**How to install a transformer?**

1, the construction should have the conditions

(1) Review drawings, prepare detailed working instructions according to the manufacturer's materials and complete the approval.

(2) The construction engineering quality related to the installation of box-type transformer shall conform to the current national construction and acceptance of construction projects.

(3) The positions of the embedded parts and cable embedded pipes meet the design requirements, and the embedded parts are firm.

2. Preparation for construction

2.1 Transformer basic check

(1) Inspect the construction quality of transformer foundation together with the owner and supervisor, fill in the record form, which shall be signed by all parties for confirmation, and timely report and deal with the problems found.

(2) Carefully check the dimensions of the transverse and vertical axes of the transformer foundation and the position of the embedded pipe, and check with the dimensions given in the drawings. The next step can be carried out only after they are correct.

2.2 Transformer unpacking Check

(1) When the transformer is unpacked after arrival, it shall be inspected together with the owner, supervisor and relevant personnel of the manufacturer.

(2) Measure and record the impact value of the impact recorder before unloading, which should be less than 3G.

(3) Check the transformer appearance without damage, the paint is intact, and record.

(4) Check the transformer internal components without displacement, pollution and other conditions.

3. The transformer is installed in place

(1) The transformer channel steel foundation is installed on the embedded parts, pay attention to leveling and alignment, channel steel foundation and embedded parts are solidly welded, and the welding parts are coated with anti-corrosion paint after the drug skin is knocked off.

(2) After the hoisting of the fan, the hoisting transformer is directly located on the foundation, and the jack is used for leveling and straightening.

(3) Connect the transformer and the foundation according to the fixed way (screw or welding) stipulated by the manufacturer.

(4) If the goods are delivered in separate parts, the shell should be installed after the transformer is installed correctly.

(5) Hang the sign board and clean the inside of the transformer box.

(6) Protect the finished product before the next process.

4. Cable line between box and fan

The cable line between the wind generator and the box transformer is laid in the buried cable trench. One YJY23-(3×240), 0.6/1kV and one YJY23-(4×240), 0.6/1kV crosslinked polyethylene insulated armored power cable are laid between each fan and the box transformer. Grounding of cable head: 40mm2 copper glue wire 1500m(including cable intermediate connector). The bill of quantities is as follows:

(1) YJY23-3×240 26/35kV 240mm2 cable 16km;

(2) YJY23-3×95 26/35kV 95mm2 cable 14km;

(3) YJY23-3×50 26/35kV 50mm2 cable 5km;

(4) 3 sets of 35kV cable terminal (YJY23-3×240 26/35kV);

(5) 35kV cable terminal 58 sets (YJY23-3×50 26/35kV);

(6) 35kV cable intermediate connectors (the quantity shall be determined according to the cable supply length);

(7) YJY23-(3×240), 0.6/1kV 2100m;

(8) YJY23-(4×240), 0.6/1kV 2100m; 1kV cable nose 232 sets.

58 box-type transformers; 47 cable branch boxes (including 4 cable terminals 8; 3 cable terminals 39).

5. Line retest process

Due to the need of engineering, the method of total station and GPS positioning system is used to carry out the retest. Instrument observation and recording should be completed by two people respectively, and check on the day of operation.

Line retesting should be carried out in one direction. If it is carried out from two ends to the middle, the junction should exceed at least two C piles (one base pole tower). To check the tower center pile is stable, there is no loose phenomenon. If there is a loosening phenomenon, should first nail firm, and then measure. For tower piles calibrated in retest, obvious and stable marks must be set. For the boundary between the two construction units, it is necessary to retest to the corner and exceed the two bases. Only after contacting and confirming with the other party, can the pit be excavated. Retest construction in time to fill in the record, the record should be true and accurate. Such as in the retest encounter with the design when the report shall not be dealt with.

6. Cross power lines

Before crossing construction, the technical person in charge shall retest the crossing Angle of crossing points, the height to ground of overhead ground wire at crossing points, the height to ground of lower wire at crossing points, the width between wire edges, and the topography according to the cross crossing points section diagram in the line construction drawing. According to the result of retest, choose the construction scheme.

(1) Crossing the power line without power failure. Before the erection of the line, the construction unit shall apply to the operating unit in writing for "exit reclosing" of the live line. The crossing construction without power failure can be carried out only after the implementation. In case of failure trip during construction, it is strictly prohibited to force power transmission without the consent of the site commander.

(2) During the erection of span frame, the safety factor of lifting tools and adjacent anchorage anchor should be increased by 20% ~ 40%.

(3) Grounding protection measures shall be taken for the pay-off block on the tower on both sides adjacent to the crossing file. All grounding devices must be installed and securely connected to the tower before crossing construction.

(4) Erection of lines across non-power failure shall be carried out in good weather. In case of lightning, rain, snow, frost, fog, relative humidity is greater than 85% or strong wind above grade 5, operation shall be stopped. If the above situation is encountered in the construction, the net and rope should be put into place for safety protection.

(5) The crossing rope needs to be dried before use, and the unit resistance needs to be measured with 5000V dial.

(6) If the crossing of all ropeway rope and insulation rod fixed rope is not completed on the same day, the crossing rope and lead rope should be taken back and properly kept, and no overnight in the open air is allowed.

(7) When laying the cable lead rope and insulation rope are not completely separated from the live line, the operators of rope pulling and binding must wear insulation boots and gloves.