

## NUCLEAR POWER WATER TREATMENT

Superior quality linings for nuclear power water treatment.



- **CONDENSER POLISHING VESSELS**

Blair Rubber's personnel are experienced in designing and processing rubber compounds for the highly corrosive environments encountered in Nuclear Power Water Treatment applications.

Nuclear facilities require sulfites to be at absolute minimum levels. In order to maintain these low levels when using semi-hard rubber linings in demineralizing water treatment units, the lining must be pressure cured; either in an autoclave or by using the vessel as its own autoclave. Only high steam pressure curing will cross-link and combine the sulfur in semi-hard rubber linings.

On the original vessel, this is not difficult because linings such as **Enduraflex™ VE821BNS, VE823WNS** and/or **VE926BNS** can be internally steam cured. It is recommended they be cured 12 hours at 260°F (127°C).

With older vessels requiring repairs, one has to make a judgment call as to how to repair the vessel. Basically, there are two options of repair: One is to use a chemical cure lining that is appropriate to match the lining in the vessel. Chemical cure linings, may have extractables such as metal salts and sulfur compounds, even when cured with steam. Therefore, chemical cure linings are only considered acceptable on minor repairs. **C922BN** is a successful chemical cured, semi-hard lining used for repairing nuclear power plant vessels. When properly cured, its low metal salt and sulfur compound extractables make it an ideal choice for this service.

The second option is to use the original semi-hard lining to repair with an internal steam pressure cure. However, one runs the risk of damaging the original lining when making a partial repair. Though the linings listed above can be exhaust steam cured, the threshold level of extractables such as metal salts and sulfur compounds is not acceptable. Therefore, if one has a large area of repair, the safe recommendation is to strip and re-line the entire vessel with a pressure cured lining.

Contact Blair Rubber's technical staff for assistance in selecting the correct lining for a specific service condition.