

Installation Guidelines for High Mast and Sports Lighting Structures

ASSEMBLY AND INSTALLATION OF VALMONT STRUCTURES

The following information is intended to be a helpful guide to the installing contractor. This information cannot be comprehensive enough to cover all situations or the details of all structures. Therefore it is essential that the owner and contractor carefully plan all aspects of the installation process, not relying only on these guidelines to determine the steps to be followed. This is general information about standard Valmont products. Special features required by individual owners may require unique installation methods. For these the Contractor must be familiar with the owner's plans and specifications and the Valmont submittal drawings (if any). Due to the varied methods used by contractors in actual field operations, Valmont Industries, Inc. cannot be liable for structural damage occurring during erection.

In addition to the steps below, please read the applicable portions of the "Installation and Maintenance Information" which is furnished with each shipment of Valmont structures and with each acknowledgement of an order.

ANCHORAGE

1. An evaluation of local soil conditions should be made by a competent foundation designer. The foundation size and reinforcing must be adequate to withstand the maximum reactions which might be applied by the pole base.
2. Concrete foundations should be installed well ahead of the installation of the poles. Standard concrete requires about 28 days to develop its full design strength.
3. In designing and installing the foundation, consideration should be given to the need for underground wiring and grounding.
4. Projection of the anchor bolts should allow for the thickness of the base plate, nuts (including leveling nuts), and raking if required.
5. Orientation of the anchor bolts in relation to the direction of the lighting must be checked carefully using data from the Valmont drawings and the owner's plans and specifications. The anchor bolts must also be vertical.
6. Reinforcing steel must not be welded to the anchor bolts.
7. Care must be taken not to disturb the position of the anchor bolts while pouring concrete.
8. Levelling nuts should be adjusted before installing the pole. They should be in a horizontal plane.
9. In the case of structures which utilize embedded base installation, typically the bottom (embedded) section of the pole is installed in the ground first. Care should be taken to assure that the bottom section is vertical before proceeding with the erection of the rest of the pole since there is no adjustment to this type installation as there is with the levelling nuts on anchor bolt type foundations.

ASSEMBLY (See Figure 1)

1. General

a. Where space near the foundation and lifting capabilities permit, it is preferable to assemble the complete structure on the ground and erect it as a unit (except see "Anchorage--Item 9" concerning embedded base poles). The sections of the pole should be aligned on the ground and supported, typically with wood blocks, in such a manner that they will readily fit together. Care should be taken to prevent dirt, stones, etc. from getting trapped between the mating surfaces.

b. If the structure is assembled vertically, extra care may be needed to assure that all joints are properly assembled as indicated in the following paragraphs.

c. Each pole section includes an identification tag welded to the member and incorporating the last five digits of its shop drawing number. Proper alignment of **HIGH MAST** pole sections is facilitated by the location of the identification tags. These are positioned on the sections so that aligning them on the same side for the entire pole length will assure proper orientation of all components.

SPORTS LIGHTING pole sections can be aligned using the climbing device stand-off plates and/or the pole step lugs.

1. Rotate pole top at hinge. (FIG2).
2. String wire through pole as shown (FIG2).
CAUTION: Wiring must pass through the wiring protection guide to assure that the insulation won't be damaged during raising and lowering.

