www.vision-tec.de

Filler / Capper Management

Filler / Capper Management

Quality assurance

The filler / capper management serves to detect burst bottles within the framework of quality assurance. The forced rejection of possibly contaminated neighbouring bottles (breakage sequence bottles) prevents them from entering the market.

As a statistical tool, the filler / capper management provides important information on runtime, efficiency, shift performance, quality, and rejection quantities.

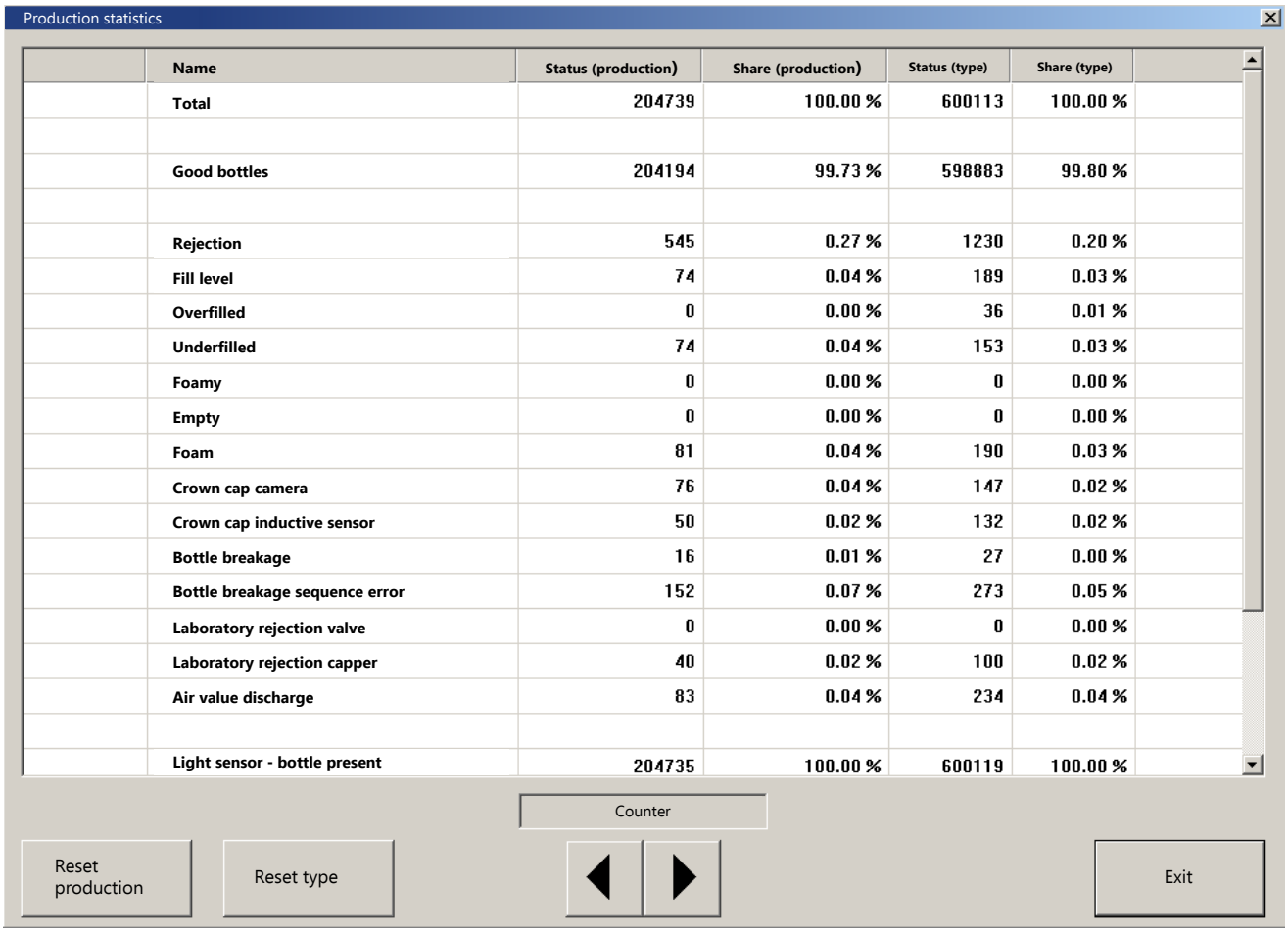
Evaluation / Structure

The filler / capper management uses and monitors the signals of the filler. The signals "bottle infeed", "machine cycle", "bottle available_1" (end of evacuation), "bottle available_2" (filling completed), "shower on" and a rounding signal are used.

