TECHNICAL GUIDE FOR BUDA NC LINE SEWER PIPES

2026

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CONTENT

1. INTRODUCTION

The production of GRP pipes in Hungary dates back to the second half of the 1970s. Based on the experience of more than three decades of production, construction and operation, the products known under the BUDAPLAST and BUDA NC LINE brands play a key role in the construction and reconstruction of utility lines.

At the Rózsaszentmárton site of Budaplast Kft., GRP produces a wide range of products in the form of various pipes, fittings, tanks, shafts and other products. The most common of these is the so-called egg-shape GRP pipe, which is the most important material for the reconstruction of the urban unified sewerage network.

The lightweight pipes with excellent mechanical properties and corrosion resistance are mostly used in the so-called unexcavated (NO-DIG) sewer renovations, typically using a construction method that does not disturb fast, continuous drainage and surface traffic.

Budaplast pipes are made on a production tool with a profile and size that meets the needs of the reconstruction, using a fiber winding process. The tool sizes have been typified on the basis of decades of customer orders, but the manufacturer also undertakes to expand the range of additional profile samples according to any new and individual requirements. The wall structure is built continuously (with a rotating tool) from the inside out via the programmed and alternating application of the raw materials. The templates are 2.3 m; 3.0 m, 4.6 m and 6.0 m long.

The guide is based on the current knowledge of Budaplast Kft, it’s aim to provide general assistance for the special handling and use of its products. However, the installation and renovation of sewer pipes must always be carried out in accordance with the planner's guidelines and regulations.

2. HANDLING OF BUDA NC LINE PIPES

The transport, storage, in-plant handling, placement and assembly of materials, fittings and accessories used in the construction of the installation shall be carried out in accordance with the relevant regulations, product information and health and safety regulations related to the handling and storage of materials.

Figure 1: Moving GRP pipes with crane

Tools and devices for pipes movement:

- forklift,
- a towed transport / storage trolley organized for this purpose,
- mobile crane, bridge crane, turntable crane.

When moving the pipes with a forklift, the product must be placed on the fork perpendicular to the fork, with the outer surface of the pipe, or larger pipes must be moved as a towing vehicle together with a storage truck provided for this purpose. To protect the inner, wear-resistant layer of the pipe, it is forbidden to "insert" the fork inside the pipes! If this is unavoidable (for example when loading or unloading on a truck), the forks must be covered with a thick protective layer of textile or foam free of dust and dirt.

When moving with a crane, the lifting rope suspended from the crane is secured around the pipe so as to lift the product at a minimum of two points. Do not use a steel cable or chain and do not lift it by tying the lifting rope inside. In order to avoid damage to the pipe, the socket part and the grinded end, the formation of point-like, concentrated pressure must be avoided; when using the lifting beam, the distance between the lifting points must be greater than the total length of the pipe.

Do not lift the pipe unnecessarily high! When moving, the stability of the moved pipe must be maintained: they can be transported at low speeds, without sudden changes of direction and only by lifting them to a height that is necessary by the terrain.

2.1. TRANSPORT

Generally, we do not pack our products. The pipes are loaded on a flat, sawn wooden bearer. The sockets and spigots (polished ends) are vulnerable. In order to avoid the damages, load concentrations should be avoided: wooden bearers must be placed under the pipes, located 15-30 cm inwards from the ends. Make sure that neither the socket nor the spigot lays on the bearers.

Figure 2: Fastening the pipes

The transport of pipes with both a socket and a grinded end shall be arranged so that the sockets and the grinded ends fall in one direction. If it becomes necessary to place the pipes next to each other with the socket end and the polished end, a wooden spacer strip or a thick separating sheet (eg cardboard) must be used to avoid damaging the casing and the polished end.

Fastening on the transport vehicle is the responsibility of the driver, subject to the following points:

- The ratchet strap, which is perpendicular to the socketed part and the grinded end, can only be fastened with a load-distributing washer.
- In the case of pipes with a thin wall structure, the ratchet strap can only be tightened to the justified tension, avoiding dents and cracks in the pipe body.
- The pipes must not rest on protruding wedges causing point pressure: the wedges may only be used until they are secured with the ratchet strap. In order to avoid dents and cracks in the pipe, the wedges must be removed from under the fixed pipe, and no other objects may be placed under the pipe, which exerts a wedge-like dent and pressure on the pipe body.
- Do not throw pipes or fittings or load them with sharp objects.

Extreme care must be taken when using a crane.

2.2. UNLOADING

Unloading of the pipes is the responsibility of the buyer. Appropriate care must be taken during unloading. The pipes must be unloaded and moved one by one, it is recommended to use a strap or rope when lifting and moving the pipes. Do not use a steel cable or chain and, if possible, do not lift it by tying the lifting rope inside the pipe. Pipes with cable shelves must not be lifted through the cable shelf itself. In order to avoid damage to the pipe, the socket part and the grinded end, the formation of point-like, concentrated pressure must be avoided, and when using the lifting beam, the distance between the lifting points must be greater than the total length of the pipe.

If unloading is done with a forklift, care must be taken to cover the forks so that the inner surface of the pipe is not damaged or scratched during unloading.

Figure 3: Protection of pipe ends using offset for alternately placed pipes

The pipes must be loaded off the vehicles in such a way that they do not fall on top of each other or on other hard, sharp surfaces. Avoid storing pipes directly on the ground, but if there is no other way, make sure the area is relatively even and there are no stones or other materials that could damage the pipes.

To protect the pipe body, we recommend the use of wooden washers (bearers) after unloading. Rolling or pulling / pushing the pipes on both the transport vehicle and the storage area, regardless of its even surface, is prohibited.