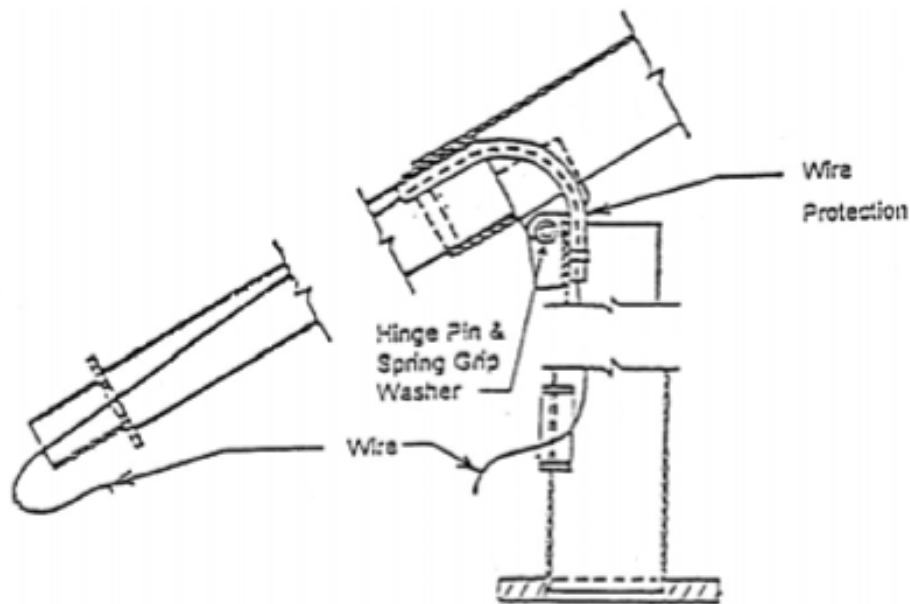


FIGURE 2

3. Rotate pole back to original position and lock down with hold-down nut at base of shroud. (REF: FIG. 1).
4. Attach rope to top of pole (FIG. 3).
5. Attach sling (FIG. 3).

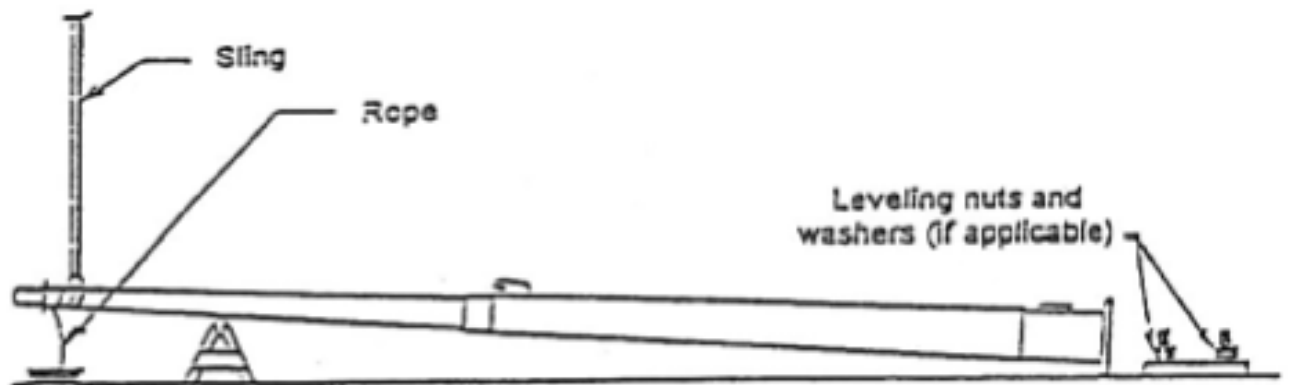


FIGURE 3

6. Erect pole.
7. Position over anchor bolts and set on leveling nut washers if applicable. (FIG.4).
(If leveling nuts are not used, place shims as required to plumb pole).