With these signals the filler can be virtually displayed on the computer of the filling level inspection and the evaluations of the filling level control can be assigned to the respective filling valve.

Features

- Filler valve monitoring
- Capper monitoring
- Laboratory rejection
- Bottle burst detection and rejection of bottles following a burst one
- Simulation program for burst bottles
- Statistical features



Example "Counter dialog" (The counters can be reset individually, e.g. when changing types.)

Filler / Capper Management

Filler valve monitoring

A filler valve with a regular error is detected and displayed. The error frequency can be set as a percentage.

The faulty filling valve is automatically reported from the valve statistics. This report serves as a decision aid whether the filler should be stopped or not.

In case of a stop, the faulty filling valve is automatically moved to the repair position.

Furthermore, a valve statistic is provided, where is shown on a bar chart what filling valve has the largest error frequency.

The data of the filler manager are available on the inspection unit and can be accessed as a file as well.

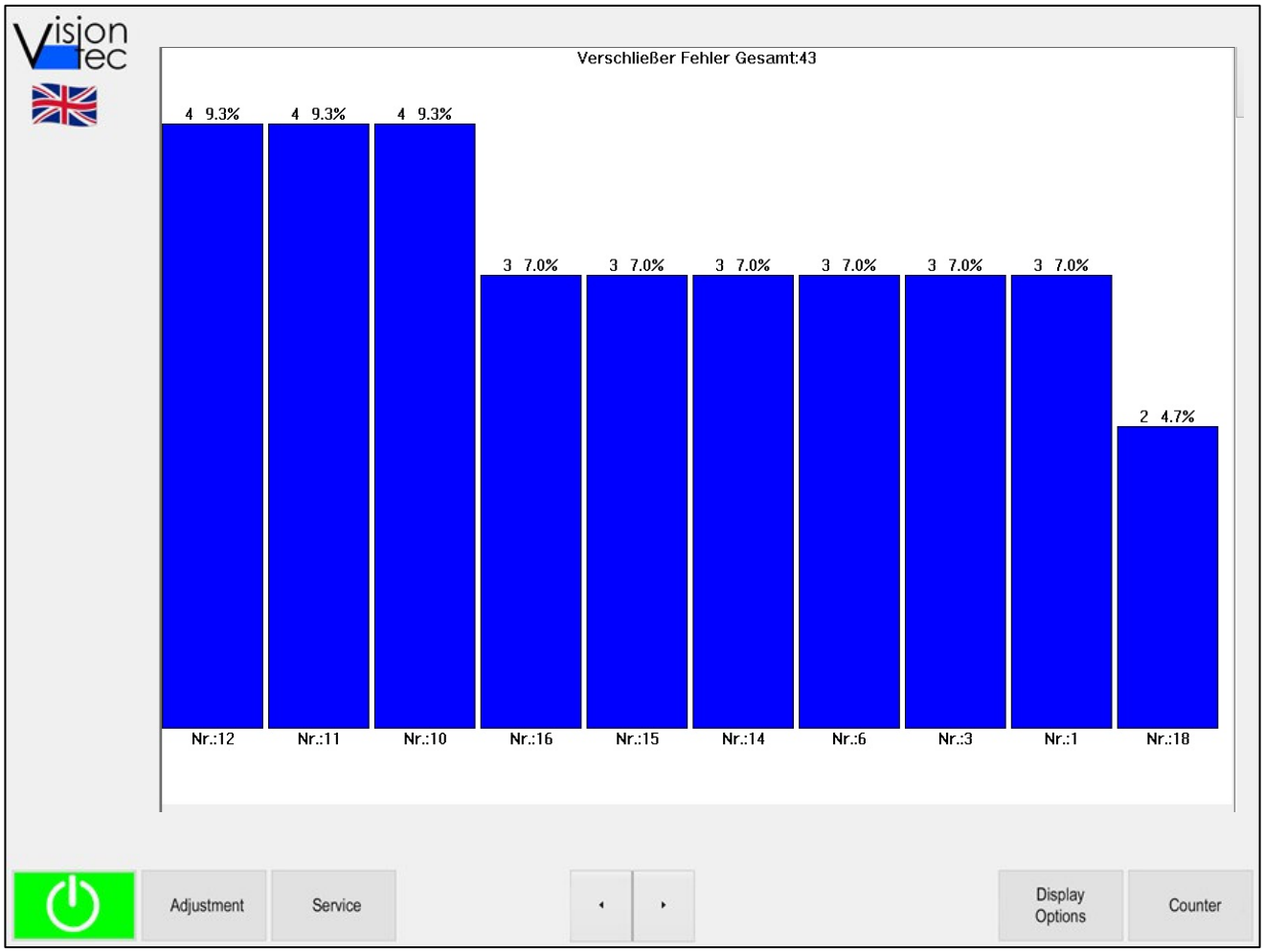
Capper monitoring

A capper unit with a regular error is detected and displayed. The error frequency can be set as a percentage.

The faulty capper unit is automatically reported by the capper statistics. This report serves as a decision aid whether the capper should be stopped or not. In case of a stop, the faulty capper unit is automatically moved to the repair position.

Furthermore, a capper statistic is provided, where is shown on a bar chart what capper unit has the largest error frequency.

