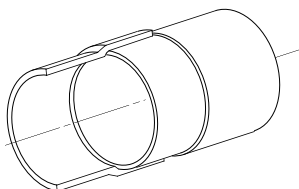


## FIBERGLASS PIPE GROUP



# Shipping, Handling, Storage and Inspection of Bondstrand Fiberglass Pipe

### Introduction

Bondstrand pipe is manufactured from fiberglass reinforced epoxy or vinyl ester resins. When properly handled and installed, fiberglass pipe and fittings result in a maintenance-free, high-performance piping system. Fiberglass reinforced pipe and fittings are impact sensitive and **must** be handled with a reasonable amount of care.

### Handling

#### Transportation

- a. Let the factory arrangement of the pipe be your guide for correct supporting and spacing when rearranging for transport. Do not let pipe or fittings rest on the bed of the truck where nails, studs and other objects might damage them. Whenever pipe or fittings come in contact with wood or metal, padding such as excelsior, carpet or foam should be used.
- b. The pipe should be securely fastened directly over the dunnage with tiedowns consisting of nylon straps or manila rope. Avoid overtightening which may cause excessive localized deformation in the pipe. Straps and ropes should be retightened every 50 miles while in transit. Rope ties should be used between standards to prevent the load from spreading.
- c. Do not allow the pipe to extend more than 3 feet beyond the truck or trailer bed as permanent damage can result from excessive flexing. Pronto-Lock<sup>®</sup> pipe should always be loaded with the female ends even. Spacers used during transportation should be padded.
- d. Bondstrand pipe is a light load, particularly with larger diameter pipe. Therefore, reduce speed on rough roads to minimize bouncing.

*Properly loaded pipe. Rope ties should be used between standards to prevent the load from spreading (left). Straps and ropes should be retightened every 50 miles while in transit (right).*



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## Handling (cont.)

### Loading and unloading

- a. Pipe and fittings should never be thrown or dropped under any circumstances.
- b. If the pipe load is properly separated and supported, forklifts can be used. Forklifts should have at least a 6-foot carriage (distance between the forks). All surfaces that come in contact with the pipe should be padded.
- c. Never jam or spear forks into a load of fiberglass pipe except where spacers of at least 2-inch thickness are located.
- d. If load is irregular and cannot be reliably moved by fork truck, or proper equipment is not available, the pipe should be carefully loaded and unloaded by hand one length at a time. The nominal weights for each respective pipe length can be found under PIPE WEIGHT.

*Correct unloading and stacking procedure. The pipe should be carefully loaded and unloaded by hand one length at a time.*

***If proper loading equipment is not available, do not roll pipe off trailer.***



## Pipe weight

Tabulated values are in U.S. Customary units (lb/ft of pipe) and include couplings.

Bondstrand Pipe Series	Nominal Pipe Size (in)								
	2	3	4	6	8	10	12	14	16
3000A/3200A	0.5	0.7	1.0	1.9	3.2	4.6	6.2	7.5	9.4
2000/4000/7000	0.8	1.2	2.0	3.0	4.3	5.4	6.4	7.4	9.5
2000M	0.9	1.3	2.1	3.1	5.2	8.1	11.0	15.0	19.0
5000/5100	1.0	1.5	2.5	3.5	5.0	6.7	7.4	8.7	11.2

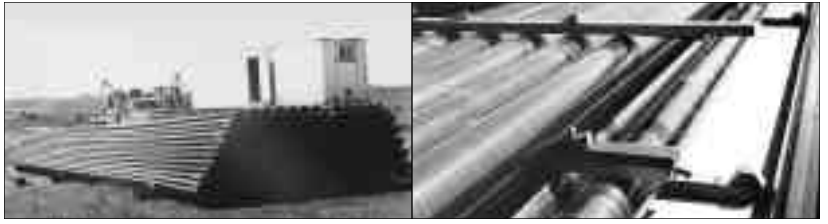
## Storage

Bondstrand pipe may be safely stored outside for extended periods provided the following procedures are observed:

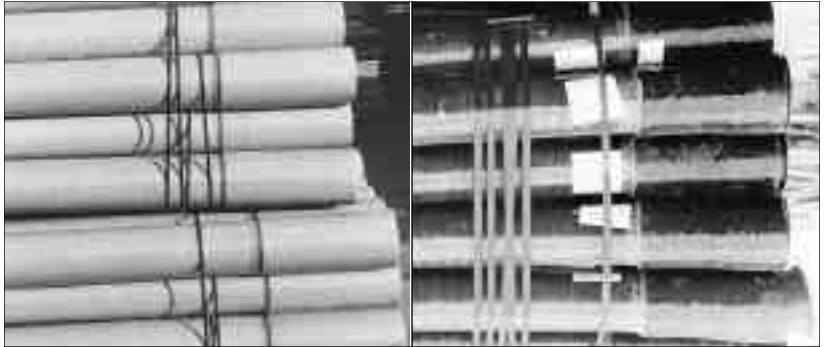
- a. Supports should be spaced in maximum 10-ft intervals and approximately 6 feet from each end. The supports should have a minimum 4-in wide bearing surface.