Product inspection upon receipt

During the unloading process, the buyer must check the quantity of the batches in accordance with the consignment note and any damage to the pipe surfaces during transport. If you notice any signs of damage, inspect the inner surface at the same location. Scratches on the outer sanded surface do not affect the performance of the sewer pipe. In case of other damage or deviation from the order, please contact Budaplast Ltd.

2.3. STORAGE

Although pipes and fittings can be stored outdoors, they should be protected from direct sunlight by prolonged storage (2-3 months). Even in the case of temporary storage, care must be taken to ensure that the products are placed straight on wooden bearers on clean, smooth, stone-free ground.

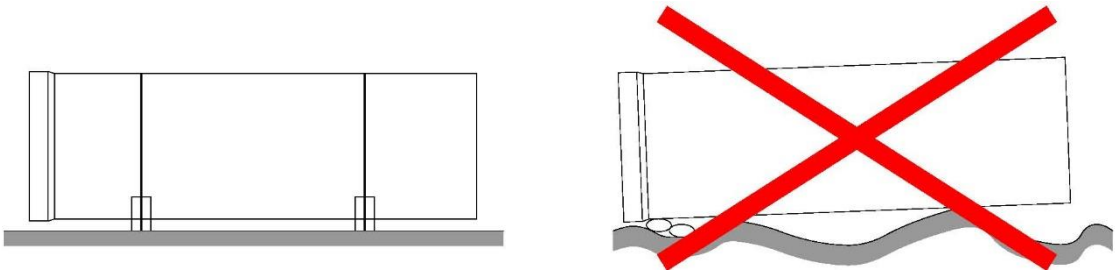

Figure 4: Placement of pipes

Storing the pipes on flat, sawn wooden bearers helps make the straps easier to attach and protects the tube and its ends from damage. The distance between the wood should be 1-2 m and the distance from the pipe ends should be 0.5 m.

Figure 5: Storage of pipes on wooden bearers

When storing the pipes on top of each other, they must be placed on wooden bearer and the pipes must be supported so that they do not roll down in strong winds. During storage, the pipes can be stacked in 3 rows up to a size of 500/750 mm, in the size range above this in a maximum of 2 rows.

Polyester pipes are made of petroleum products, so excessive heat and open flames must be avoided during construction and storage. Pipes should not be exposed to welding sparks or other sources of heat or flame. This is especially important when working with volatile chemicals, solvents, resins during bonding, home installations, and repairs.

Storage of sealing rings and lubricants

Rubber seals should be stored in a cool, dry place protected from sunlight. Avoid contact with chemicals, lubricating oils or fuels. If the temperature is below 5 ° C during the sewer installation, seals and lubricants must be stored in a protected place before usage.

Figure 6: Moving with forklift

3. INSTALLATION OF GRP PIPES

Work before and after laying the pipelines (preparatory work, earthworks, capping and drainage work, bedding, concrete and reinforced concrete work, etc.) must be carried out in accordance with the relevant professional construction and safety regulations.

It is forbidden to nonconforming defective, polluted pipes and fittings! Any damage to the external or internal surface treatment must be repaired before installation. Only materials and processes that ensure the continuity of insulation in a manner equivalent to the original may be used to improve the surface treatment and insulation of the pipeline.

If you notice any non-compliance with the pipes, please follow the instructions in the "Repair" section.

The pipe ends that remain temporarily free during construction must be temporarily closed. No foreign matter or pollution may enter the pipeline, the seals may only be removed if the pipeline is made continuous.

When constructing a pipeline that is close to a traffic lane, care must be taken to keep the structure gauge clear during construction. If this is not possible, traffic must be restricted for the duration of the construction (traffic restriction or diversion, track closure, etc.) on the basis of a preliminary official resolution.

There are basically two ways to install GRP pipes:

- one of the non-covering renovations, when the GRP pipe functions as a liner,
- the other is laying in a traditional open ditch.

Sizing

In the case of open floor installation, the technical parameters of the installation depend, inter alia, on the following factors:

- mechanical properties, geometry, wall thickness of the GRP pipe,
- soil physical characteristics,
- groundwater level,
- laying depth,
- surface loads (road, rail loads).

Knowing the above factors, the appropriate pipe material should be selected by a static-scaled test. There are several methods for static sizing, which usually examine the degree of deformation in the case of GRP pipes.

The following basic data is required for static scaling:

- GRP pipe technical parameters (external and internal size, shape, wall thickness, density, mechanical properties)
- Technical parameters of the soil (soil physical characteristics, laying depth, groundwater level data)
- Surface load (road, rail load class)

Having the above data, the sizing will be performed by the pipe manufacturer upon request.

3.1. CONNECTING PIPES

Sewer pipes manufactured by Budaplast Kft. can be connected in two ways. The flexible pipe connection allows the elements to be quickly fitted with a sealing ring with a small angular deviation. The biggest advantage of a rigid connection is that the connection requires less space.

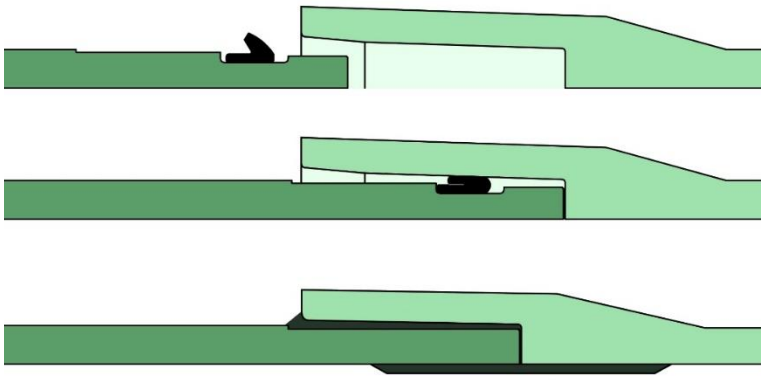

Figure 7: Section of flexible and rigid joints

3.1.1. FLEXIBLE JOINTS

In the case of a flexible connection, the pipe joints are equipped with a rubber ring, which also ensures the sealing of the pipes. The technological steps for the rubber ring connection are described in the section "Installation of GRP pipes with open trench laying" and for more information on the application of seals, see "Installation of seals".

