

1.0 SYSTEM DESCRIPTION

Increasingly sophisticated electrical controls produce the need for a means of eliminating corrosives from electrical control room atmospheres. Westvaco Nuchar WV-IS specialty activated carbon is a proven means of air purification. The Westvaco Vapor Adsorber is a conveniently packaged assembly that uses this activated carbon to produce purified air and to convey it to an electrical control room. This adsorber keeps out corrosive gases through room pressurization, thus increasing the life and reliability of the equipment in the electrical control room.

The Westvaco Vapor Adsorber is a skid-mounted unit with a stainless steel adsorption vessel, an FRP direct-drive fan, stainless steel inlet hood having a screen and prefilter, and stainless steel outlet duct connection with a prepostfilter and postfilter. See Figure 1. The inlet air is drawn through the inlet hood and screen which protect the prefilter from moisture, debris, and insects. The air then flows through the 30-percent ASHRAE efficiency pleated prefilter where particulates are removed. The contaminated air then flows through the fan, an adjustable airflow damper, and into the bottom of the adsorption vessel. FRP grating and a polypropylene fabric grid cover support a 3-foot-deep bed of Westvaco Nuchar WV-IS specialty activated carbon. As the air flows upward through the carbon bed, the corrosive gases are removed. Any particulates passing through the carbon bed are removed by a pleated pre-postfilter with a 30-percent ASHRAE efficiency and an HEPA postfilter with a 95-percent DOP efficiency. The air then enters the outlet duct for delivery to the electrical control room(s).