Safety Advice 16-2009(a)(NZ)

Pole Roll Incident - Supplement

This Advice 16-2009(a) supplements the original Advice 16-2009 by providing an example procedure for safe handling of concrete poles. Both should be read together. EEA is appreciative of Busck Prestressed Concrete Ltd making this available for general information. Advice readers may consider approaching suppliers for similar guidance to promote safe concrete pole handling.

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Busck Prestressed Concrete Ltd
Guideline for
Safe Handling of Concrete Poles

Document number: BCG-001 Revision 3

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Revision		
Revision	**Reason for revision**	**Issued**
1	Replace photo, replace wording of "nylon strop" with "polyester or composite material sling"	15/4/2010
2	Changes to Section 6.4 Loading on to a line truck, Section 6.5 photo's added	1/5/2010
3	Changed photos	1 /10/2010
End		

Contents

1 Purpose

The purpose of this document is to provide Busck Prestressed Concrete Ltd's staff and its customers, a safe handling guideline for concrete power poles.

The following shall be used as a manufacturers guide only. It is not intended to remove the need for staff to comply with relevant Acts, Regulations, Standards, Code of Practice or your own Companies Safety Rules or Guidelines.

2 Policy

All Busck concrete products shall be handled in such a manner to ensure that product is not damaged, to the point where the product may fail to meet its designed strength or life. If a product is handled or mistreated with the use of equipment not recommended by Busck, such as choked chains, warranties may be void.

3 General

This guideline only applies to Busck concrete poles and may not be suitable for the handling of other Busck products or other manufacturers products.

4 References

The following documents are referenced for guidance only and may not be a complete list of Acts, Regulations, Standards or Codes of practice

Reference	Title
Standards	
AS/NZS 3000:2000	*Electrical installations (known as the Australian/New Zealand Wiring Rules)*
AS/NZS 4676:2000	*Structural design requirements for utility services poles*
ESAA HB C(b)1-2003	*Guidelines for the design and maintenance of overhead distribution and transmission lines*

5 Definitions

Busck	Shall mean Busck Prestressed Concrete Ltd or any person directly employed or contracted to Busck Prestressed Concrete Ltd
Customer	Shall mean any Company or their staff members who purchases or are contracted to work on or with Busck's products
Dunnage	Timber which is placed in between layers of concrete products
Staff	Any worker handling or working on a Busck product, whether employed by Busck or one of its Contractors or anyone employed or contracted to the Customer
Narrow Face	Shall mean the transverse face of the pole, commonly called the across line face
Wide Face	Commonly referred to as the along line face
Swift Lift Chains	Is a set of chains attached to the Reid "Swift Lift" clutch

6 Handling of poles

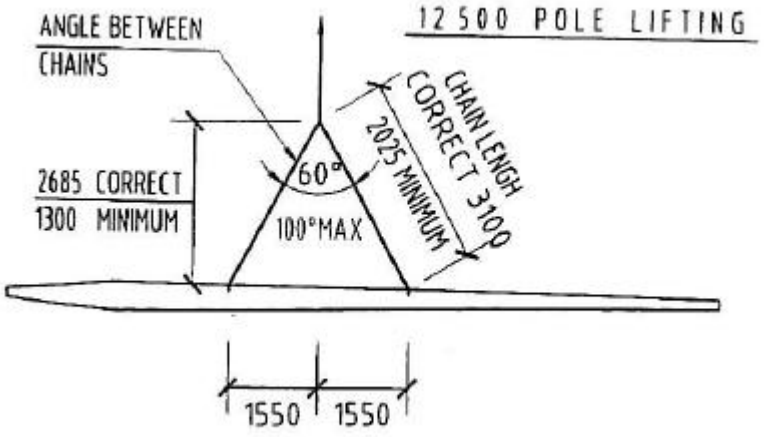
At all times safety must come first and if for any reason anyone feels that there is a safety issue, then the work site/yard should be made safe and work stopped while the issue is reassessed and corrected if needed. At all times only correctly rated and tested devices shall be used to lift a Busck pole. While lifting poles, all personnel shall wear suitable Personal Protective Equipment as required by their employer or required for the work site owner, whichever is the greater will apply.

Before any lifting takes place, the crane operator shall ensure that the crane being used is fit for the purpose and is in good operating order and all test certificates are current. Where the crane is not in good operating condition or the test certificates are not current or the crane is not suitable for the purpose, the crane shall not be used.

All lifting equipment must be kept in good condition and all test certificates shall be current. Where any lifting equipment is showing signs of damage, it should not be used.