3.1.2. RIGID JOINTS

In the case of a rigid connection, there is no rubber ring for the pipe connections. The lack of a rubber ring allows the outer diameter of the pipes to be smaller, which can be an advantage especially for installation without covering. In the case of a rigid connection, the pipe joints are formed by gluing and lamination. The adhesive consists of a polyester resin and an initiator also used in the manufacture of pipes. The adhesive consists of a polyester resin and an initiator also used in the manufacture of pipes or epoxy resin system (like Sikadur®) can be used as well.

Steps of the gluing process:

Check the undamaged state of the socket and the spigot of the pipes to install first. Set the next pipe item the correct direction and be prepared to join it. Then clean all surfaces participate in adhesion (Figure 1). Taking into account the time of adhesive usage, apply the glue on the whole surface of socket in the required amount. With low forces join the pipes, check and fix the positions of them. Remove the glue from the inner surfaces in case of surplus.

Lamination is done as follows:

Apply the mixed resin evenly to the polished, cleaned surface (with a 1½ ”–2” flat brush). Apply 1 coat of glass mat (15 cm wide, 300 g / m2) to the surface covered with the appropriate resin and soak it with an aluminum laminating roller or a flat brush with a force perpendicular to the surface. After impregnation, if necessary, the surface should be enriched with resin, followed by the application and impregnation of a layer of glass textile using the methods described above. Laminating (glass mat - glass fibre - glass mat) should be continued until the desired thickness is reached, taking care to avoid air inclusions and non-wetted parts. The first and last layers should preferably be glass mats. The number of layers is determined by the amount of stress on the structural members affected by gluing, but must not be less than 3.

The overlapping layers are approx. It should be formed with an overhang of 2.5 cm along each side. The outer surface layer should be coated with a resin containing plenty of paraffin to cover the protruding glass fibers. If the resin did not contain a paraffin additive, it must be replaced by mixing 5% paraffinic styrene solution in the resin with 5% of the resin. If the thickness of the lamination is greater than 6-8 mm, the lamination must be stopped and the resin can only be cooled back (reaching an exothermic peak) or possibly completely cured.

In case of inadequate amount of initiator, due to the heat generated during crosslinking, the resin may burn, crack, or ignite. The remaining initialized resin should be poured into a container containing water to avoid possible fire and accidents.

The curing time of the resin depends on the temperature of the environment and the resin and can vary from 10 to 60 minutes. The ideal temperature is 20-25 ° C, where the gelling time

(workability time) of a conventional laminating resin is 20 minutes, and the process is slower at lower temperatures and faster at higher temperatures.

After the resin has hardened, the uneven surfaces must be re-sanded and sealed with resin.

In addition to connecting the pipes, lamination must also be used in the following cases:

- lining of mines and structures with GRP sheets,
- placement of saddle fittings on GRP pipe,
- creation of GRP arc profiles consisting of segments.

3.2. INSTALLATION OF GRP PIPES WITH NON-COVERING LINING TECHNOLOGY

GRP liners can be installed individually or with slip-lining technology. In case of passable cross section sizes the individual procedure can be used, if the cross ection is smaller the slip-lining technology should be used.

Figure 8: Lining technology

It is essential to fill the space between the existing pipe and the liner during the lining. Filling can be accomplished by gravity and / or pressure injection. The injection acts primarily as a bedding, so the space between the existing and the liner must be filled airtight with a homogeneous, load-bearing material.

Prior to injection, the reconstituted line should be divided into sections, usually at intervals of manholes. At the shaft wall, the ring space must be masonry, and injection and vent pipes must be placed in the masonry. For liners larger than DN800 and BN600xHN900, stiffening ribs must be placed before injection to prevent deformation of the pipe.

The injection must be carried out in several stages, which helps to spread the injection material properly, to reduce the pressure resulting from the injection and to minimize the buoyancy. The injection is considered complete when the injection grout appears on the vent pipe.

The injection process must be documented in an injection log, which must include at least the following:

- location, date,
- type of injection grout,
- amount of incorporation,
- outside temperature

The injection log should be included in the handover documentation.

3.1.1. INDIVIDUAL LINING

Prior to the reconstruction of the pipelines, it is necessary to clean the pipeline with appropriate methods and techniques (mechanical or hydraulic) and to remove any obstacles found during the camera inspection. In both cases, the pipe section must be disconnected and drained. After cleaning, any faults in the wires can be identified during a diving inspection.
GRP piped lining is done through starting pits. In order to ensure the space and light

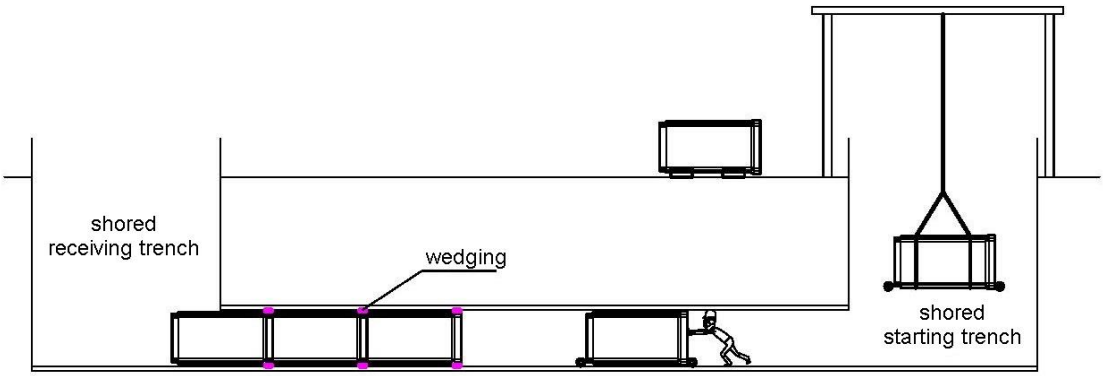

Figure 9: Individual lining

requirements of the next step and the cleanliness of the surface, the resin adhesive must be applied to the pipe end in the case of a rigid connection and the seal in the case of a flexible connection.

