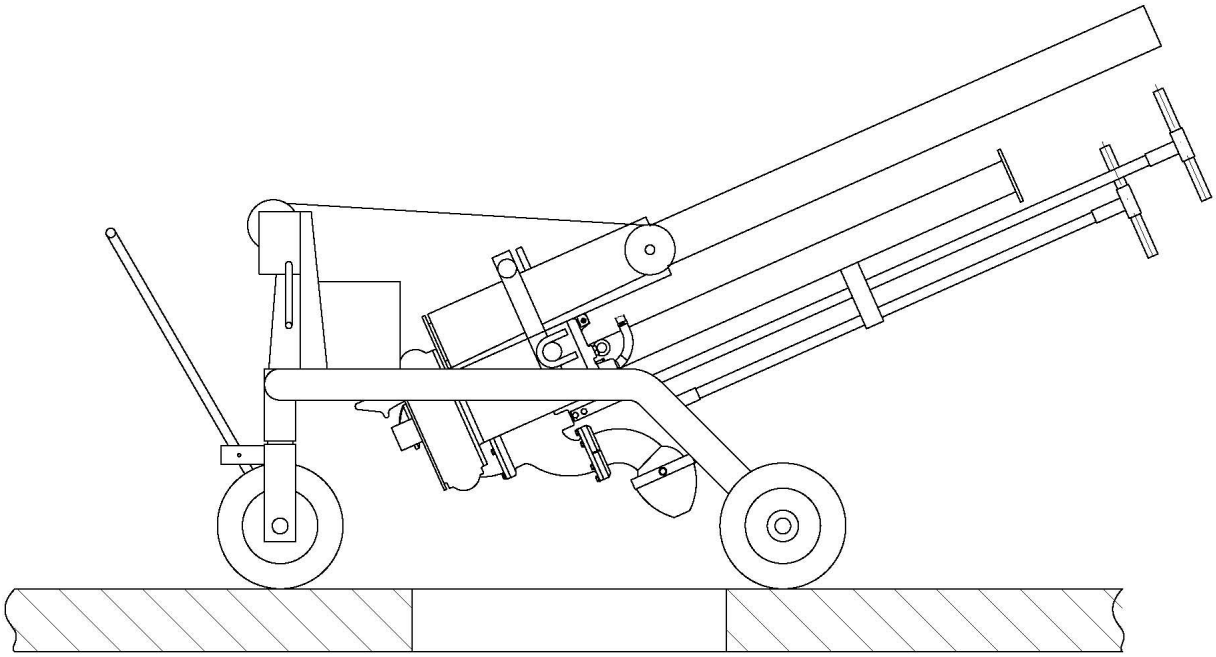
Stallkamp

OPERATING MANUAL

Trioport chassis for sub-mersible motor pump

BG132 4.0/ 5.5/ 7.5 kW
BG160 11.0/ 17.0/ 22.0 kW



Zg.–Nr.: 4–102987/6/1

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Space for notes:

General information

- **The technical specifications, weights and measures are to be considered approximate and not binding.**
- **Pictures are for illustration purposes and can deviate from the actual product.**

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2. MANUFACTURER'S DECLARATION

Manufacturer: Erich Stallkamp ESTA GmbH

Address: In der Bahler Heide 4
49413 Dinklage
Germany

Tel.: (0049) 04443 / 9666-0
Fax.: (0049) 04443 / 9666-60

Product name: Trioport chassis for submersible motor pump

We hereby declare that the above-designated chassis was produced by Erich Stallkamp ESTA GmbH.

Erich Stallkamp ESTA GmbH

Dipl.-Ing. (FH) H. Ansorge (AL-TPR, Bevollmächtigter der GL)

Dinklage, dated 07 December 2007

This declaration is not an assurance of characteristics in the sense of the German law on product liability.

The safety instructions provided in the product documentation must be observed.

3. GENERAL INFORMATION

Our devices are developed according to the current state of technology, manufactured with great care and subject to a continual quality control. This operating manual should help you to get to know the device and to employ its proper operational possibilities.

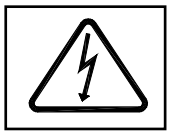
The operating manual contains important notices in order to operate the chassis safely, appropriately and cost-effectively. It is necessary to observe the operating manual to ensure the reliability and long lifespan of the chassis and to avoid hazards.

