### BANGLADESH RURAL ELECTRIFICATION BOARD

PBS INSTRUCTION: 100-53 BREB INSTRUCTION 500-22

STORAGE AND HANDLING OF TIMBER PRODUCTS

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SUBJECT: STORAGE AND HANDLING OF TIMBER PRODUCTS

#### I. SCOPE

This manual will be applicable for the proper Storage, Handling and Disposal of all treated wood products used in the BREB System.

#### II. GENERAL

All Timber Products under this manual shall be stored and handled in such a manner as to insure sufficient air flow in, on, around and through the stacked material.

Timber products, as with all other material shall be used in accordance with the "First In-First Out (FIFO)" method of issuance.

New material shall not be stacked upon the older material already in storage. New material shall be stored in such a way so that the older materials can be used or removed first without disturbing the newly received stock.

#### A. General practices for storage material are as follows

 The storage yard shall be graded for good drainage away from storage area so that no material will be exposed to standing water.

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- 2. The storage area shall be free of all vegetation.
- 3. Material shall not be stored directly on the ground, floors or on cardboard or plywood that is placed directly on the ground or floors.
- 4. All decayed, decaying or decay-susceptible wood, paper or other packing material shall be removed from the storage areas as soon as it is detected and disposed of in a proper manner.
- Materials shall not be "dead piled" with the possible exception of anchor/stabilizer logs because their irregular shape usually provides sufficient space for good air circulation.
- Material shall not be stored on top of other materials, unless it is properly supported and air can circulate freely around it.
- All material shall be handled in a manner so as not to cause damage or injury to the material or personnel working in the area.
- Treated wood products and their mulch are not to be used for making of roadways pathways for vehicle or pedestrian traffic or bedding or litter for chickens and
  animals or humans.
- Material shall be used only for the purpose it was purchased for except with prior written permission of competent authority.
- 10. Timber products generally shall not be transported by rafting or floating in water. However for inaccessible areas and in extreme condition, where no other mode of transportation is available, timber products may be transported by rafting or floating

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in water with the approval of concerned Director CS&M/concerned Executive Engineer, BREB as the case may be. In no circumstances the timber product shall remain in water more than 15 days.

11. Direct burial is the approved method of disposal for all pressure treated wood products and their waste; (Arsenical treated 'CCA' or 'penta' Pentachlorophenol), unless otherwise prohibited by regulations. Treated wood products shall never be burned.

#### B. Storage

- Poles shall be stacked on dunnage (broken poles) of such dimensions and so arranged as to support the poles evenly without producing noticeable distortion to any of the stacked poles.
- 2. The height of the pole stacks shall be limited to 3 meter to avoid damage to poles in the bottom layers and to avoid injury from collapse of the pole pile to personnel working on or around the pole pile.
- 3. Pole dunnage and proper pole storage for all poles is illustrated in figure 1 of this instruction. After filling up a layer of poles, the next layer shall be placed at a right angle to the completed last layer. Each pole pile shall contain only those poles of the same length and class of poles. Uneven stacking causes these poles to be over exposed to the elements like the top layers, in that they also may become weather checked and cracked due to the sun's heat. Also these protruding poles are a hazard to pedestrians and may become damaged by vehicle traffic in the store yard.

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#### C. Handling

- 1. Treated wood products shall not be dragged along the ground.
- 2. Cant Hooks, Pole tongs, or other pointed tools shall not be used in the ground line section of any pole. "The ground line section of a pole is defined as the area one foot (1') above to two (2') below the nominal ground line (setting depth) of any pole".
- 3. Treated wood products should not be dropped directly on the ground while they are being unloaded from any type of conveyance or pole pile. Such handling causes breaking, cracking and abrasions etc. The poles are to be rolled down a ramp constructed of rejected poles strategically placed to insure that no damage will occur to the poles being unloaded.
- While unloading poles by cranes, care should be taken to avoid indentation of the poles by the slings or hitting the carriage.
- 5. Treated wood products, as all other materials, shall not be thrown or roughly handled while loading or unloading them from transports. It is notable that "preservative treatment" does not increase the strength properties of wood from its original strength, it only increases its durability against decaying.
- In order to maintain FIFO, only stack poles of same age. Do not add new poles on top of old ones - start a new stack.

D. Assessing Damage to Poles

 Poles shall not be accepted if they contain any indentations, attributed to loading or handling slings, that are one-quarter (¼") inch (6 mm) or more deep over 20% (twenty percent) of the pole circumference, or more than ½ inch (12.5 mm) deep at any point.

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- 2. If indentations or abrasions, (i.e. forklift damage, chain saw damage, etc.) are more than 1/20th pole diameter at the point of damage up to a maximum of one inch (25 mm), they should be rejected. Such damage is permitted in an oversize section where the excess of wood shall be taken into consideration in evaluating the effects of damage. In any case, the remaining circumference for a given class is still required to be not less than the specification minimum. If mechanical damage occurs within two feet (2' or 60 cm) of the classing point, the remaining circumference at the point of damage must be equal to the specified minimum.
- 3. If there are any questions as to the damage or other related matters, the BREB Wood Products section shall be consulted.

# III. STORAGE AND HANDLING OF CONDUCTOR AND WIRE REELS A. Storage

- Conductor and Guy Wire reels shall be stored on brick soling in multiple layers.
   Wedges shall be provided for the reels of bottom tier to secure them on the ground.
- 2. Reels of a tier shall be stored with sufficient space between them so the reels can be re-handled with the use of a spreader bar.
- 3. Reels shall not be stacked more than three (3) tiers high unless it can be determined that greater heights will not cause crushing or other harm to the lower layers and that mechanical lifting devices are readily available to handle them.
- Reels stacked on top of one other shall be stacked so that each reel of upper layer rests
  upon the flange of the reel of the lower layer as to not damage the contents of the
  lower layers.

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5. Reels shall be stacked only on their flanges and not on their side. (flat stacking of reels can cause breaking of the flange ends and allows the layers of wire to shift and cross over one another causing damage to the wire during the stringing operation).

#### B. Reel Handling

- Conductor and wire reels shall not be dropped to the ground from any height. Reels
  may be carefully rolled down the skids of sufficient strength to hold the weight of the
  reel being unloaded.
- 2. The lagging shall not be removed from the reels until the contents of the reel are to be used.
- 3. When rolling reels without lagging intact, much care is needed to avoid damaging the contents of the reels by rocks, loose hardware etc.
- 4. The approved method to lift a reel is with the use of a spreader bar, at least as wide as the reel, suspended from a lifting device, with two (2) slings attached to a shaft placed through the arbor holes of the reel of sufficient strength to support the reel (this will prevent collapsing of the reel and damage of the contents).
- Reels shall not be lifted with a sling around the lagging or conductor as this practice will cause damage to the contents.
- To the extent possible, reels should not be lifted with only a sling through the arbor hole.
- 7. Reels should not be rolled in the reverse direction to lay within the reel.

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