The liners cast into the starting pit are placed one by one on the retraction wheel and pulled and pushed to their final location, with 1 person following them and the other in front of the tube securing and removing any obstructions. In each case, the pipe is pulled forward with the tail section and the pipes are tightened together with a hand winch.

The positioning of the liners must be done with wooden wedges, the appropriate slope will be created by placing the wedges.

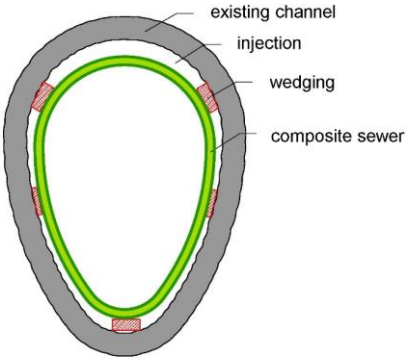

Figure 10: Fastening of GRP pipes

When making the rigid connection, a maximum mounting gap of 10 mm must be left, which must be filled with resin adhesive after lining. The pipe retraction is repeated in the same way until the full length is lined.

3.1.2. SLIP-LINING

Prior to slip-lining, a machine winch must be installed at the start pit and at the shaft at the end of the lining section. For the winch 10 m more than the length of the section, min. A Ø14 mm wire rope must be wound. The wire rope leads through the guide screws to the channel centreline. Tearing and splicing on the rope is not permitted. In a non-climbing lines, a float, a strapping tape and a duct cleaning machine can be used to thread the wire rope.

Pipes discharged into the pit should be assembled at the excavation site. Each pipe moves together with the previously assembled pipe section. The indentation is thus made up of repetitive parts of the work.

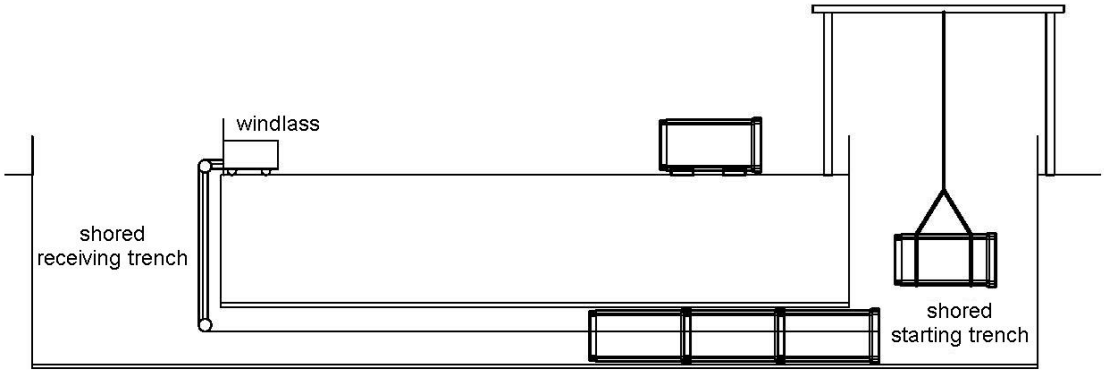

Figure 11: Slip-lining procedure

After each pipe has been delivered and connected, the pipe train is introduced into the channel section to be lined by a "pull-push" process (always pulling the free end of the last installed pipe). The operation is repeated in the same way until the pipe train fills the section to be lined.

3.3. INSTALLATION OF GRP PIPES WITH OPEN TRENCH LAYER

The laying of GRP pipes in an open trench begins with the laying of a trail. The laying of the cable must be carried out in both height and horizontal directions according to the construction plans. This is followed by demolition, excavation, embankment and, if necessary, lowering of the groundwater level. In the dredged and dewatered working trench, subgrade preparation is the work process immediately prior to pipe laying. The construction of the

subgrade is necessary so that the thickness of the bed is the same along the trail. In the case of open trench laying, the design of the bed around the pipe plays a statically decisive role.