The operating manual does not take local, on-site requirements into consideration; the operator is solely responsible for ensuring that these are observed, including by external installers.

Designation of notices in the operating manual

In the Operating Manual, safety references about causes of endangerment to persons are designated with the general hazard symbol DIN 4844-W9,

for warnings about electrical voltage, with the safety signs according to DIN 4844-W8



All other notices whose disregard might restrict the functional reliability of the device or represent a danger for the machine are marked with the word

ATTENTION!

.

This machine unit may not be operated beyond the values defined in the technical documentation with respect to conveying liquid, delivery flow rate, rotational speed, density, pressure, temperature as well as motor power output or other instructions contained in the operating manual or contract documentation. If you have any queries, please consult the manufacturer.

The type plate designates the most important operating data and the machine serial number. We request that this always be specified in the event of enquiries, subsequent orders and when purchasing spare parts.

Provided that additional information or notes are required or in case of damage, please contact our local field sales employee or contact us directly.

Unauthorised conversion and spare part manufacture

Conversions and modifications to the devices and their machine units are only permissible with the explicit approval of the manufacturer. The use of non-"genuine spare parts" abrogates all liability.

4. SAFETY

This operating manual contains fundamental information which must be observed during installation and operation as well as when performing maintenance work on the device.

It is therefore absolutely necessary that the installer as well as the responsible qualified personnel and operator read these instructions before installation and commissioning, and that they are continually available at the location where the machine is operated.

Not only the safety instructions in this operating manual must be observed, but also the warning signs and provisions of the respective professional association.

4.1. Qualification of the personnel

The personnel performing the operation, maintenance, inspection and installation must be appropriately qualified for this work.

Area of responsibility, competence and the monitoring of the personnel must be precisely regulated by the operator. If the necessary skills are not available to the personnel, then they should be appropriately trained and instructed.

Furthermore the operator must ensure that the operating staff fully understands the contents of the operating manual.

4.2. Dangers if the safety instructions are not observed

Failure to observe the safety instructions can endanger persons as well as the environment and the machine. Failure to observe the safety instructions results in the loss of all claims for damages.

Specifically, failure to observe instructions can, for example, result in the following dangers:

- Failure of important functions of the device or system.
- Endangerment of persons due to electrical, mechanical, chemical or other exposure.
- Endangerment of the environment due to leakage of hazardous materials.

WARNING SIGNS

Observe all notices and warning signs. Dangerous gases can escape when stirring the liquid manure.

DANGER OF POISONING!

If the liquid manure is stored below slatted floors, the presence of persons in buildings during agitation is only permissible with sufficient ventilation. Therefore windows and doors must be open and the ventilator set to full power.

4.3. Safety-conscious work

Observe all safety instructions presented in this operating manual, the existing national regulations for accident prevention as well as possible internal work, operation and safety regulations of the company at all times.

Safety instructions for the operator and attendant:

- ✓ If hot or cold machine parts can pose a hazard, then these parts must be protected on site against contact.
- ✓ Contact protection for moving parts may not be removed while the machine is in operation.
- ✓ Any leakage of dangerous materials must be conducted away so that there is no endangerment to persons and environment. Observe statutory provisions.

4.4. Safety instructions for maintenance, inspection and assembly work

The operator has to ensure that all maintenance, inspection and installation work is carried out by authorised and qualified personnel.

Fundamentally, all work on the machine can only be carried out when the machine is at a standstill.

Directly after completion of the work, all safety and protection equipment must be reattached or made functional.

5. GUARANTEE

This section contains the general particulars for the guarantee. Contractual agreements are always treated with priority and are hereby not rescinded. The period of guarantee is a component of Stallkamp's general terms and conditions. Agreements deviating from this must be specified in writing in the order confirmation.

5.1. General

Stallkamp is obligated to repair every defect to products sold by Stallkamp under the condition:

- ✓ that it is a quality defect of the material, manufacture or design;
- ✓ that the defect is reported in writing to Stallkamp or the Stallkamp representative within the period of the guarantee;
- ✓ that the product is employed exclusively in the specified operating conditions described in the operating manual and employed for the intended purpose;
- ✓ that the monitoring device integrated in the product is correctly connected (temperature protection);
- ✓ that genuine Stallkamp parts are used.

