

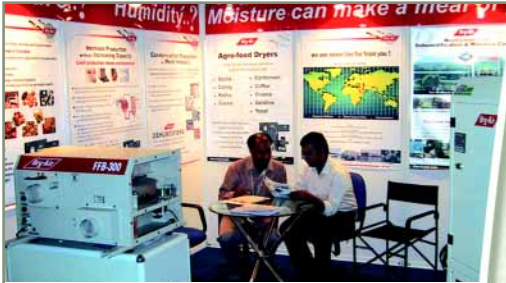
# dry facts

from **Bry-Air** [www.bryair.com](http://www.bryair.com)

111

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**AAHAR – March 08 Delhi**



**S.E. Pharma Show – March 08 Malaysia**  
BRY-AIR MALAYSIA SDN BHD



**Civil Aviation – March 08 Delhi**



**China Refrigeration – April 08 Shanghai**  
BRY-AIR (ASIA) PVT. LTD



**ISK Sodex – May 08 Turkey**



**We are never far from you !**

As we move forward, let us take you through a quick tour of events in the year gone by! In the year 2008, we ventured into many new regions, continuing to strengthen our partnerships and spreading our wings. Nearer home, we opened new sales and service office at Chandigarh to provide our customers with quicker response.

Strengthening our network abroad we ventured into Turkey, opened an office in Philippines and signed a licensee agreement with Somax, Brazil.

*Today, Bry-Air (Asia) has two plants in India, wholly owned subsidiaries in Malaysia, China and Germany, a licensee in Brazil and associate plant in USA, with offices in Thailand, Philippines, South Africa, Australia and office and warehouse in Sharjah – UAE, apart from nine offices in India.*



**8th China Intl. Battery Fair – June 08 China**



**HVAC&R – Nov. 08 Philippines**



**Big 5 Show – Nov. 08 Dubai**



**IPC Pharma – Dec. 08 Delhi**



**REVAC – 08 Malaysia**

## Don't let Breakdowns in your Electronic Controls stop your Process flow !

### Ensure reliability. Eliminate downtime.

Traces of corrosive gases like Chlorine, Sulphur Dioxide/Trioxide, Hydrogen Sulphide, Nitric Oxide, Mercaptans, Aldehydes, Arsine, Ammonia, Volatile Organic Compounds, etc. produced during the manufacturing process slowly corrode electronics and sensitive electronic components of control panels and sensors, resulting in malfunctions, breakdown and downtime.

### Why do you need to protect your control rooms ?

Studies have shown that atmospheres which produce corrosion rates greater than 0.1 microns per year cause unacceptable number of corrosion-related failures of micro-circuitry.

### Corrosion Rate per year vs. Equipment Failure (in micro-circuitry)

- <0.1 : No failures found
  - >0.1 : Intermittent failures in 1-2 years
  - >0.4 : Inoperative in 2-4 years
  - >0.6 : Intermittent failures in 0.5-1 years
  - >0.2 : Inoperative in 0.25-0.5 years
  - ◆ For electronic equipment, corrosion rate has to be below 0.1 micron per year.
  - ◆ For electrical equipment, the same can be as high as 0.5 micron per year.
- (1 micron = 0.001 mm)

### The **Bry-Air** **EcoSCRUB**™ solution !!

Bry-Air's 'state-of-the-art' **Air and Gas Purification System**, provides gaseous filtration - a simple and cost-effective solution.

The ultimate solution to corrosion lies in gaseous filtration, which involves passing the contaminant laden air stream through a bed of dry media placed in a properly designed housing.

The principle of air purification is simple : the contaminated air passes through pre-filters which retain dust and particles,

and then the required **chemical media** stages (combination of activated carbon and activated alumina impregnated with proprietary chemicals) which chemically destroy any remaining gaseous contaminants. It is a simple, yet cost-effective solution to a problem that can be very costly from a production standpoint.

Besides, a complete line of gaseous filtration products ranging from filter media to adsorber housing, **Bry-Air** offers the latest technology in gaseous adsorption such as the Ammonia-Gas Phase Activated Carbon process which greatly increases the adsorption capacities of activated carbon.