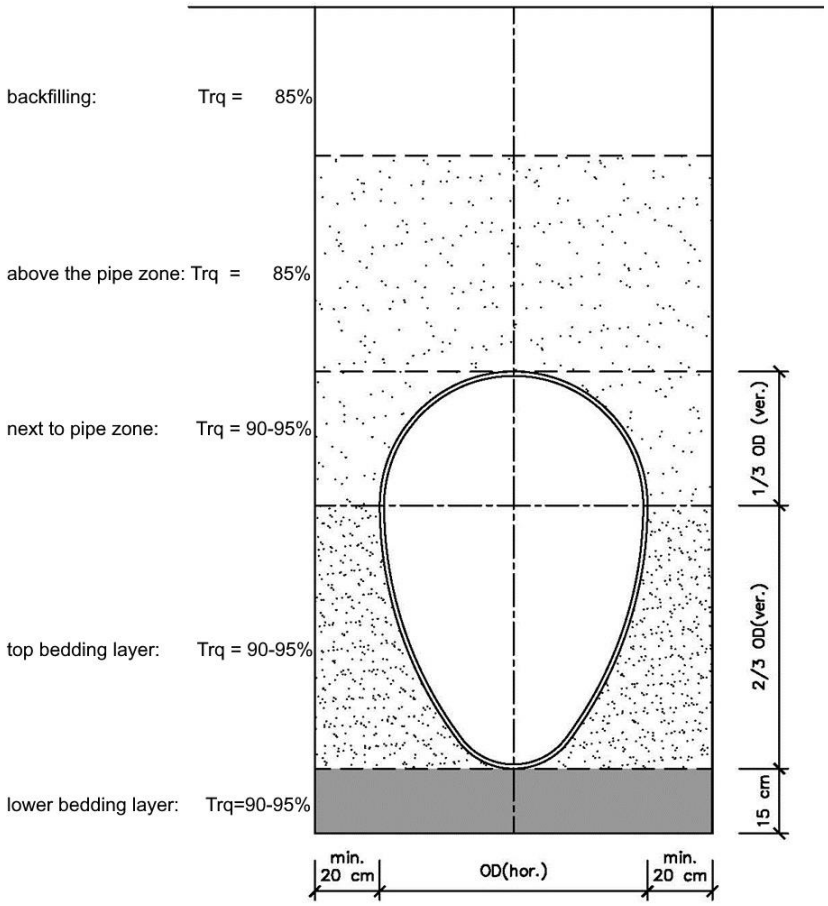

Figure 12: Bedding design for open trench laying

The bedding of the pipe zone must be made of debris- and organic-free, well-compacted granular material. In the pipe zone, the bedding material must be spread and compacted in layers at least 15 cm thick. The material of the bedding must be a material with a continuous granular structure (sandy gravel, sand, or compacted earth excavated from the working trench with a sludge content of less than 10%). The particle size of the bedding material shall not exceed 20 mm, and if crushed material is used, its maximum particle size shall be 16 mm. For proper compressibility, the trench should be designed to leave a minimum of 20 cm between the edge of the trench and the pipe wall.

Special care must be taken when laying or installing GRP pipes when working at temperatures around 0 ° C. Pipe-laying and installation work must be carried out by a conscientious workforce skilled in machining GRP pipes.

In case of unfavorable subsoil, it may be necessary to install an additional substructure under the lower bedding layer. The bed should not be compacted if the subsoil could lose its strength due to its dynamic effects. If the bed is not completely surrounded by the pipe, only stone-free soil should be refilled in the zones in contact with it.

Careful laying and embedding of the pipeline guarantees a long service life for the entire piping system. The bottom of the trench should be smooth, free of roots, stones and granular material. The entire length of the pipeline should lie on the ground of the ditch.

Compaction of the lower part of the bed should be done keeping in mind that the pipe is at the planned height and slope. The bedding should be cut deeper than each socket connection so that the support is continuous and the pipe does not rest on the socket part.

The laying of GRP pipes consists of the following steps and special care must be taken to the following:

- If possible, start laying the pipeline with a spigot in the direction of the water flow by making a connection to the shaft.
- The sealing ring and the inside of the housing must be thoroughly cleaned and the rubber ring must be inserted into the groove of the housing, see chapter "Installing seals". The insertion must be made with the thicker side of the rubber ring facing the inside of the socket. Inserting the rubber ring is facilitated by pre-dipping it in water and then shaping it into a heart shape.
- Visually check that the pipe ends in the trenches are intact. If so, the end of the pipe should be cleaned as needed and matched to the housing at the end of the already laid pipe. After that, the pipe is pushed into the socket. The end of the pipe should be lubricated with a water-based lubricant to help it slip. Do not use oil, grease or other substances that are harmful to the rubber to facilitate slipping.
- After inserting the pipe into the socket, the horizontal and height position of the pipe is adjusted. Care must be taken to ensure that there are no deviation between two pipes - neither vertical nor horizontal. The height adjustment of the pipes must be performed with a leveling instrument.
- The free end of the tube is then cleaned and visually inspected for damage during assembly. If not, lubricate the pipe end with a water-based lubricant.

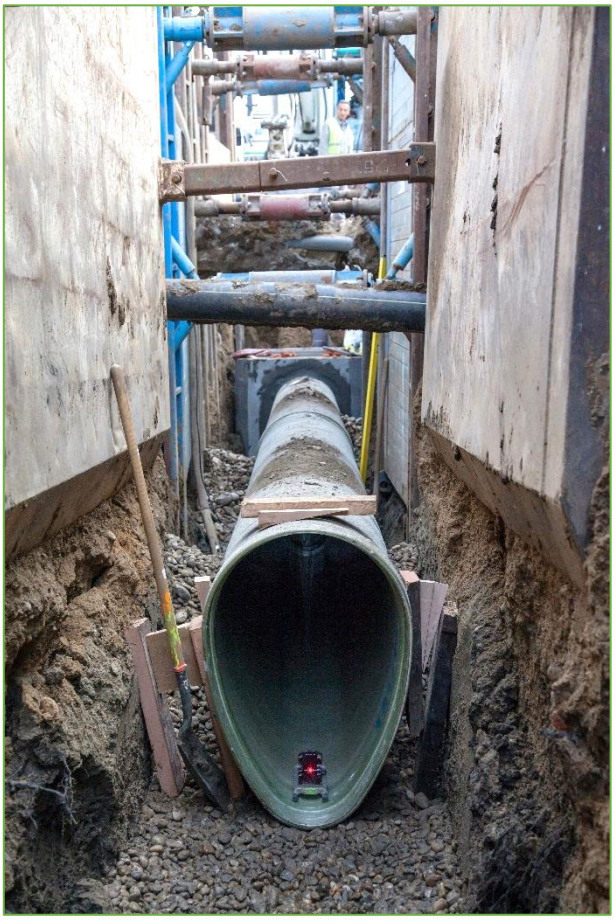

Figure 13: Positioning

Backfilling and compaction must always be carried out symmetrically on both sides of the pipe. It is not permitted to use a compaction device larger than 30 kg in the cable zone and below a filling plane 50 cm smaller than the clause line.

