

Distribute this information to installation personnel, future maintenance personnel, and owners.

This general information deals primarily with the long term durability of structures of the type supplied by Valmont. It is not intended to be a comprehensive description of how to install these structures. Competent installation contractors must be consulted upon for practices, and equipment that meet the demands of the conditions at each job location.

Valmont cannot be responsible for any damage that occurs during or after installation, or for any structure that has been modified or that is utilized in some way other than that described in our application recommendations.

For information about the structural capability of these products or about installation practices, please consult with the factory or nearest Valmont representative.

Grounding and Protection Against Electric Shock

The purchaser and installer must provide proper electrical grounding and warnings about any electrical hazards in accordance with applicable codes.

Corrosion Protection

Structures that are to be stored prior to use should be protected from moisture retention and kept well ventilated. Immediate removal of all packing and shipping materials is recommended to prevent accelerated finish deterioration.

Foundation details should assure that water or excessive moisture cannot accumulate at the base of the pole. This includes providing drainage for any water caused by condensation inside the pole.

All finishes are subject to gradual deterioration. The rate of deterioration is a function of many variables such as:

- Corrosive elements in the atmosphere.
- Salt spray from road surfaces or a marine environment.
- Moisture from rainfall or condensation.

An on-going maintenance program must include periodic inspection for normal deterioration of the protective coating and for any indication of corrosion, which may be localized. Renewal of the protective end of the coating, both inside and outside, must be done at the end of the coating life to preserve the structural integrity of each assembly. Valmont's brochure "Protective Coatings for Steel" has additional information on corrosion protection.

Field Painting

The following information applies only to application of finish coats over Valmont's standard prime coats (Valmont Specifications F73). The painter must check whether the prime coat is Valmont's standard or a special finish specified by the purchaser.

The primed surface should be free of any contaminant detrimental to adhesion, such as grease, oil, and dirt. This can be accomplished by chemically cleaning contaminated areas with stoddard solvent, petroleum naphtha, mineral spirits, turpentine, xylol or toluene. Light sanding of the primed surface further enhances adhesion of the top coat. Spot prime such areas as scratches and mars that have penetrated near or to the substrate.

Note: Field applied top coats containing high strength solvents should be tested for inter-coat and system adhesion. Primed surfaces not top coated within 30 days should be lightly sanded or chemically cleaned.

Weathering Steel

Weathering steel is not a completely maintenance-free material. An on-going maintenance program must include periodic inspection for any abnormal corrosion.

Suppliers of weathering steel can supply data about the behavior of these materials in various environments. Their application recommendations should be consulted for best results.

It is important to avoid continuous exposure to moisture. Liquid water, damp debris, or soil on weathering steel surfaces will cause accelerated corrosion. Excessive vegetation around the base can be harmful. A build-up of corrosion debris can adversely affect the inside of the pole base.

Unless tubular members are hermetically sealed they should be kept open for ventilation, particularly at the base.

At least one steel supplier recommends painting closely fitting (faying) surfaces. The best time for painting is immediately prior to installation to minimize damage to the protective coating.

Effects of Vibration

Although rare, vibrations severe enough to cause damage can occasionally occur in structures of all types. Because they are influenced by many interacting variables, vibrations are generally unpredictable. There is no single cure that will assure the prevention of all modes of vibration.

Vibration is believed to be more likely to occur when structures (or components such as arms) are installed without attaching the equipment which the structures are designed to support. Therefore the intended equipment, or devices equivalent in damping characteristics, should be installed at the time of erection.

Steel poles have been less affected by vibrations than poles of other materials. However, the user's maintenance program should include observation for excessive vibration and examination for any structural damage or bolt loosening.

Anchor Bolt Foundations

If anchorage hardware is furnished by others, the correct size and strength must be used.

When leveling nuts are used, the lower nuts should be close to the concrete surface (about 1" maximum). Large spaces between the pole base plate and the concrete can cause excessive stresses in the anchor bolts, particularly when there are large torsional forces in the pole.

Transformer Bases

In attaching a pole to a transformer base, when the pole base plate has slotted holes, place the connecting bolts on the largest possible bolt circle (i.e. the outer ends of the slots).

ASTM A325 Bolts

Threads may need to be lubricated in the field in order to achieve bolt tension in accordance with AISC recommendations. Hardware suppliers use beeswax and various commercial waxes as lubricants. They indicate that products like "WD-40" are commonly used in the field.

Hinged Poles

Wiring must pass through the wiring protection guide at the hinge to assure that the insulation won't be damaged during raising and lowering. The raising and lowering winch must be operated smoothly and the winch cable kept taut to avoid impact loadings which could cause collapse of the shaft extension shroud.