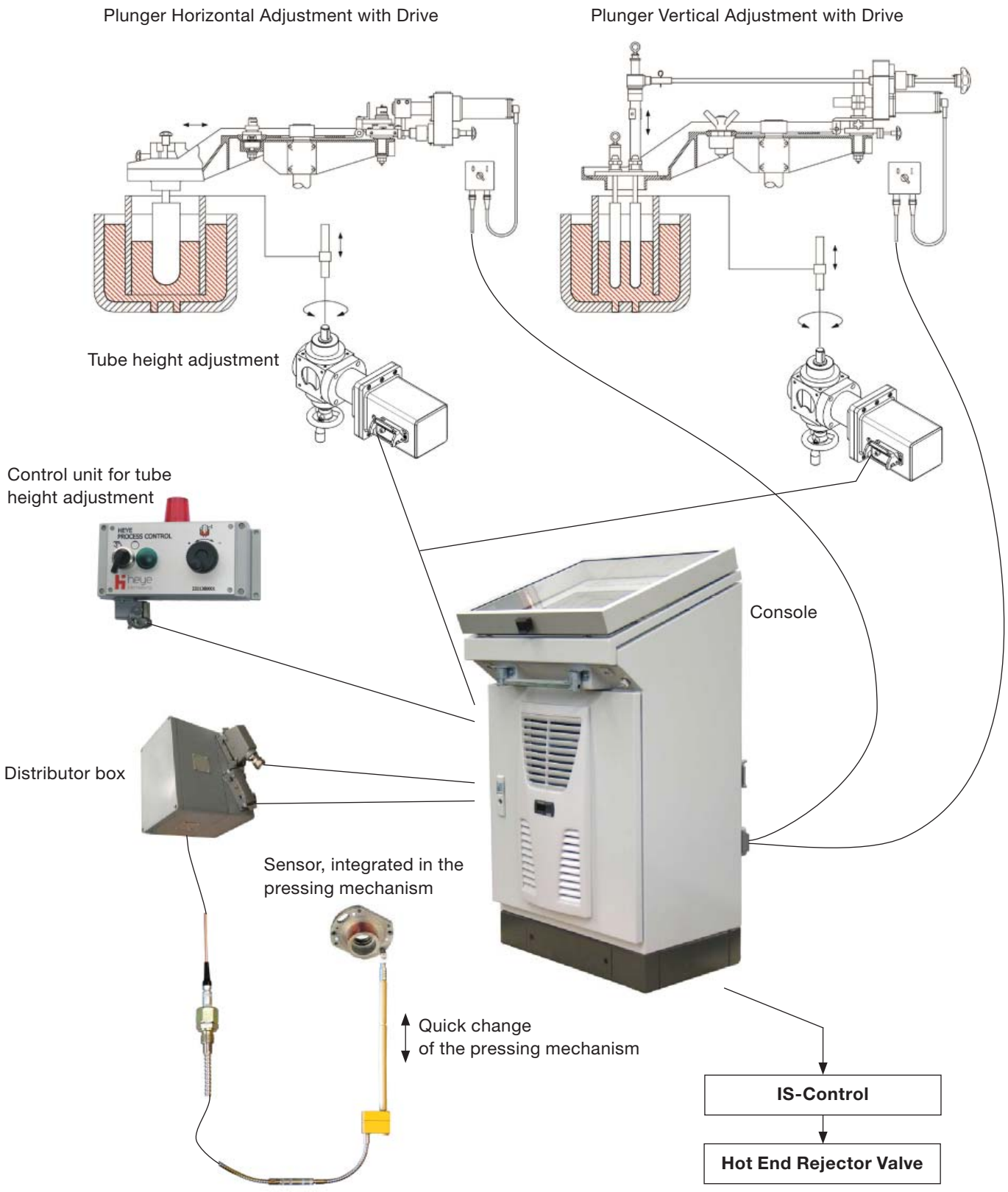
Coupling with the IS-Machine control
Each pressing process with its features

- Plunger position
- Erratic value
- Pressing duration
- Position / time gradient

is checked for an exceeding of programmable limit values. The coupling with the IS-Machine Control renders possible to reject these articles.
Typical reasons for limit value exceedings are for example a bad gob loading etc.
Additionally, in case of sticking plungers the section can automatically be stopped.



COMPONENTS OF THE HEYE PROCESS CONTROL



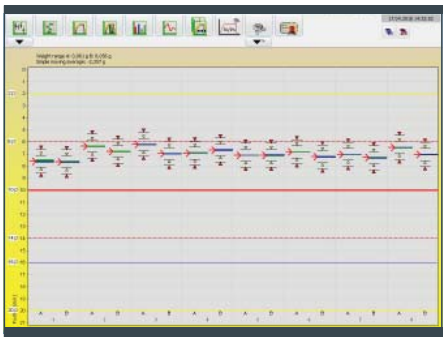
EASY HANDLING

Plunger Position

By a simple click on the icon several graphics illustrate at real time a number of forming events:

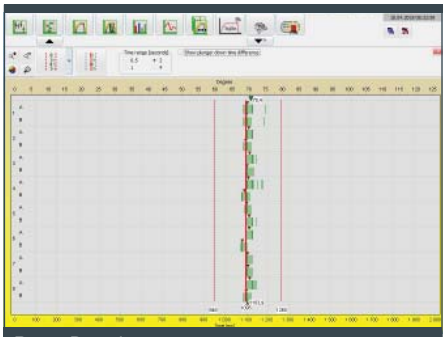
Analysing possibilities

- Set-point of plunger end position
- Limit lines for plunger end position
- Plunger end positions of the last 40 cycles
- Volume differences of blank moulds
- Short-term weight deviations
- Overshooting of defined limits
- Piston positions relative to the cylinder
- Plunger positions relative to the blank moulds
- Limit triangles for erratic values
- Active controller limits
- Inactive sections
- Display of rejected articles
- Change to pressing curve display by mouse click


Plunger Position

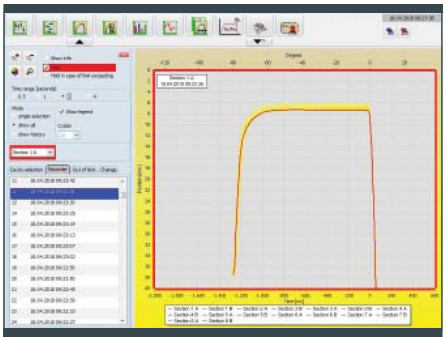
Option: Press Duration Control

- Press durations for the last 200 cycles of each blank mould
- Deviations of press durations
- Average press duration of each blank
- Average press duration of all blanks
- Limit line for min. dwell time
- Limit line for max. dwell time
- Plunger down time differences


Press Duration

Root cause analysis

- Hard running mechanisms
- Too high or too low pressing force
- Frictional condition of plunger mechanisms
- Speed of plungers during penetration into glass
- Dwell duration of plungers in the glass
- Gradient limits
- Hold in case of limit exceeding
- In the persistance mode sporadical malfunctions are recognisable


Plunger Motion

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