FLUE GAS DESULFURIZATION SYSTEMS

Superior quality linings for flue gas desulfurization systems

- ABSORBER TOWERS
- OUTLET GAS FLUES
- PROCESS TANKS
- DEMISTER SUPPORTS
- RECYCLE AND PROCESSING PIPING
- RAKE ARMS & AGITATORS

Blair Rubber's personnel are experienced in analyzing and processing rubber compounds engineered for the highly corrosive and abrasive environments encountered in FGD systems.

BLAIR'S PERFORMANCE LININGS FOR FGD COMPONENTS ARE:

Plioweld™ LS582 Chlorobutyl, 60 Shore A durometer for the FGD absorber and associated demister internals.

Enduraflex™ No. VE616BN. 60 Shore A durometer specially designed for recycle slurry, reagent feed, gypsum dewatering, filtrate, piping, rake arms and agitators.

Numerous manufacturers in the early 70's experimented with pure gum rubber for absorber and component piping. The overwhelming evidence from these early installations showed that a soft 40 durometer natural rubber is unsuitable for these units and associated component piping. The linings failed rapidly due to blistering which was caused by moisture absorption.

Another critical factor in preventing blistering is the moisture permeation rate, which is the determinant of FGD rubber life. This permeation rate is directly proportional to the temperature gradient across the rubber lining, the so-called "coldwall" effect.

Simulated FGD tests conducted by EPRI showed that both fully cured and deliberately uncured pure gum 40 durometer natural rubbers do blister. Panels of the same lining, when externally insulated, did not blister during the test period. Also, tests confirm blistering did not occur with 60 durometer compounds either with or without insulation. Laboratory tests comparing various durometer materials showed vast differences in water absorption. A 40 durometer natural rubber gains five times the amount absorbed by a 60 durometer lining.

FGD Absorber case histories confirm that the chlorobutyl linings give trouble free service when correctly applied and cured. Chlorobutyl linings offer excellent chemical, heat, weather and ozone resistance compared to natural rubber.

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However, the 60 durometer natural rubber specifically compounded for the FGD rubber absorption pipe has double the abrasion resistance compared to the chlorobutyl linings used in FGD absorbers. In selecting a rubber lining for pipe, either for recycled slurry, reagent feed, gypsum dewatering, or filtrate systems, one must take into account the volume flow, percentage of solids and particle size in order to make the proper choice.

Where abrasion is considered severe, Blair's **Enduraflex™ VE616BN**, 60 durometer natural rubber is the proper selection. When moderate to light abrasion is encountered, Blair's **Plioweld™ LS582** (Formally GoodYear) 60 durometer chlorobutyl lining may also be utilized.

In many FGD pipe applications, 40 durometer pure gum natural rubber gives only 3-7 years of service where a 60 durometer natural rubber gives 7-10 years of life. Since most FGD scrubber piping is exposed to very light abrasion, installing LS582 chlorobutyl is expected to last in excess of 15 years.

Only chlorobutyl LS582 is recommended as the performance lining for the absorber and the demister supporters.

Once again, when you have tough operating conditions, contact Blair Rubber's technical staff for assistance in selecting the correct lining.