

DURAFRAX® 2000 ELBOW LINERS

The Choice for Extremely Abrasive Environments

In industrial environments where highly abrasive materials are pneumatically conveyed, unlined steel or rubber lined elbows may wear out in a few weeks, generating a costly cycle of downtime for frequent repairs and replacements. Saint-Gobain's solution to this common wear problem is our Durafrax® alumina elbow liner, an option that offers easy installation, exceptionally long service life, and low-cost fabrication.

Saint-Gobain developed the Durafrax® alumina elbow liner specifically for this type of application. By engineering our Durafrax® alumina to be one of the best wear materials available for fine particle abrasion, we produce a product with excellent mechanical properties, superior wear resistance and desirable corrosion performance. In the most severe operating environments, Saint-Gobain's Durafrax® elbow liners lasted five to ten times longer than the steel. Do not be fooled by "ceramic lined" imitations.



Easy Integration Into Your System

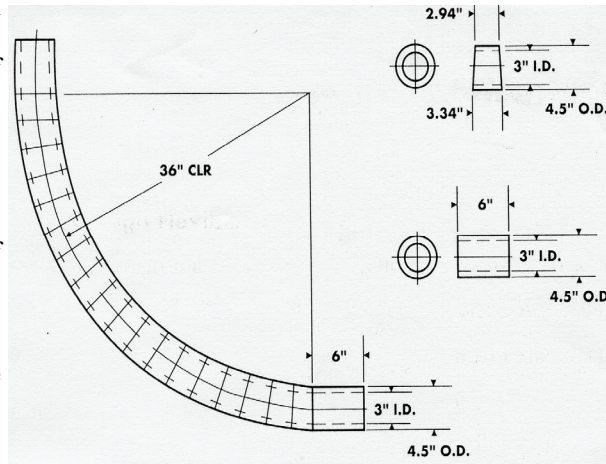
Our Durafrax® 2000 Elbow Liners are designed with the same internal diameter as the existing un-lined pipe. A minimum Durafrax® thickness of 1/2" wall is required, but a heavier wall is recommended for optimum wear life. Segmented cylinders are laid out in preparation for



installation, and each joint is coated with a specially formulated epoxy. The Durafrax® elbow liner is inserted into the steel elbow. The space between the liner OD and the steel ID is filled using a ceramic mortar specified to your particular operating environment. Special oversized flanges are used on existing straight pipe to connect them to the Durafrax® Lined Elbow. When the elbow is installed in a pneumatic conveyor line, a 1/8-inch thick gasket is placed between the flanges.

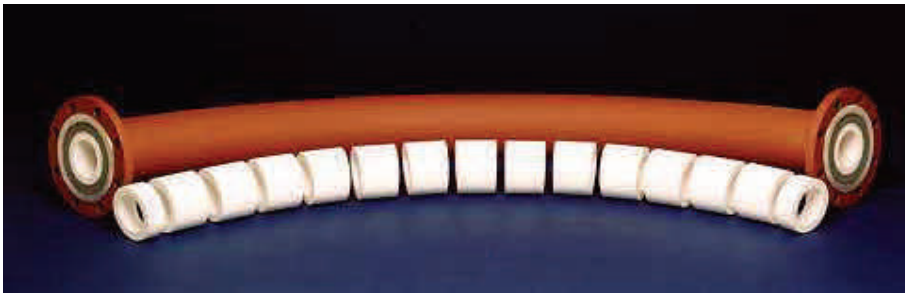
Chorded Construction Offers Design Flexibility

Saint-Gobain's recommended design for the Durafrax[®] elbow liners is called chorded construction because each section of the liner is a straight tube, rather than a curved piece. A minimum clearance of 1/4 inch between the alumina liner and the inside diameter of the steel is required for proper insertion of tubes and mortar. Saint-Gobain chorded construction Durafrax[®] lined elbows are available in diameters up to 12 inches with virtually any degree of bend and center line radius.



Quality Through Design

Our expertise in material science, the latest technology in computer design, and our unique shaping capabilities give Saint-Gobain a technical edge. One of our major strengths is custom-engineering ceramic shapes in their pre-fired state, which enables us to provide a more precise fit and full ceramic protection throughout the thickness of every joint. The result is a superior wear system that eliminates frequent downtime for repairs and substantially extends the service life of your equipment.



We sell solutions

Analyzing a wear problem is a complex process. Wear is typically caused by a combination of temperature, raw material impingement, high velocity particles, abrasive slurries, and chemical attack. Our design engineers understand wear problems and specify materials to suit the operational environment. Material properties, engineering tolerances, attachment methods, and material costs are all considered in a Saint-Gobain wear solution.

Applications

- Chutes/Hoppers
- Classifier Cones
- Cyclone Separator
- Elbows
- Fan Housing & Blades
- Lined Piping
- Nozzles
- Wear Panels

Markets

- Coal-fired Power Generation
- Abrasive Material Handling
- Chemical Processing
- Food Processing
- Iron/Steel Manufacturing
- Mineral Processing
- Powder/Bulk Solids Conveying
- Pulp & paper Manufacturing
- Pulverizing & Grinding
- Grain Handling
- Cement
- Asphalt

All of the above statements, recommendations, suggestions and data concerning the subject material are based on laboratory and field results, and although we believe the same to be reliable, we expressly do not represent, warrant or guarantee the accuracy, completeness or reliability of same, of the material, or the result to be obtained from the use thereof. Nor do we warrant that any such use, either alone or in combination with other materials, shall be free of the rightful claim of any third party by way of INFRINGEMENT or the like, and Saint-Gobain Ceramics DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



SAINT-GOBAIN CERAMIC MATERIALS

4702 Route 982
LATROBE, PA 15650 USA
Phone: (1) 724 539-6000
(1) 800-438-7237 (USA Canada)
Fax: (1) 724 539-6070
Internet: www.wrt.saint-gobain.com
e-mail: wrtinfo@saint-gobain.com
SAINT-GOBAIN CERAMIC & PLASTICS, INC.