5.2. Exclusion of liability

No guarantee or liability is assumed for damage to the device if one or several of the following points are applicable:

- A faulty configuration of the device on our part because of inadequate or incorrect information from the ordering party or operator;

- Failure to observe the safety instructions, regulations or the necessary requirements in this operating manual which apply according to German law;
- Installation, disassembly or repair of the device not in keeping with the regulations;
- Inadequate maintenance;
- Possible chemical, electrical or electrochemical influences;
- Wear and tear.

Since maintenance has an influence on the safety and functional capability of the device, it is an integral component of the guarantee. The operator of the device is obligated to carry out maintenance work according to the regulations of the manufacturer, including the repair and replacement of wearing parts.

The liability of Stallkamp thereby excludes any liability for personal damages, material damages or financial losses.

The manufacturer reserves the right to modify the performance, specifications or configuration data without prior information.

6. PRODUCT DESCRIPTION

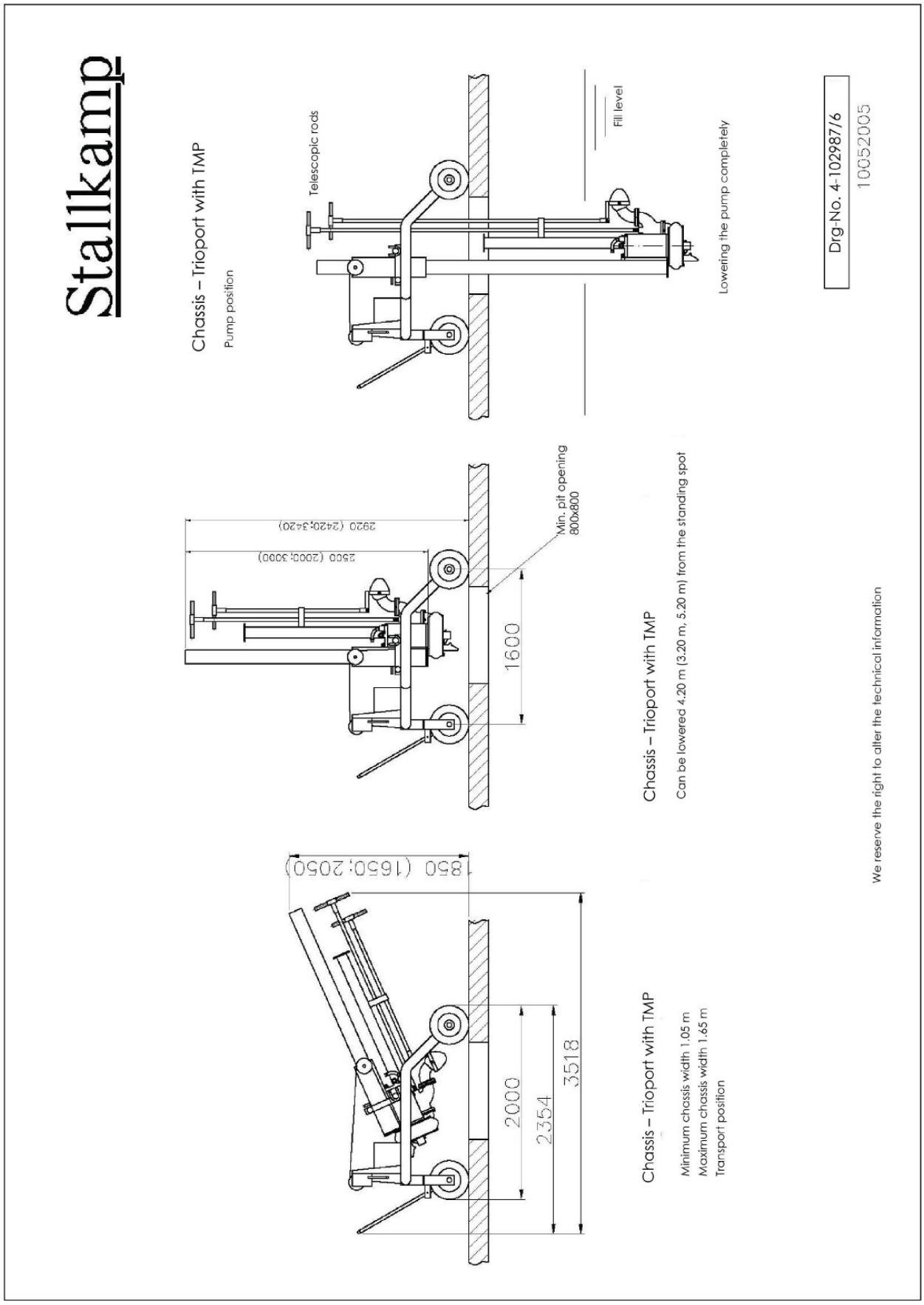
The galvanized Trioport chassis for the submersible motor pump is equipped as follows:

- Three-wheel chassis with pneumatic tyres,
- Wheel lock on the drawbar,
- Adjustable track width on the rear axle,
- Swivelling telescopic rail for lowering the pump,
- Safety cable winch with load brake for lifting and lowering the pump.

6.1. Applications

The Trioport chassis is designed to accommodate a Stallkamp submersible motor pump (see the operating manual of the submersible motor pump). This chassis allows a submersible motor pump to be driven manually to the vehicle-accessible liquid manure pit and lowered over the pit opening (at least 550 mm x 800 mm). Overrun rails are required for larger pit openings.

7. DIMENSIONS OF THE TRIOPORT CHASSIS FOR THE TMP



8. COMMISSIONING

8.1. Prior to commissioning: Safety instructions

The following rules should fundamentally be observed to prevent accidents during maintenance and installation work:

(1) Never work alone. The danger of drowning and suffocation must not be underestimated.

(2) Check whether sufficient oxygen is available and that no poisonous gases exist.

(3) Before welding work or using electrical tools, check whether there is a danger of explosion.

(4) Pay attention to the danger of electrical accidents.

(5) Examine lifting gear to ensure its fully satisfactory condition.

(6) Ensure an adequate shutoff at the place of work, e.g., cordoning trellis

(7) Wear a hardhat, safety glasses and safety footwear.

(8) Keep a first-aid kit ready.

Otherwise observe the health and safety regulations as well as the prevailing governmental regulations.

8.2. Commissioning the Trioport chassis with a submersible motor pump

Open the pit cover and measure the pit width. The minimum pit opening must be 550x800 mm. It is possible to widen the track width of the rear axle for larger pit openings. If this is not enough, the chassis must be moved over the pit opening on additional overrun rails.

Fig. 1

Chassis in transport position

Trioport chassis equipped with a submersible motor pump, distributor with agitating nozzle and rods for manual operation, pressure pipe and manual star-delta motor protection switch in transport position.

Fig. 2

Changing the track width at the rear axle.

Remove the jack from the chassis and place it under a wheel axle. Loosen the lifting eyebolt and pull the wheel with the axle all the way out. Retighten the lifting eyebolt. Then repeat the same procedure on the other side of the chassis.

Fig. 3

Wheel lock on the drawbar

Move the chassis backwards over the pit opening until the front wheel is in front of the pit edge. The front wheel is braked by pivoting the drawbar upwards until the claw engages. To release the brake, step on the front end of the claw with one foot and pivot the drawbar downwards.

Fig. 4

Chassis in transport position

The chain allows you to adjust the inclination angle of the telescopic rail for the transport position.

Fig. 5

Chassis in pump position

Turn the lever on the cable winch clockwise until the telescopic rail stands vertically.

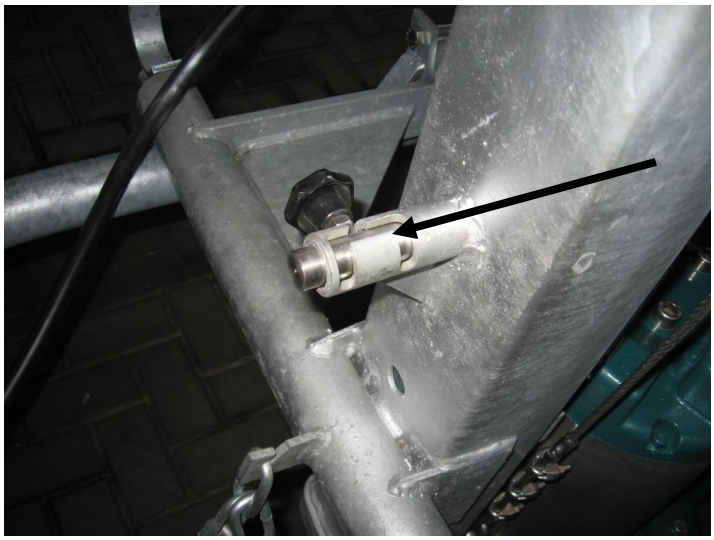


Fig. 6

Locking bolt on external section

The locking bolt on the outer section of the telescopic rail is locked in this position.