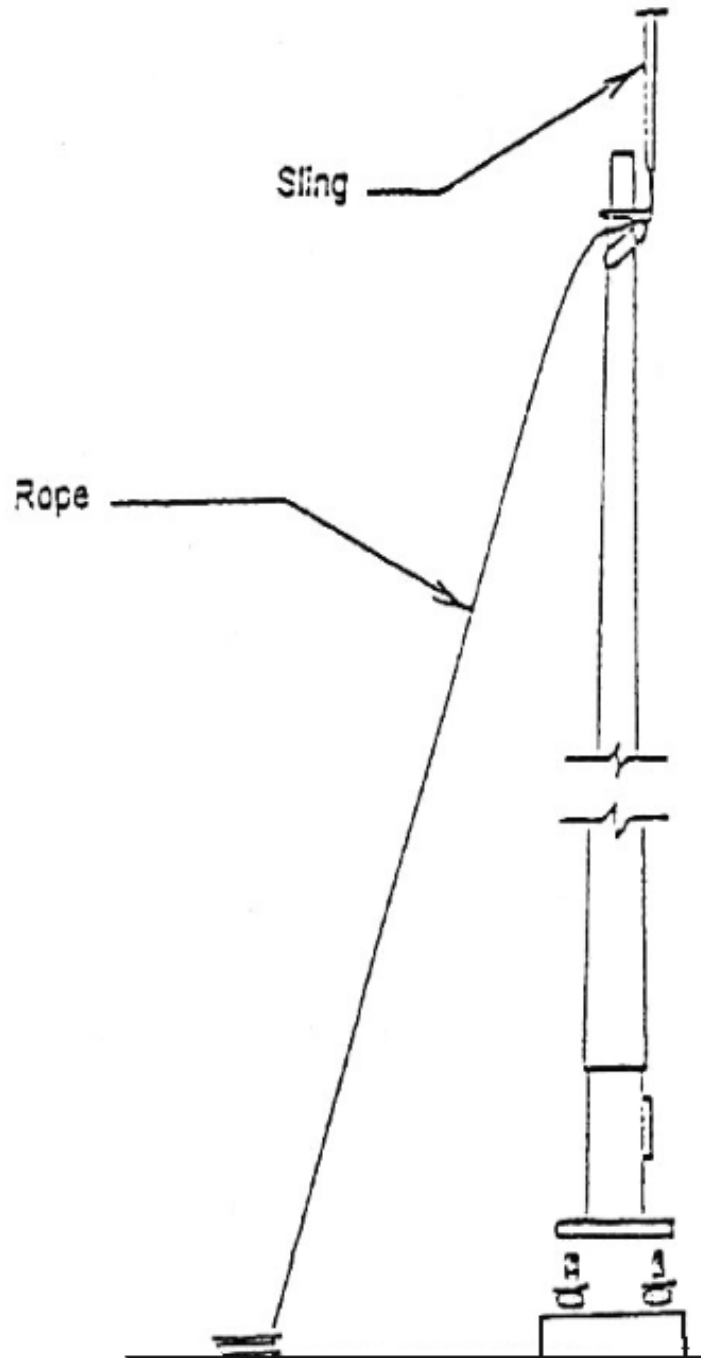


FIGURE 4

- Place anchor nuts and washers on anchor bolts and tighten. (FIG.5).

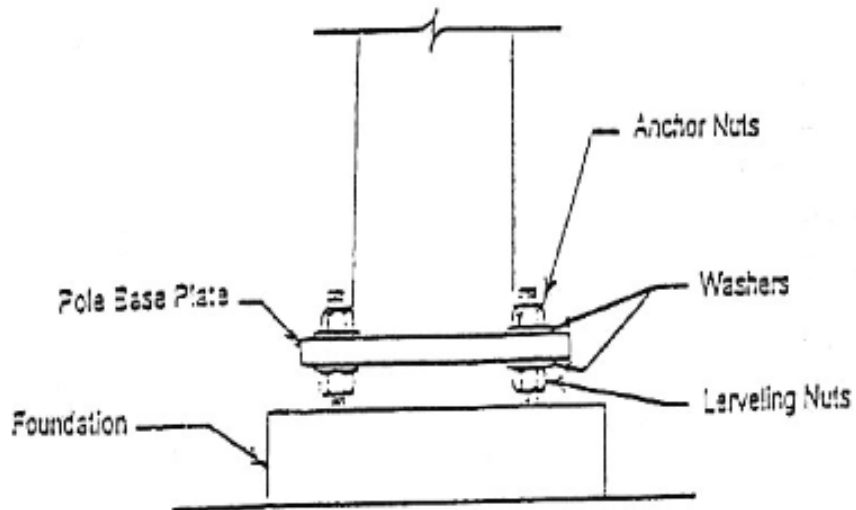


FIGURE 5

- Attach winch to pole. (FIG6).
- Attach cable end to shroud pin (FIG6).
- Remove shroud hold-down nut (FIG. 6).