The pipeline must only be laid in water free trenches.

The pipeline must not be laid on stony, rocky, frozen ground or frozen bedding. It is forbidden to refill frozen soil, rollers larger than 100 mm, construction debris, organic soil and contaminated soil!

Manholes, protective ducts, temporary or permanent fastening and supporting structures must be constructed in such a way that no harmful stresses or displacements occur in the pipeline and fittings.

Ground-water

If the GRP pipe is laid in a groundwater environment, the buoyancy must be taken into account. When calculating the buoyancy, the GRP pipe must be taken into account when empty. In a groundwater environment, the figure below provides guidance for the pipe bed.

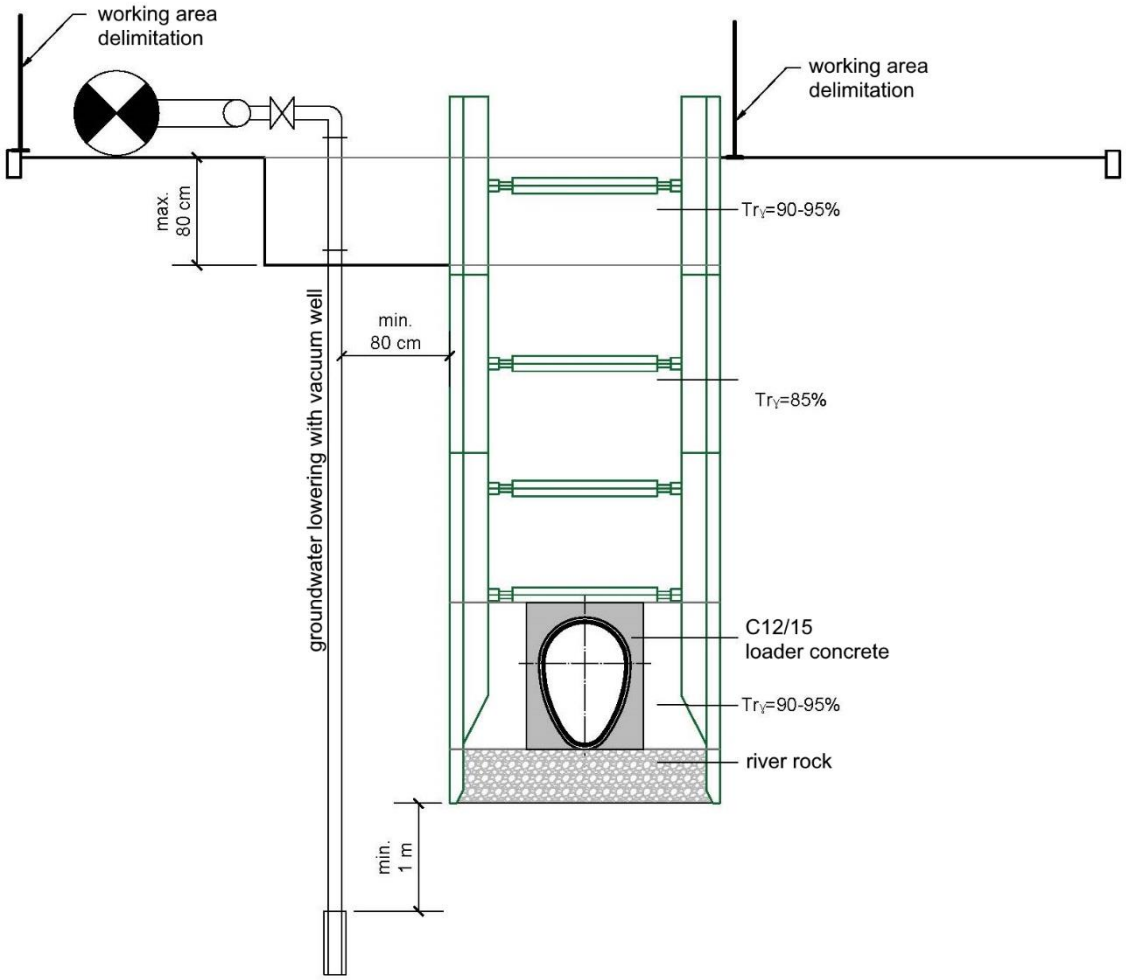

Figure 14: Laying of GRP pipe in case of high groundwater

Installing seals

Seals play a key role in the proper operation of GRP pipe systems. Their careful and correct placement not only results in proper sealing but also makes it easier to assemble the pipes. The main steps for installation are:

- After clenaning the seal and the pipe end, check the integrity of the rubber ring and place it in the notch provided for this purpose, paying attention to the correct direction of the profile

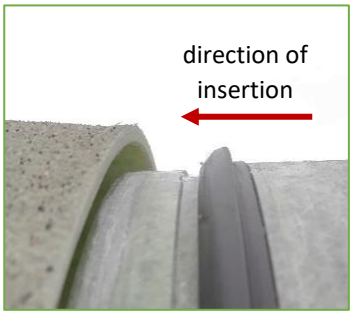

Figure 15: Position of the rubber ring

- Tighten the seal from the small radius parts of the pipe profile on both sides to even out the elongation along the entire length of the rubber ring.