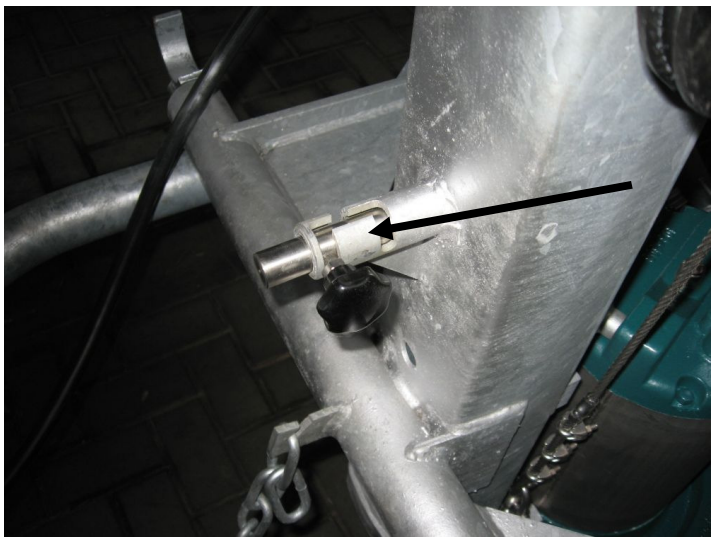


Fig. 7

Locking bolt on external section

Unlock the locking bolt. If it gets stuck, lift the pump slightly with the cable winch. Then lower the pump with the cable winch until it reaches the last locking position between the outer and middle section. Lock the locking bolt again in the outer section.

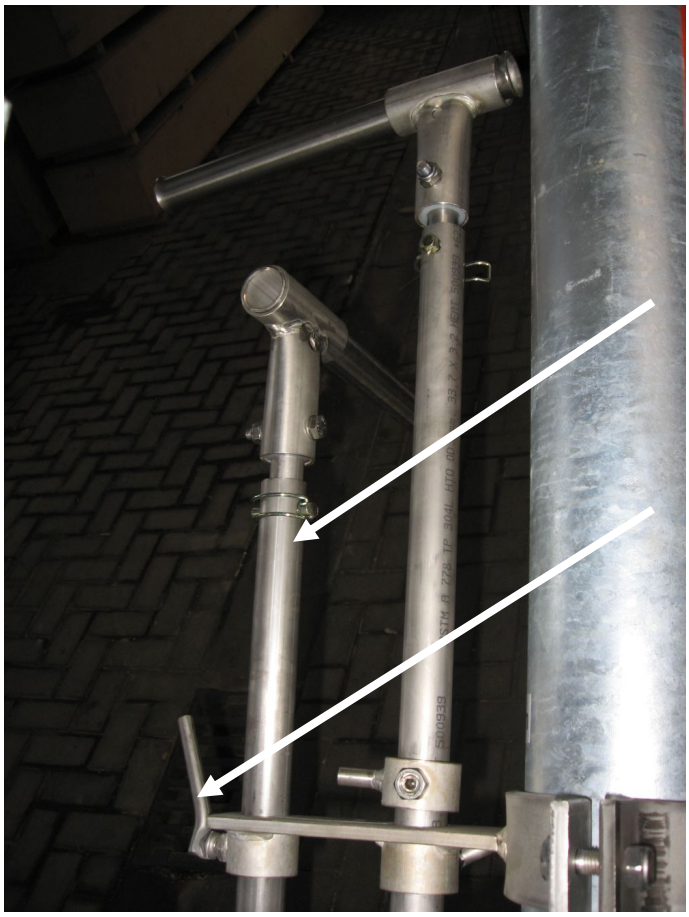


Fig. 8

Rods for manual operation of agitating nozzle and distributor (if included in the delivery scope)

Unlock and remove the spring-loaded clip on the rods for manual operation of the agitating nozzle. Pull out the rods for manual operation until the last hole is evenly covered. Reinsert the spring loaded clip and secure it. Repeat the same procedure for the rods for manual operation of the distributor.

