Power Plant

SURFACE PREPARATION & COATING

Property Damage Restoration | Temporary Humidity Control | Property Damage Prevention

APPLICATION

Overview

It is common maintenance practice in the power production industry to temporarily shut down fossil fuel or nuclear power plants in a process referred to as ‘mothballing’. These shutdown periods enable maintenance to be undertaken to repair or upgrade boilers and turbines as well as major cleaning and servicing of pumps and valves.

Additionally, power plants have thousands of square meters of painted steel that need regular maintenance re-coating to prevent damage created from corrosion. This repair work is required and can prove expensive. Often power plants are located in extreme environments which make mothballing and re-coating activities challenging. Munters can install temporary climate control equipment systems to control the moisture and temperature within the power plants to create a suitable environment for these applications to be successful.

Desiccant dehumidification systems can be utilised to passivate steam side pipes to keep corrosion in check reducing the reliance on costly nitrogen purging. Additionally, these systems can be utilised to improve conditions for the re-coating of the steel surfaces within the plant. These shutdown periods can be very expensive especially at re-commissioning, however using Munters’ technical expertise and equipment the plant climate can be guaranteed while reducing the owners’ overall shut down costs.

One way to ensure the best results during a plant lay up is to ask for solutions that require experience, equipment innovation, engineering expertise and of course, the people to ensure success every time. The use of Munters temporary desiccant dehumidifiers, heaters and air conditioners will provide the optimum environment to meet all your shutdown climate control objectives. The contractors can complete their projects on schedule while providing the highest quality of work.

Munters’ dehumidifiers secure climate during maintenance.

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PROCEDURE

In order to ensure that the equipment is tailored specifically to any outage or maintenance application, the following detailed information is necessary:

- Size of the steam pipes or vessels
- Ventilation rates
- External weather data
- Product specifications
- Equipment openings and exits
- Site logistics.

Only when this information is compiled and analysed can the suitable equipment be selected. Munters personnel can then engineer the equipment for specific applications to meet the desired specifications for the project.

Munters technicians' service and check the equipment, ducting and ancillary items prior to delivery. After delivery to the site, the equipment is then placed in a designated area, positioned close to a power supply and set up to maximise the safe operation of the unit.

Munters state-of-the-art desiccant dehumidification systems are utilised to deep dry the ambient air which ensures that the moisture level in the pipe is low enough so as to keep the corrosion growth in check. Temporary cooling and heating equipment is provided to control temperature conditions within the facility which can directly affect the curing of a specific coating type or the general working conditions of the workers. Munters provides a turnkey solution with well engineered equipment offering around the clock service that is unmatched in the industry.

Corrosion can be a major threat at many power stations.

RESULTS

Munters experienced and highly trained staff can consult customers on the best solutions for any plant shutdown or maintenance program. By utilising Munters' state-of-the-art climate control equipment, conditions are closely controlled to maintain surface dew point and temperature throughout the entire plant lay- up process. This technology ensures that the contractor receives only the equipment required to meet the project specifications while maximising efficiency and guaranteeing the highest possible results.

Power plant during maintenance. Parts have been covered to maintain required climate conditions.

BENEFITS

- Provides a safer and cost efficient scenario at start up
- Provides a safer alternative for passivating steam pipes
- Eliminates the blast and coat cycle
- Reduces weather related work delays
- Improves production rates and quality of work
- Extends coating life by providing optimal conditions during application
- Allows a monolithic spray of each coat under proper climatic conditions
- Eliminates the traditional blast, clean and prime cycle
- Provides ideal humidity and temperature conditions for 'holding the blast'.