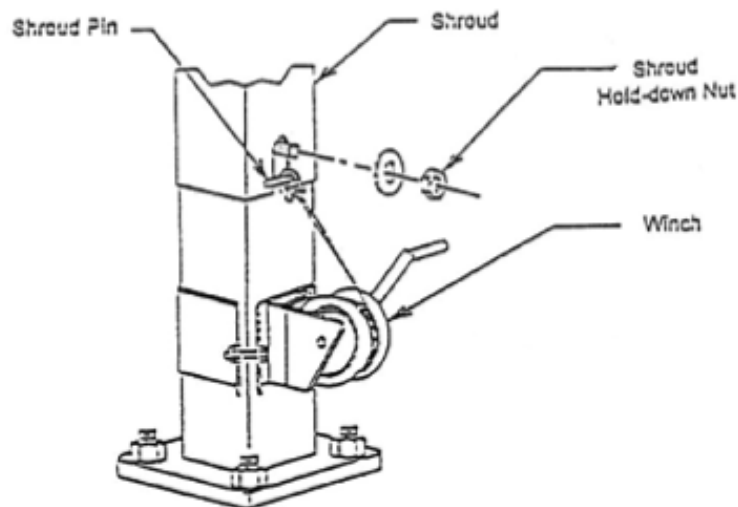


FIGURE 6

12. Pull on rope at top of pole while releasing cable from winch (FIG. 7).
CAUTION: to prevent damage to the pole, the cable must be kept taut when raising or lowering the pole.

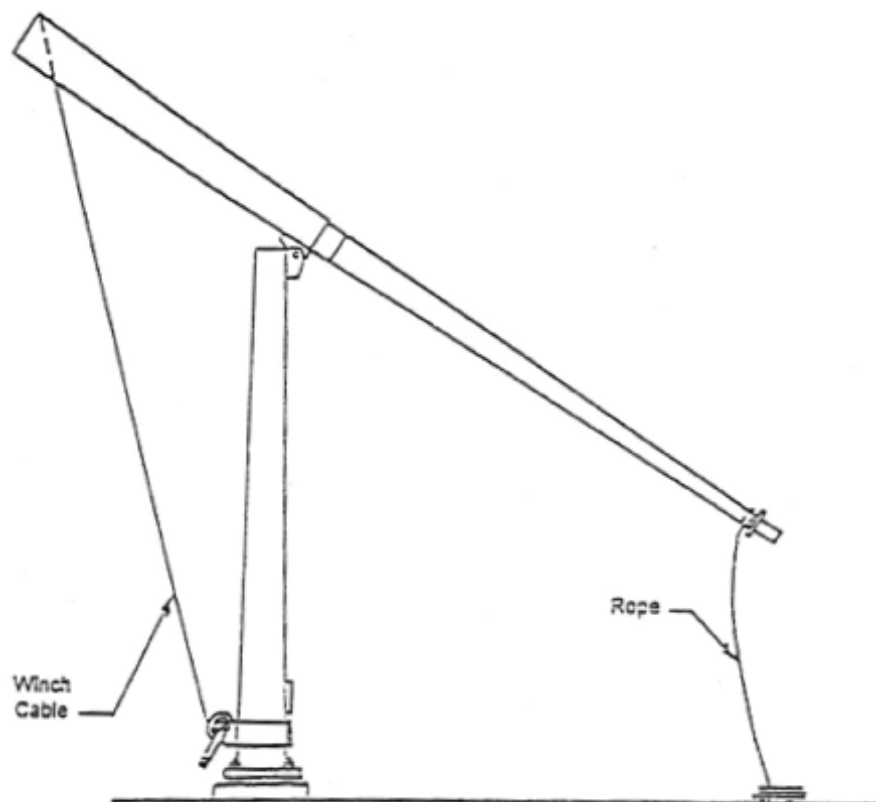


FIGURE 7

13. When the pole top is at desired level, attach luminaire and complete wiring.
14. Remove rope.
15. Raise pole back to erect position with winch and secure with hold-down nut at base of shroud.