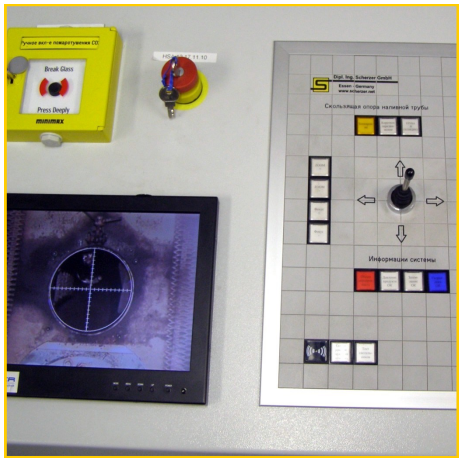

Options

for SCHERZER filling tube systems

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Optional Drop collector

for SCHERZER filling tube systems

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Optional Drop collector for SCHERZER filling tube systems

After each loading procedure, the hydraulically actuated loading tube returns to its upper position. Although the filling tube is liquid-tight sealed, a few drops of the loaded product can fall onto the rail car.

Especially with highly viscous products (f.e. Bitumen) the draining process takes longer and results stronger, long lasting contamination.

In order to collect these drops, Dipl.-Ing. SCHERZER GmbH offers a pneumatically operated, pivotable drop collector.

As a standard feature, the drop collector comes with a removable insert that can be exchanged and evaporated depending on the product.

The drop collector (cup) can also be supplied with an electrical trace heating, so that the product remains liquid.

A retrofitting of existing facilities is easily possible in most cases.

In case we piqued your interest, do not hesitate to contact us for a free quote.

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Technical data:

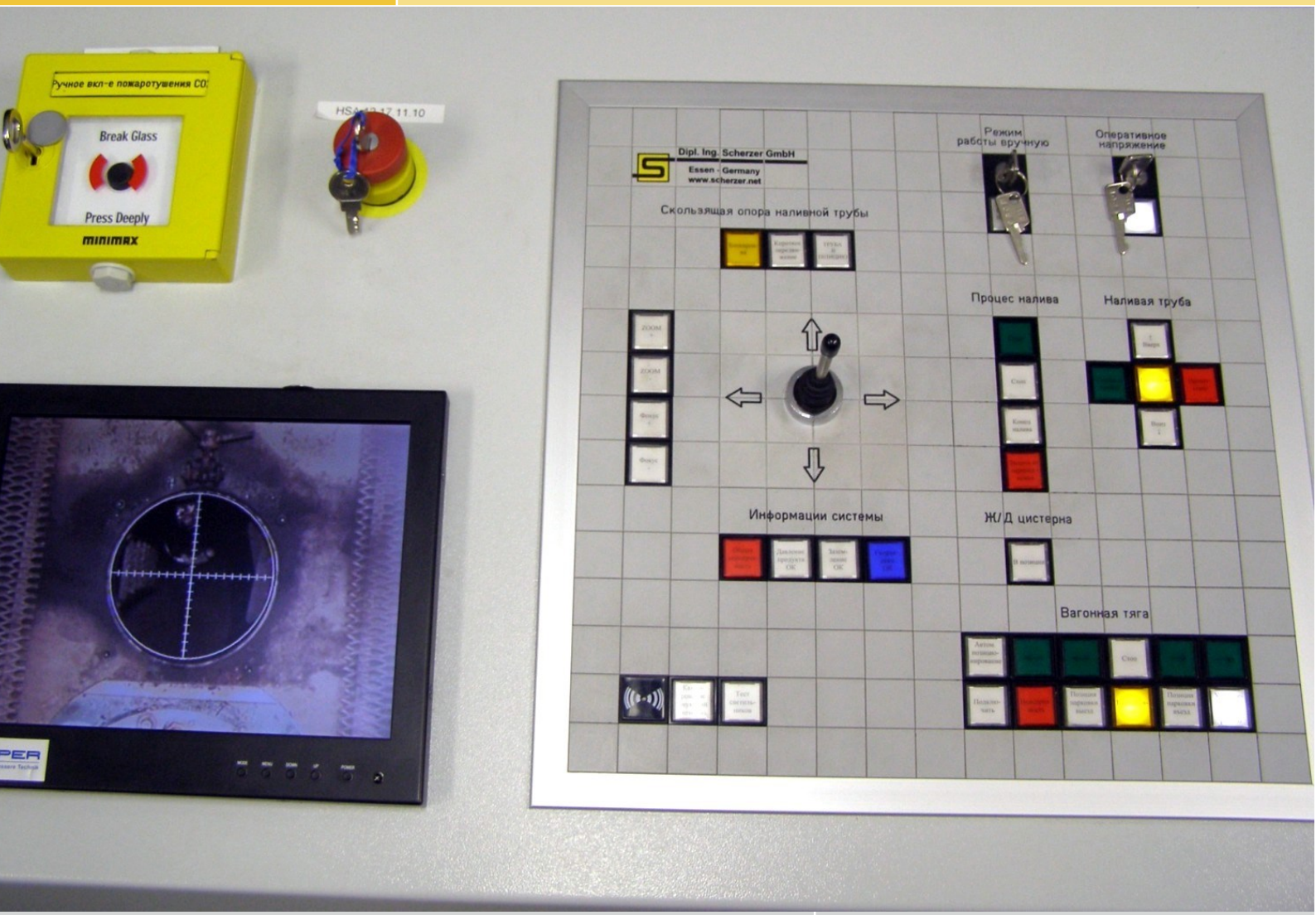
- Pneumatic operated swivel drive
- 180° - swivel range
- Outer hoist limiting
- Final position signal by initiators
- Speed control by throttle valves
- Collector (cup) diameter: 450 mm
- Collector (cup) height: 130 mm
- Instrument air pressure: 6 bar