6.1 Horizontal Lifting

When lifting poles in the horizontal position, only "Swift Lift" chains shall be used. Two correctly rated "Swift Lift" chains shall be connected to the lifting point in the poles. Poles shall not be lifted off the wide face of the pole. Poles should not be lifted directly by a forklift without the use of "Swift Lift" chains. Each set of chains attached to the Swift Lift clutch should be the same length as the distance between the lifting pins in the poles. This is especially important when lifting 12.5m poles.



Correct chain length for 12.5m pole

Swift Lift clutch

Swift Lift clutch on pole

Swift Lifts with chains

Swift Lifts with chains

Lifting with forklift and Swift Lifts

6.2 Stacking

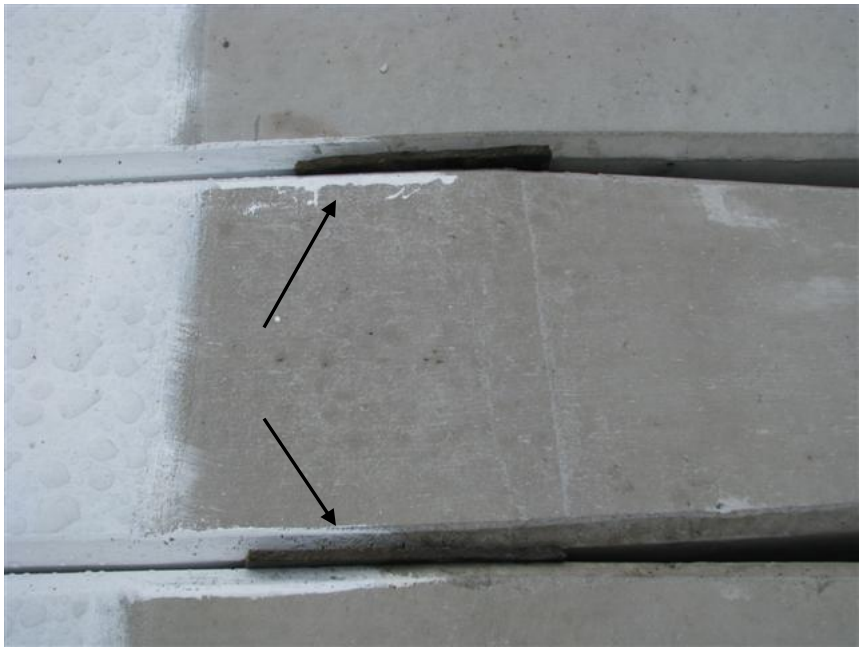
Where possible poles shall always be stacked on the narrow face of the pole. If for safety reasons it is decided to lie the pole on the wide face, no other poles shall be stacked on top of the pole on its wide face.

When stacking poles, suitable dunnage in similar locations as photo below, should be placed on the ground and between each layer of poles as shown on the Busck standard pole drawings. Each subsequent layer of dunnage should be placed directly over the first set laid on the ground. Poles shall be stacked in piles of no more than three high. Consideration needs to be given to location, the slope of the ground and the width and stability of the stack before a second layer is added. Where poles are to be placed on the side of the road, consideration should be given to the possibility of the pole rolling over. In these cases the customer may choose to lie the pole on the wide face. Additional dunnage should be placed under the pole to ensure the pole stays straight over its entire length and does not deflect.

