INSTRUCTIONS FOR TRANSPORTING, UNLOADING, STORING, ASSEMBLING AND OPERATING COMPOSITE POWER POLES (ENERGY POLE)

I. TRANSPORT

1) The party organizing the transport is responsible for the proper protection of the product during loading and transport. In the event of contamination of poles on the way to the investment site, the obligation to remove it rests with the Contracting Authority.

2) The transport organiser should ensure that the means of transport is suitable for transporting elements of considerable length. The transport of transported products must not interfere with or endanger road traffic. The organizer of transport should ensure that the means of transport has:

    a. Unless otherwise specified, a transport platform with a minimum length of 20% longer than the longest transported element,

    b. Removable side walls for forklift, crane or manual loading.

    c. a transport platform equipped with a tarpaulin to cover the transported products during transport during adverse weather conditions (snowfall, slush, wet road salt), the tarpaulin should be removed immediately after the goods are brought to the place of unloading, products should not be stored under the tarpaulin,

    d. Certified belts made of soft material, meeting the requirements of standards, in order to properly secure products during transport.

    e. Transport conditions according to Incoterms 2020

3) NCT S.A. reserves the right to refuse to load products if the means of transport does not meet the requirements set out in point 2. If the party organizing the transport demands the loading despite not meeting the above requirements, the party is fully responsible for the damage caused during transport and the resulting consequences, on its own responsibility. NCT S.A. reserves the right to refuse to load the products, without incurring any legal or financial consequences, in any case when the transport may pose a threat to human health or life for any objective reason.

~~4)~~ In the case of poles manufactured by NCT S.A., they should be transported neatly stacked, secured with a packing sleeve.

5) Products should not be tossed, dragged or rolled.

6) After loading, the power poles (Poles) should be secured with certified belts to prevent the poles from moving during transport, it is recommended to tighten the transport straps after driving about 5 km.

7) Accessories and other elements are recommended to be placed on pallets during transport and properly secured in a way that prevents them from being moved or overturned.

II. UNLOADING

1) Unloading should be carried out with particular care and in compliance with health and safety rules in a way that ensures the safety of all persons involved in the process.

2) Before proceeding with the unloading procedure, the place where the products are deposited must be prepared (a description of a properly prepared place can be found in point III "Storage").

3) Unloading must be carried out in such a way as not to damage the products being unloaded. It is forbidden to load and unload on the bare forks of the trolley, due to the high risk of damaging the surface of the poles. It is recommended to unload manually (in the case of lighter poles) to the prepared place or unload by hand onto the secured forks of the forklift using e.g. a pallet and manually transfer from the secured forks and place on the prepared place. In the case of heavier poles, plastic straps can be used, the poles can be lifted with a suitable means of loading and lowered by laying them flush with spacers that allow the straps to be inserted and removed.
Do not use chains, rods, wires, hooks or other agents that may damage the surface of the poles for loading and unloading.

4) During unloading, the following are not allowed:
- dumping products from the car,
- dragging products on the side of the car or dragging them on surfaces that may damage the surface of the pole,
- impact of the product during movement,
- any other action that may damage the surface or the entire pole.

5) After unloading, it is necessary to check the completeness of all elements included in the set and the condition of the products after transport. Any damage noticed should be documented with a photo and immediately reported to the manufacturer.

III. STORAGE

1) The yard, the area where the products will be deposited, must first be cleaned of sharp and hard objects that may damage the stored elements and pose a threat to people working during storage.

2) Storage of products should take place in places inaccessible to animals, away from places where chemicals are stored.

3) Products should be stored in a dry place on paved surfaces, they should not be stored directly on the ground. Before laying the poles on the surface, spacers must first be placed to guarantee a stable stacking of the pile.

4) It is not recommended to cover or wrap stored items with foil or tarpaulins.

5) Products should not be tossed, dragged or rolled.

6) Be stacked neatly as they are for transport.

7) The poles should be unpacked/unwrapped from the protective foil within 72 hours, if they have been provided with it.

8) Accessories should be placed on pallets for the time of storage.

IV. ASSEMBLY

1) Placing and installation of poles should be carried out by qualified persons with particular care, in compliance with health and safety rules in a way that ensures the safety of all persons involved in the process.