Optional electrical heating:
(Heating belt HSB 60):
Power: 450 W (during operating temp. 40°C)
Power: 1000 W (during start-up temp. –25°C)
Retaining temp. 40°C
(during outside temp. –25°C)
Ex-area: T3
Voltage: 230V WS

Optional camera-supported

Filling tube positioning

for SCHERZER filling tube systems



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- **Camera-supported check of the dome opening and the moving in area for the filling tube down to the railcar bottom.**
- **Camera-supported residual amount check in the railcar.**

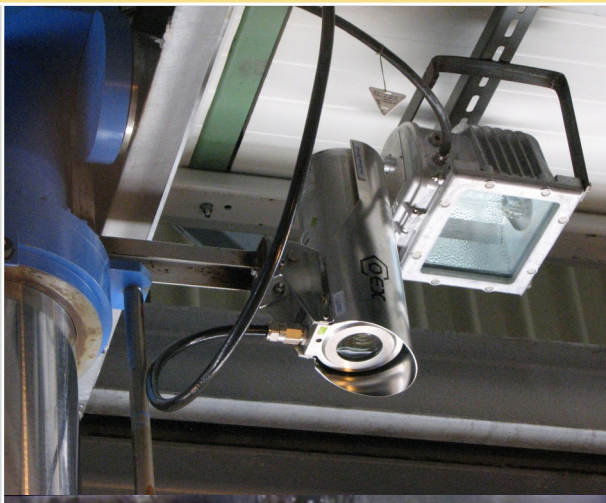
Automatic positioning of filling tube – filling point camera

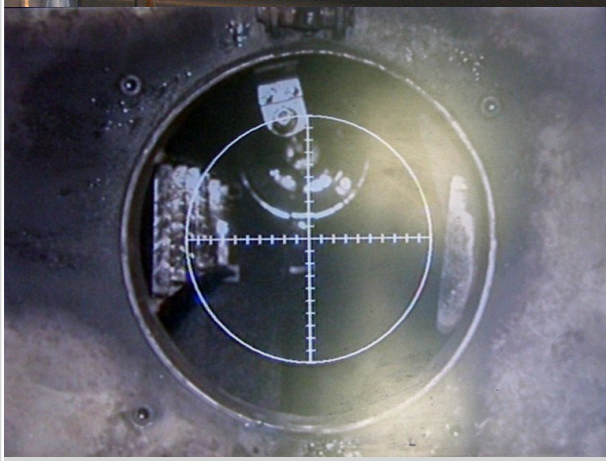
The filling point is provided with a camera which is mounted at the top of the filling tube slide beside the filling tubes. The camera image is shown at the monitor of the operating panel.