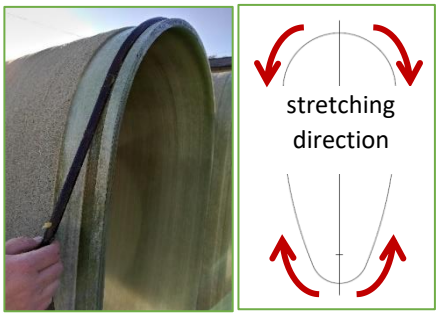

Figure 16: Cross-sectional alignment

- Fit the seal to the side of the notch opposite the pipe end.

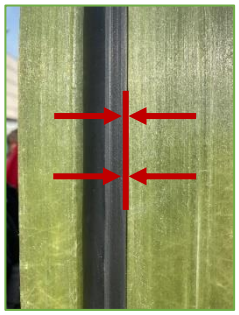

Figure 17: Sealing position inside the groove

- Lubricate the surfaces with water-based soap before starting to assemble!

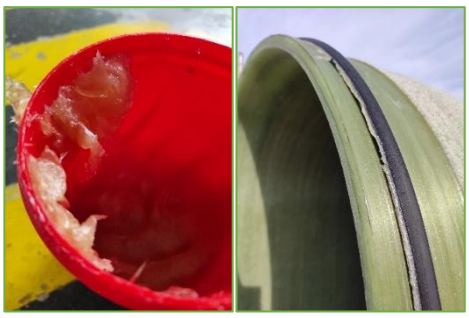

Figure 18: Lubricant useage

3.4. FITTINGS, SHAFTS AND CONNECTIONS

For GRP pipes of various cross-sections, the manufacturer offers a flexible delivery program for additional elements that form a complete system with bends, branches, saddle connections and shaft elements for quick on-site installation and precise fitting.

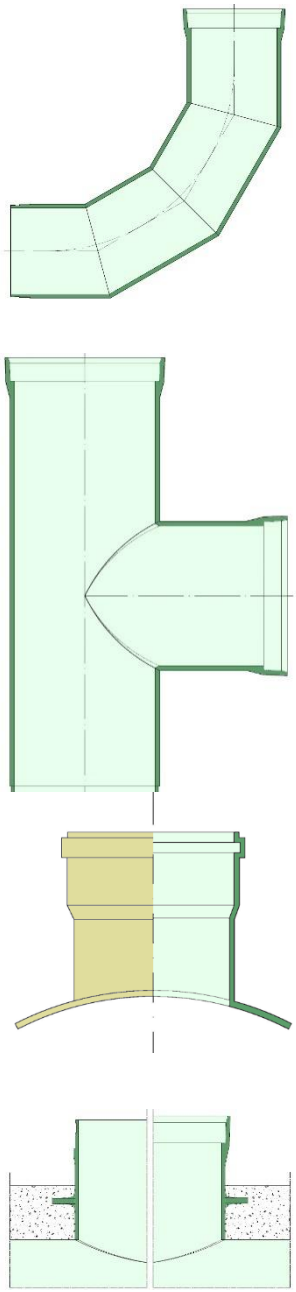

Figure 19: GRP profiles

Pipe bends

The arches are made with the angular rotation specified by the customer, assembled from pipe segments by lamination.

Branches made of GRP

The direct connection of backbone tubes and larger diameter connections is ensured by custom-made branch profiles. If required, the GRP branch can be manufactured with a case connection suitable for receiving PVC pipes.

Saddle pieces

For the connection of the connections to the GRP pipe, the correct connection is provided by the prefabricated GRP saddles. The saddles can be used to connect both newly built and retrofitted connections.

The housing design of the saddle profiles allows the KG-PVC pipes to be watertightly connected to the GRP backbone. The seat post must be fixed to the GRP pipe by on-site lamination.

Masonry profile

In order to ensure a proper connection to the existing concrete shaft and for the sewer pipes passing through the walls of the buildings, we recommend the use of a GRP masonry profile, the end of which can be selected as required. Two types of components are distinguished, depending on whether they inhibit one or two-way movement.

3.1.1. CONNECTION TO CLENING PITS

GRP pipes can be connected to the cleaning pits in two ways.

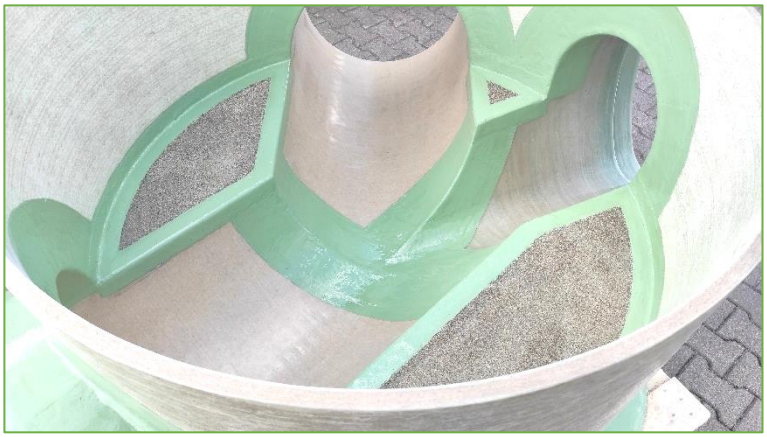

Figure 20: Budaplast GRP manhole

One is when the bottom element of the cleaning shaft consists of a prefabricated element. This way an opening corresponding to the diameter of the pipe is formed in the bottom element of the shaft at the factory. The custom-made GRP shaft elements are suitable for both the reconstruction of existing shafts and the construction of new shafts. They can be structurally self-supporting, as well as GRP shells reinforced with concrete or injection grout. The manhole profiles of Budapest are characterized by their unique structure, design, sizing and technical solution that is maximally adapted to the local conditions.