The data of the capper manager are available on the inspection unit and can be accessed as a file as well.



Example "capper statistics"

Filler / Capper Management

Bottle burst detection and rejection of bottles following a burst one

This feature detects if a bottle is burst during the evacuation. The valve number of the burst bottle is determined in the computer and used for other features.

- Rejection of bottles before and behind the burst bottle. The number of forerunner and follower bottles to the valve position, in which the bottle was burst, is adjustable.
- Rejection of bottles in a (likewise adjustable) number of filler rounds for the valve position, in which the bottle was burst.

Since the signal "bottle available" signal is used twice, there are also two bottle burst functions:

- Bottle burst 1 (after evacuation)
- Bottle burst 2 (after filling the bottle)

Different follow-up reactions can be set for both types of bottle burst.

Simulation program for burst bottles

The simulation program simulates and checks the entire sequence which is specified after a bottle burst.

Example procedure:

- For the valve number 10 the simulation starts by entering "Valve no. 10 - bottle burst".
- The filler manager suppresses the signal "bottle available", so that the shower must be addressed.
- In the next round, a forced underfilling is initiated by the filler.
- The given control of the shower and the forced underfilling of the filler to this valve number is evaluated via the showers signal and the then underfilled bottles.
- After a complete bottle-burst-sequence, it is acknowledged on the system with the confirmation "bottle burst simulation on valve 10 successful".
- Should single features not have been initiated, they are reported.