Move the agitating nozzle and rotary slide in the distributor together with the rods for manual operation to the desired position and clamp them tightly to the rod holder with the T-screws.

Fig. 9

Locking bolt in the middle section

Unlock the locking bolt in the middle section. Lower the pump with the cable winch until it reaches one of the locking positions or the last one between the outer and middle section. Lock the locking bolt again in the middle section.

Connect a hose line, tank fill line, etc. at the upper end of the pressure pipe. Ensure that nothing can fall in the pit opening by protecting it with suitable cover plates or safety fences. Connect the mains plug to the switch box on the chassis and start the pump from the star-delta switch. (see submersible motor pump operating manual: Direction test, etc.)

After completing the pumping process, stop the pump, crank it up and return the chassis into transport position. Now proceed in reverse order.

9. MAINTENANCE

Lubricate all joints and rotating parts on the chassis at regular intervals (approx. every 3 months). The tyre pressure should be checked regularly and adjusted if necessary (2.5 bar). After use, clean the chassis and especially the telescopic rail.

The maintenance work that should be performed on the submersible motor pump can be found in the "Submersible motor pump" operating manual.

The maintenance work that should be performed on the hand-lever cable winch can be found in the "Hand-lever cable winch" operating manual.

10. NOTES

10.1. Regulation of the professional association

The following accident prevention regulations of the Agricultural Professional Association can be found in Paragraph 2.8 under "Special Provisions for Pits and Canals":

Paragraph 2.8

§ 1 Protection against falling in

(1) Pits, ditches, canals, wells and other similar pits in the house and courtyard area must be protected with fences or coverings to prevent persons falling in. If these are not deeper than 100 cm, other safety precautions can suffice.

§ 2 Openings

(1) If removal and entries openings, etc., are opened, it must be guaranteed that persons and objects cannot fall in.

(2) Pits and canals that are customarily entered must have facilities which permit risk-free entry. The openings of these pits and canals must be dimensioned in such a way to allow the rescue of any casualties.

§ 3 Entry

(1) Before entry and during the presence in pits and canals, ensure that sufficient respiratory air is present and that plant facilities are reliably protected against being switched on. The handling of naked flames is not permitted.

(2) Entry for the recovery of an accident victim is only permissible if two other persons secure the entering person with a rope which is firmly anchored outside the tank.

§ 4 Tanks and canals for animal faeces

(1) For tanks and canals in the open air, it must be guaranteed by suitable measures that fermentation gas cannot flow into the buildings.

(2) Closed tanks in the open air must have vent openings on opposite lying sides.

(3) If tanks and canals are found in the buildings - also under slatted floors - it must be guaranteed that fermentation gases are conducted away from the buildings.

(4) If tanks and canals in the buildings are furnished with agitating, pumping and rinsing plants, facilities for the removal of fermentation gases must be present which automatically switch on when the agitator and rinsing works are operating. They may only be switched off after conclusion of the work process. The gases conducted away must not endanger persons.

(5) Canals must be designed so as to avoid any unnecessary whirling up of the faeces.

(6) Operating stations for agitating, pumping and rinsing, etc., equipment must be built up over the floor.

(7) Closed rooms in which there are operating stations may not have openings to the tanks and canals.

(8) Operation instructions must be permanently attached to the operating stands.

§ 5 Removal of animal faeces from tanks and canals

(1) No smoking and no naked flames are allowed in the immediate proximity of removal openings during the agitating and removal of faeces.

(2) In the buildings in which there are open tanks and canals, the presence of persons and animals during agitation and removal is only permissible with sufficient ventilation.

§ 6 Warning signs

(1) Easily visible warning signs must be attached to openings of tanks and canals which indicate the danger of the gases.

(2) Refer to the "Information Sheet with Notice, Warning, Prohibition and Rescue Signs" of the Federal Association of Agricultural Professional Associations.

You can find us here

Stallkamp

...Lead by innovative technology

Dinklage lies in the heart of Oldenburg Minster Country.

From the exit (A1) Lohne Dinklage No. 65, direction Dinklage, towards Dinklage Vechta, then industrial area West.

- Pump technology
- Agitating technology
- Stainless steel tanks

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