In the case of the other connection method, the cleaning shaft is retrofitted to the built-in GRP pipe section. The lower part of the shaft is then made on site. An opening corresponding to the lower element of the cleaning shaft must be cut in the part of the GRP pipe above shoulder height, in which the shaft formwork is placed. The shaft chamber is then concreted on site in addition to unloading the GRP pipe, and the additional shaft elements are prefabricated.

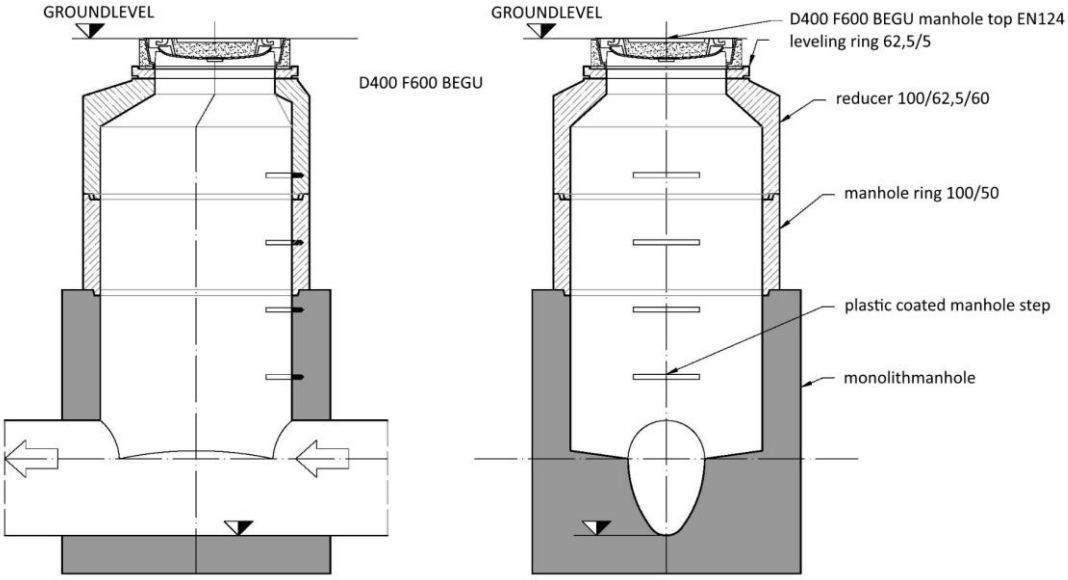

Figure 21: Design of a cleaning pit with a monolithic manhole

3.5. TECHNICAL DELIVERY AND RECEIPT OF COMPLETED PIPELINES

Completion documentation shall be prepared for the completed wires, which shall include at least the following:

- construction log and its annexes,
- declaration of the contractor / responsible technical manager,
- geodetic survey, implementation plan,
- declarations of performance of incorporated materials,
- pressure test / water holding test report,
- injection log,
- construction and demolition waste registration sheets,
- records of necessary laboratory tests.

4. REPAIR

All products used must be visually inspected immediately before installation. In case of non-compliance, always contact Budaplast Kft. for support. The examples listed in this chapter can help you classify faults on site and repair surface damage quickly.

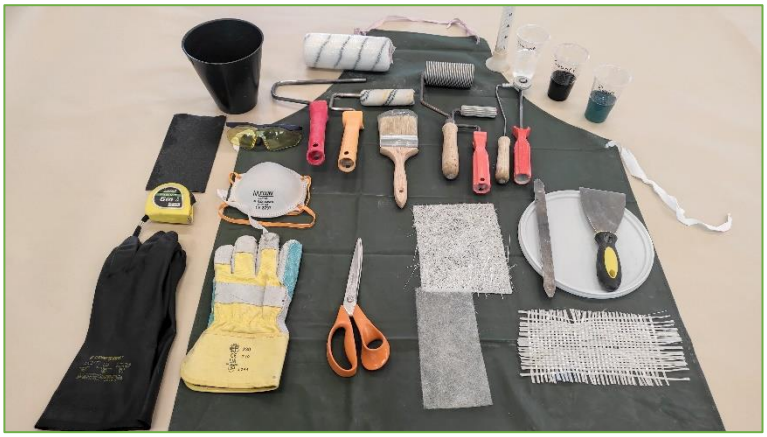

Figure 22: Repairing tools

4.1. FAILURES WHICH CAN BE REPAIRED ON SITE

Surfaces damaged during loading can be repaired with glass mat and resin, depending on the degree of damage, using the following technology:

Figure 23: Can be repaired on site surface damage

- Removing protruding parts.
- Roughening of surfaces by gringind.
- Apply a layer of resin to the sanded surface.
- If necessary, glass mat should be laminated in the applied resin in such a way that the damage does not break the continuity of the surface. The surface of the glass mats is covered with one layer of resin for each layer.
- Allow the resin to cure for 24 hours in the repaired area.

4.2. PIPES WHICH CANNOT BE REPAIRED ON SITE

Structural defects (delamination, chipping) that occur on the sockets or pipe ends and the damaged part can be well delimited can be repaired at the site of Budaplast Kft. by removing the pipe section containing the defective part and re-establishing the connection.

Figure 24: Structural defects that cannot be repaired on site

4.3. NOT REPAIRABLE, faliure pipes

Extensive defects affecting the entire structure of the pipe cannot be repaired, the damaged pipe must be treated as waste.

Figure 25: Complete failure

5. DISPOSAL CONSIDERATIONS

Waste generated during the handling, use and possible repair of pipes (containing only fully crosslinked resin) must be treated as non-hazardous, non-recyclable waste.

EWC code: 17 02 03 CONSTRUCTION AND DEMOLITION WASTES - Plastic

When mixed with other debris, the EWC code 17 09 04 (mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03) is to be used.