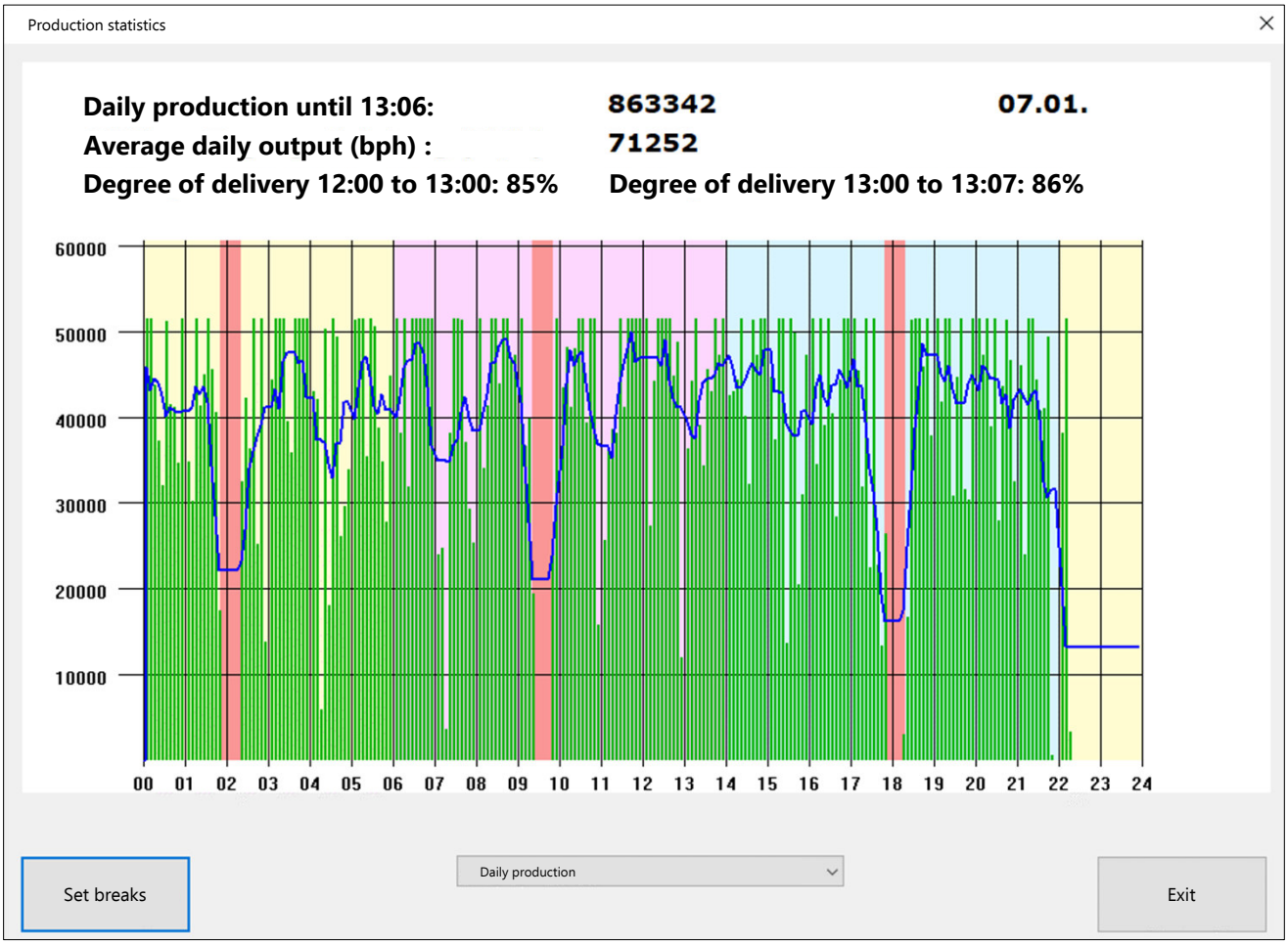
Laboratory rejection

For the laboratory rejection a valve, a set of valves or the number of filler rounds can be set on the inspection unit for a forced rejection. The same applies to the capper.