As soon as the railcars are positioned below the filling point, first of all, the camera is placed exactly on top of the filling opening. The joy stick is used here. An unhidden circle at the monitor image represents the outside diameter of the filling tube and facilitates exact positioning.

Here, the operator ensures by the camera image that there are no obstacles in the inlet area of the dome and the required free space is available for moving in the filling tube into the tank. If necessary, he/she can use the additional operating keys in the operating panel to zoom into the tank car or to focus the camera image. An additional lamp is used for the optimum illumination.

When actuating the operating button “filling tube position”, the selected filling tube is positioned automatically on top of the dome opening. For this purpose, the filling tube moves into the adjusted offset of the filling tube. This is ensured by the distance measurement at the filling tube slide.





Technical data:

Camera:

- Camera in heated 316L –stainless steel housing
- Housing of EX-d protected design
- Zoom: 23x optical and 12x digital
- Image sensor ¼‘‘ inches (6.36mm)
- Design with motor zoom objective
- Viewing angle 47° to 2.2° (with zoom function)
- Camera operated from operating panel
- incl. cross-hair generator
- incl. image memory function (integrated in automatic mode)
- Temperature range -50°C to +55°C

Monitor:

- 10.4‘‘ LCD/TFT color monitor (to be installed in desk)
- Screen resolution 800x600 Pixels
- Contrast 400:1
- Voltage 12VDC (with power pack 100 ~ 230VAC); 9.6W

Lighting:

- Flood light 230V / 300W
- of EX-de protected design
- Temperature range -50°C to +55°C

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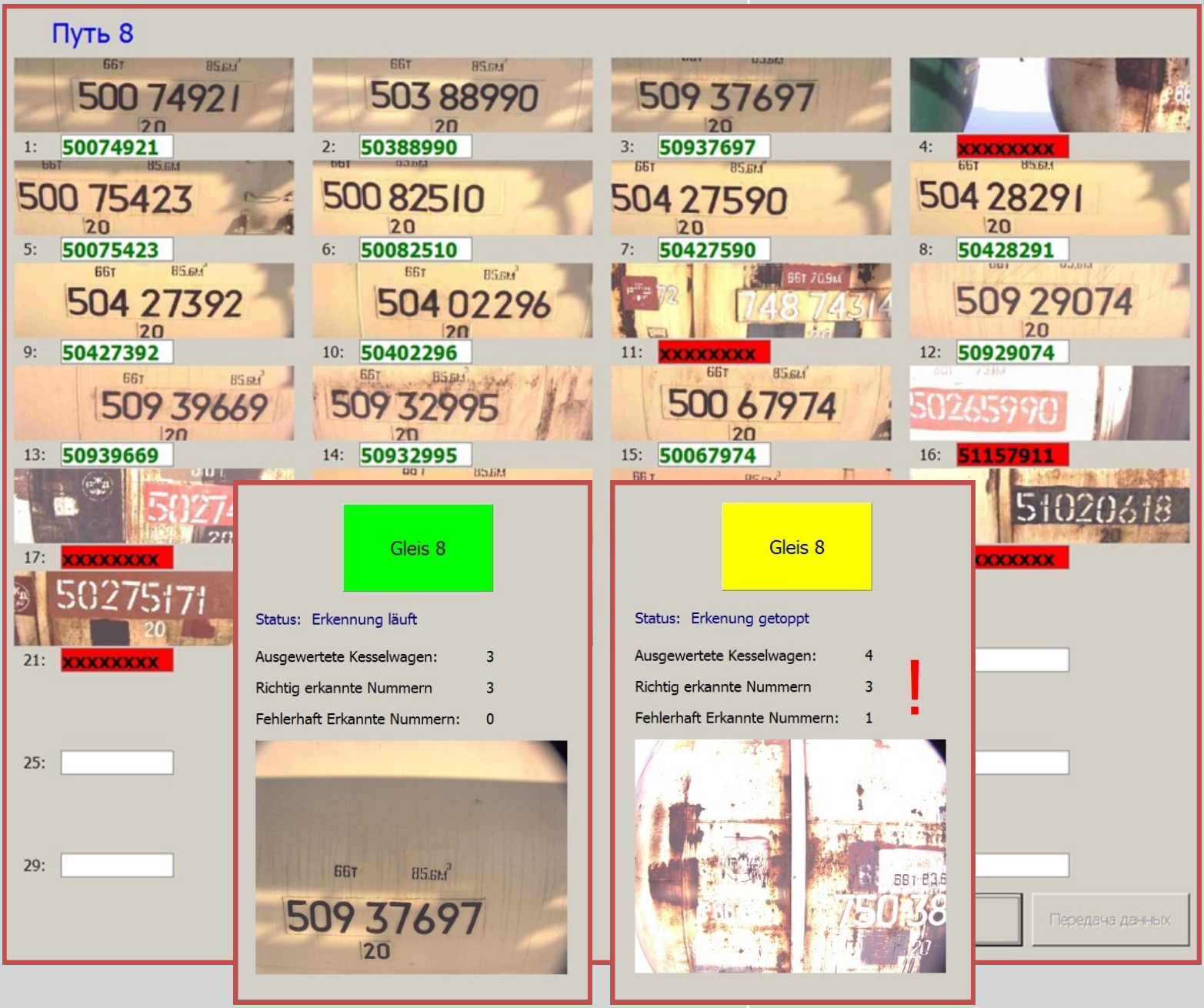
Optional automatic