2) Before proceeding to the foundation in the ground, it is necessary to check the correctness of the development with the land development project and the construction design.

3) Earthworks should be carried out in accordance with the Polish Standard PN-86/B-02480 or the currently applicable standard in the country.

4) Before commencing excavations, the contractor is obliged to check:
- Location
- utilities of the underground area,
- soil and water conditions, in order to select the appropriate method of excavation preparation.

5) Changes and deviations from the foundation conditions require the preparation of a design or, if it has been made, consultation and approval of the author of the project.

6) The excavation should be made using a technology that takes into account the depth of the excavation, the terrain, the ground conditions in accordance with the construction design, the width adapted to the type of machines compacting the excavation.

7) Attachments should be mounted horizontally or with a booster. However, NCT allows the installation of devices and/or accessories in a vertical position, on already permanently and correctly positioned poles using leaning ladders, the optimal angle of incidence is 85 – 75 degrees, it should also be remembered that the support point - the contact point of the upper part of the leaning ladder with the body of the telecommunication pole, protects against slipping of the ladder itself and scratching or mechanical damage to the pole in question. Additionally:

   - The support point of the leaning ladder must not be higher than 0.5 m in front of the top of the column. The installer should be assisted by a second worker.
   - The installer should have a valid - appropriate license to work at heights, required in a given country.

Illustrative image of leaning ladder

8) **Installation of a power pole** requires the following steps:

1 Carry out the installation of the pole fittings, the height of the installation of the cable suspension accessories should be made in accordance with the construction design, but not higher than 15 cm from the top of the pole.

2 Preparation of the appropriate trench:

a) For the use of standard or cement-sand backfill - prepare a hole with a minimum depth equal to the nominal depth of the column foundation and a width that allows the column to be freely placed. The width of the excavation must allow the soil to be compacted in layers every 30 cm,
b) For the use of native soil - prepare a hole with a minimum depth equal to the nominal depth of the column foundation and a width enabling free foundation of the column,

3 With the help of workers (in the case of light poles) or a lifting device equipped with webbing slings made of plastic, fix the pole in such a way as not to damage the outer surface and place it in the trench.

4 Plumb the pole (using a spirit level) and then fill the hole:

a) When using standard or cement-sand backfill - fill with standard backfill with 0-31.5 grain size (natural crushed aggregate) or cement-sand mixture. The backfilled material should be compacted in layers every 30 cm with the use of a petrol jumper until the soil compaction index **Is** in the range **of 0.95 to 1.02 is obtained**
b) When using native soil - backfill with material obtained from the excavation and then pour water before compacting the soil, this will result in better soil compaction. After backfilling and compacting the trench, the native soil (deposited from the outer layer) should be spread at the perimeter of the column up to 15 cm above the ground, with a slope outwards to the contour line of the backfilled trench.

5 A pole placed in a vertical position should be supported by slings or workers until its underground part is filled to the height of the ground and the backfill is compacted along with the soil around it.

6 Attaching accessories using a lift or ladder (in accordance with Chapter IV, point 7 of this document).

V. INSPECTIONS AND MAINTENANCE

Long-term and safe use will ensure that you follow these instructions.

It is recommended to carry out regular maintenance inspections.

INSPECTIONS AND MAINTENANCE

1) The operation of the product begins when the correct assembly is completed in accordance with the manufacturer's instructions.

2) The warranty period starts from the moment of receipt of the product.

3) Under pain of losing the warranty imposed by the manufacturer, during the use of the products it is not allowed to:
   - Any kind of additional load on the structure contrary to the manufacturer's recommendations, contained in the data sheets and/or technical specification of the products. The installation of additional elements such as road signs, lighting, Christmas decorations, information boards, etc., is possible only with the written consent of the manufacturer.
   - Any modifications or repairs to the structure are possible only with the written consent of the manufacturer.

4) It is recommended to perform a detailed operational inspection at least once every two years.

5) If any irregularities are found, it is recommended to correct the foundation of the pole in accordance with the above installation instructions. If mechanical damage is found, posing a threat to safe operation, it is imperative to contact the manufacturer.

6) If mechanical damage to the structure is detected, contact the manufacturer.