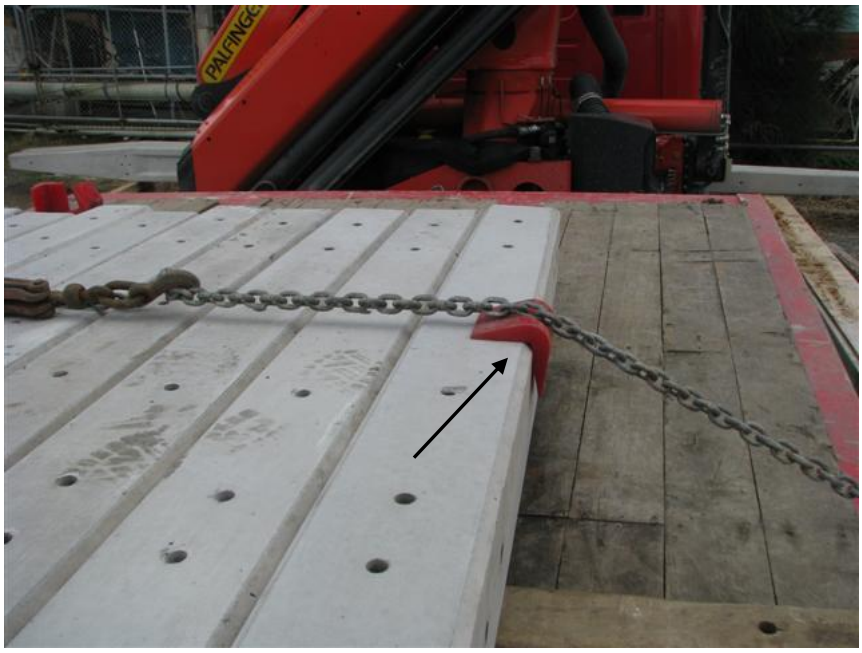
Dunnage locations

6.3 Transporting on a flat deck truck

Where multiple poles are loaded on to a flat deck truck, rubber shall be placed between each pole to ensure the poles are not damaged during transportation. Where chains are used to secure the loads, protection shall be placed over the edges of the pole under the chain.

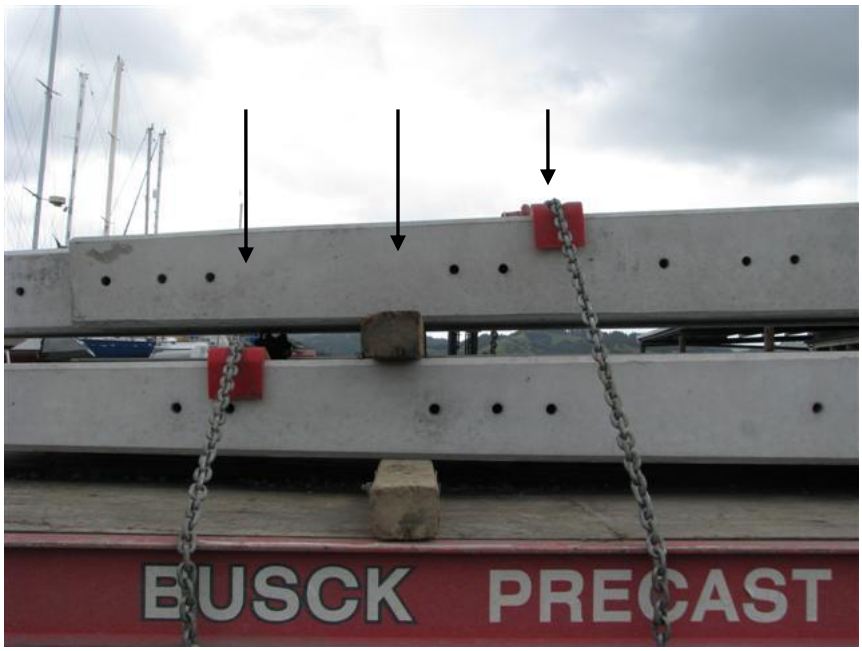


Rubber between poles at the widest point



Corner protectors under chains

It shall be the responsibility of the truck driver to ensure that all loads are correctly tied down and are secure. The driver shall also be responsible to ensure that their truck is not overloaded. No chains shall be placed at more than 1000mm away from the dunnage.



Corner protectors and dunnage locations

6.4 Loading on to a line truck

Where poles are being loaded on to a line truck or other type of transport where the pole is not flat, the pole shall be lifted with either two correctly rated "Swift Lift" chains with length adjusters connected to the lifting points in each of the poles. Poles shall always be lifted with the wide face vertical.

Using swift lift chains

It shall be the responsibility of the truck driver to ensure that all loads are correctly tied down and are secure. The driver shall also be responsible to ensure that their truck is not overloaded.

6.5 Erecting poles

Before unloading or erecting a pole, the crane operator shall ensure the crane truck is well stabilised, wheels chocked and park brake applied.

All poles should be lifted off the truck with two correctly rated "Swift Lift" chains connected to the lifting points in each of the poles. Poles shall always be handled and stacked with the wide face vertical.

Poles shall be placed onto the ground with dunnage under the pole at the correct points. Using a correctly rated polyester or composite material sling or wire strop, which should be choked around the pole, approximately 1.5 metres above the balance point, with the butt end resting on the ground, all poles shall be erected from the narrow face of the pole.

The use of an M16 bolt placed through a hole, and with a nut fitted above the sling, may stop the sling from slipping until the sling grips on to the pole.

Using a choked polyester or composite material sling

Erecting with polyester or composite material sling strop

Erecting with polyester or composite material sling and safety bolt

At no time should a choked chain be used for the purpose of erecting a Busck concrete pole as it may cause damage to the pole, which may affect the poles structural integrity. Use of choked chains for lifting a pole may void the warranty.

End of document