Filler / Capper Management

Statistical evaluations

Example: 24-hour evaluation



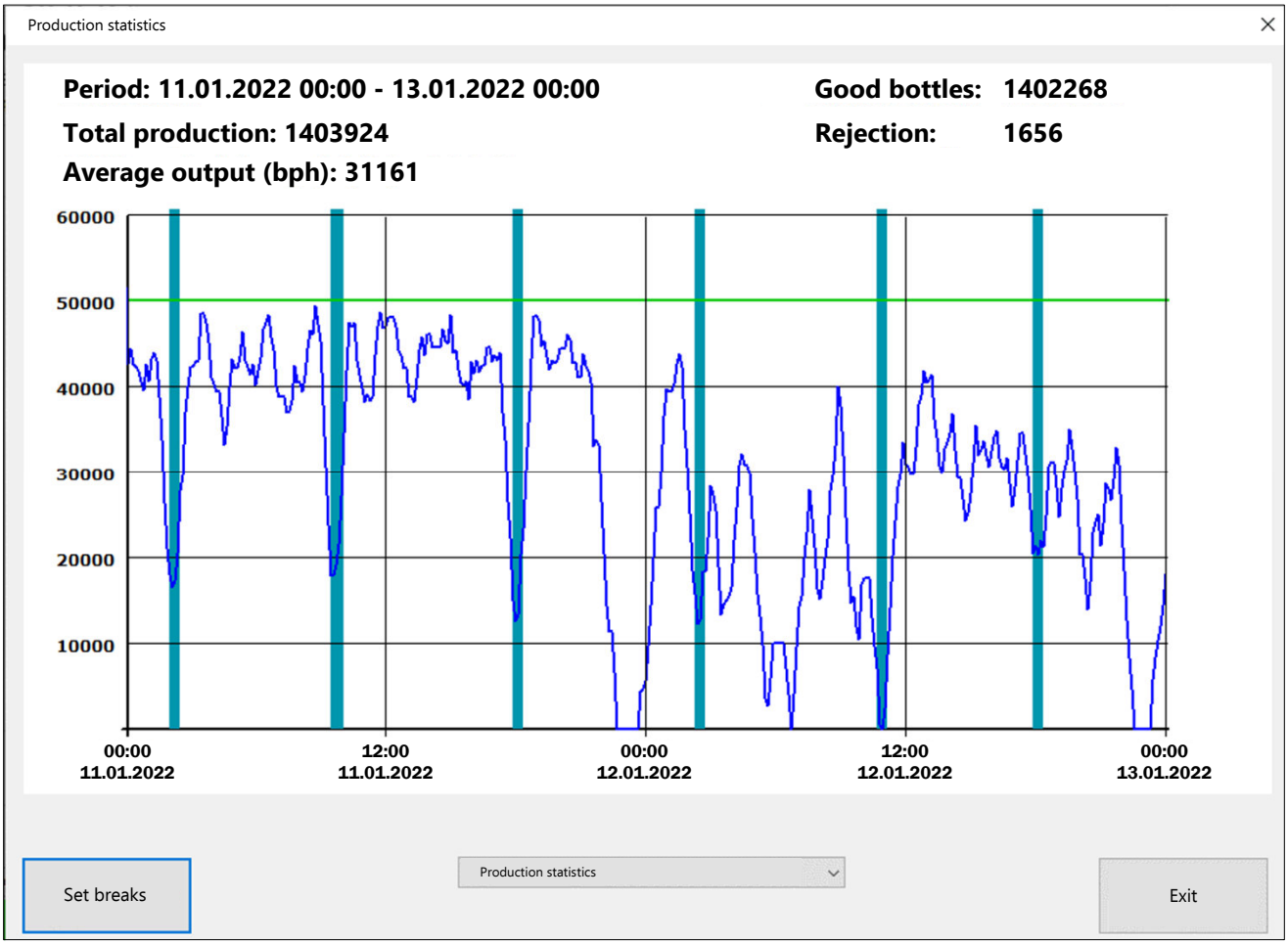
24-hour evaluation

- Evaluation of the current day (00.00 - 23.59)
- Colour background of the individual layers (yellow, pink, light blue)
- Display of current good performance in bottles per hour per time unit (green)
- Display of total production and average output over the day
- Pause times (displayed as red bars) can be freely defined and are considered for the calculation of the average power.

Filler / Capper Management

Statistical evaluations

Example: Production evaluation



Production evaluation over a certain period of time

- Freely definable period
- Calculation of total production and average output (minus pauses)
- Graph display (blue)
- The green line symbolizes the rated power of the system.
- Pauses are displayed as vertical bars

vision-tec gmbh
Otto-Hahn-Straße 5
D - 34123 Kassel
Germany

Tel.: +49 (0) 561 / 97 98 00 00
Fax: +49 (0) 561 / 97 98 00 70
E-Mail: info@vision-tec.de
Web: www.vision-tec.de