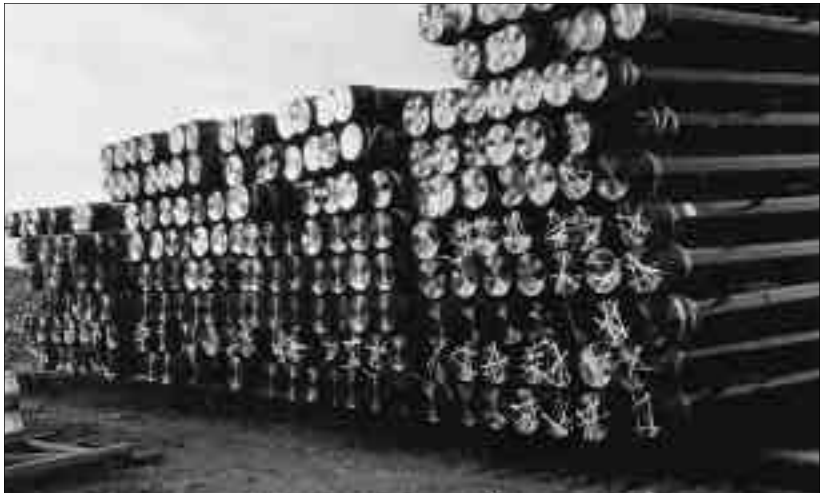
## Storage (cont'd)



- b. A pipe stack should not exceed 10 feet in height and should have side supports or blocks to prevent rolling or slipping in the stack.
- c. Spacers should be utilized every 3 feet if the pipe will be reloaded by forklift.



- d. Tie downs should consist of nylon straps or manila rope. Avoid overtightening which may cause excessive localized deformation in the pipe.
- e. If it is necessary to stack pipe directly on the ground, make sure that the ground surface is level, soft and free of rocks or sharp objects.
- f. Protective end coverings should be left in place until time of installation to protect the pipe ends and to prevent dirt or other materials from entering the pipe.

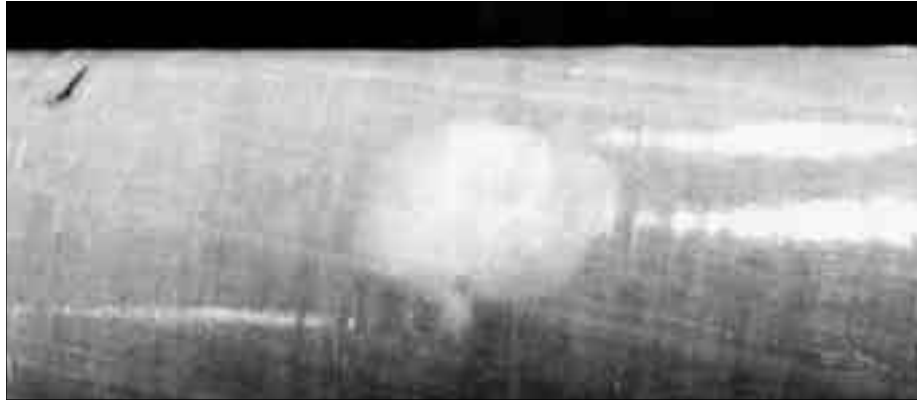


- g. Fittings, adhesives and tools should be stored in their shipping boxes under cover and protected from water, mud and extreme heat or cold.

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## Inspection

Since pipe and fittings may be subjected to rough treatment during transportation, storage and handling, it is imperative that they be fully inspected for possible impact damage, cracking or manufacturing defects. If the outside surface of the pipe has been gouged or exhibits a depression, it is likely that the impact has also caused damage to the liner. Impact damage on translucent pipe can usually be detected by a localized color difference in the pipe.



The color difference may be as small as ½ inch in diameter or as large as 4 inches in diameter depending on the intensity of the impact. Inspection of pipe and fittings should be undertaken upon delivery and just prior to installation. At delivery, check the load carefully. If pipe or fittings are delivered damaged, the following procedure should be observed:

### End Users and Distributors:

*Accept all damaged material.* Note damage on freight bill and bill of lading. Notify the shipper immediately. Depending on the origin of shipment, call the Bondstrand distributor in your area, or, in the case of direct shipments, call Ameron Fiberglass Pipe Systems.

During inspection, isolate any damaged sections immediately to avoid any chance of damaged material being installed. All damage on pipe must be cut out and repaired. Inspection plays a major role in the ultimate success of an installed pipeline. If damaged or defective pipe or fittings can be detected prior to installation, the installer will avoid frustration and delays caused by necessary rework. All parties involved will benefit from careful and thorough inspection.

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## Important Notice

This literature and the information and recommendations it contains are based on data reasonably believed to be reliable. However, such factors as variations in environment, application or installation, changes in operating procedures, or extrapolation of data may cause different results. Ameron makes no representation or warranty, expressed or implied, including warranties of merchantability or fitness for purpose, as to the accuracy, adequacy or completeness of the recommendations or information contained herein. Ameron assumes no liability whatsoever in connection with this literature or the information or recommendations it contains.



### FIBERGLASS PIPE GROUP

#### GROUP HEADQUARTERS

P.O. Box 801148 • Houston, TX 77280 • Tel: (713) 690-7777 • Fax: (713) 690-2842 • <http://www.ameron.com>

#### Fiberglass Pipe Division

**Asia**  
Ameron (Pte) Ltd.  
No. 7A, Tuas Avenue 3  
Singapore 639407  
Tel: 65 861 6118  
Fax: 65 862 1302/861 7834

#### Fiberglass Pipe Division

**Europe**  
Ameron B.V.  
J.F. Kennedylaan 7  
4191 MZ Geldermalsen  
The Netherlands  
Tel: +31 345 587 587  
Fax: +31 345 587 561  
Telex: 40257 bonds nl

#### Fiberglass Pipe Division

**Americas**  
P.O. Box 878  
Burkburnett, TX 76354  
Tel: (940) 569-1471  
Fax: (940) 569-2764

#### Ameron Composites

P.O. Box 71370  
11 McBride Street  
Newnan, Georgia 30263  
Tel: (770) 253-2000  
Fax: (770) 253-9234

#### Fiberglass Pipe Division

**Centron International**  
P.O. Box 490  
600 FM 1195 South  
Mineral Wells, Texas 76068  
Tel: (940) 325-1341  
Fax: (940) 325-9681