Railcar number detection

for SCHERZER filling systems



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Railcar number detection

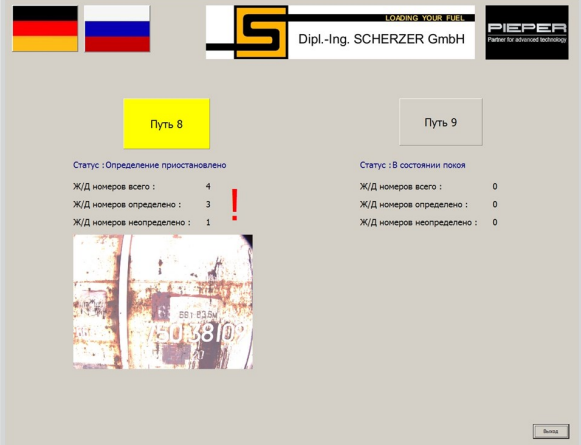
The system for the detection of the railcar number is activated by selection at the loading computer system of the relevant track. At the PC system for number detection, a series of images is taken of each railcar passing the camera – by triggering by the laser distance sensor. The real time image is shown at the overview mask.

An additional lamp is used for proper illumination of the image area to be evaluated. The individual images are evaluated by the OCR character recognition at the PC system and saved as assigned to the railcar. Counters in the overview picture show the number of railcar numbers which were evaluated, detected correctly and/or not correctly. Evaluation is stopped automatically if no new railcar has been detected during a longer period of time (which can be set).

During or after the evaluation it is possible to check and correct, if necessary, individual numbers in the detail window for re-editing. Incorrect numbers are shown red.

If the railcar number cannot be seen correctly or not at all, the series of the recorded images can be opened by a click to the relevant image and another image can be selected for display.

As soon as all railcar number have been read in and corrected, if necessary, the data can be transferred to the loading computer by selecting the enter button.



Technical data:

- Speed of block train: Approx. 1m/s
- Distance of camera to track: 4m – 25m
- Distance of camera to evaluation: 100m; with LWL connection max. 2,000m
- Camera in heated, weather-proof and dust -proof housing (Material: 1.4301; IP67)
- Design possible also as EX protected version
- Camera resolution: UXGA = 2 Megapixels (1600 x 1200 Pixels)
- Max. image rate: 12 images/second
- Temperature range: -40 to +64°C
- Connection voltage for camera connection box and lighting: 230V AC
- Measuring range of laser distance sensor: 2-30m
- Evaluation PC in 19‘‘ industrial housing
- TFT monitor: 17‘‘ with 1280x1024 Pixels

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Other brochures of Dipl.-Ing. SCHERZER GmbH

- Company profile
- Railcar – Loading systems
- Railcar – Unloading systems
- Railcar – Filling tube and Hydraulic systems
- Options for SCHERZER filling tube systems
- Study to compare Rail Tank Car ON-SPOT loading systems with serial loading systems
- LPG Loading– and Unloading systems
- Tankcar - Loading– and Unloading systems
- Ship - Loading– and Unloading systems
- Tankfarms, including handling plants and Vapor recovery units (VRU)
- Reference lists

We are pleased to send you our brochures on request.

Stand: 10/2023