**Process industries can prevent downtime caused by corrosion / break-downs in control rooms by installing a Bry-Air EcoScrub Air & Gas Purification System (AGP).** The Bry-Air AGP removes the corrosive gases by a process of Adsorption and Chemisorption using Brysorb impregnated media.



### Process Industries which can benefit

- Paper & Pulp   ➤ Refineries & Petrochemicals
- Semiconductors   ➤ Fertilizer   ➤ Steel
- Cement   ➤ Rubber   ➤ Paint   ➤ Aluminium
- Battery   ➤ Food Processing   ➤ Chemicals



# WHEN MOISTURE IS TORTURE !

In this column, we will share with you regularly our experience in major application areas where usage of dehumidification is both extensive and essential.

## Remove Moisture, Prevent Welding Electrodes Damage !



**Welding is an important tool for efficient maintenance of plants and quality fabrication in industry**

In applications varying from simple fabrications of plain carbon steel to demanding joints in high strength materials welding process is widely used. The **welding electrode** in this process serves both as the **arc carrier** and the **filter metal**. It consists of an alloyed or unalloyed core-wire and a flux coating. Electrodes are available in various diameters and lengths, depending on the position, material thickness and requirements of the welded joint.

There are five main groupings of electrodes :

- Rutile (Titanium dioxide)
- Basic (Calcium carbonate and fluoride)
- Cellulosic (Cellulose)
- Iron powder
- Surfacing and non-ferrous alloy types

### Care and storage of electrodes

Generally, it is assumed by the welding engineers that quality of the welding depends on the skill of the welder or the quality of the welding consumable, i.e.

the electrode. More often than not another factor, moisture, plays an important role in the "poor" quality of welding.

The quality of welded joint and ease of welding depends entirely on the condition of electrodes. If the mineral coating is damaged, poor arc stability and inadequate shielding will result.

As most electrodes are mineral coated, they are highly hygroscopic in nature. If not properly stored, most of the coating materials can absorb moisture. This could result in deterioration of coating and subsequent hydrogen pick-up in the weld bead.



Any one or more of the following problems may indicate deterioration of the electrode coating due to moisture :

- ◆ Increased Arc Voltage (arc instability)
- ◆ Excessive Spatter
- ◆ Porosity in weld deposit (poor bead profile)
- ◆ Underbead cracking/heat affected zone cracking (which is not directly visible but which may result in premature breaking of the joint)
- ◆ Poor slag removal/release
- ◆ Undercutting and general rough welds.

### The **Bry-Air**® Solution

These hazards can be eliminated by ensuring that humidity is properly controlled at the time of

- Manufacture
- Storage prior to packaging
- Packaging
- Bulk user storage

Relative Humidity should be maintained at 40+5% at ambient temperature to retain the quality of the mineral coating of welding electrode by installing a Desiccant Dehumidifier.

Bry-Air Dehumidifiers are effectively maintaining the exact condition needed for welding electrode storage for

- Phillips
- Alstom Power Boiler Ltd.
- Cochin Shipyard Limited
- General Electrodes & Equipment Co.
- Gujarat Machinery Mfr. Pvt. Ltd.
- Integral Coach Factory
- Indian Oxygen
- Jaisub & Co.
- L&T Limited

- Maharashtra Weldair
- ESSAB
- Advani Orlicon
- BHEL and many more.

**The Bry-Air Dehumidifiers remove moisture from the air through a process of continuous physical adsorption. Bry-Air has a large range of standard and engineered Dehumidifiers, which can maintain RH at the desired level thereby ensuring longer shelf life of electrodes.**



# The **THERMOTRON**® Environmental Range from **Bry-Air**®



**SE-Series Chambers**



**Standard Series Chambers**



**Electrodynamic Vibration Testing**



**Walk-in Chambers**



**Thermal Shock Chambers**



**Environmental Stress Screening (ESS)**



**Speciality & Custom Chambers**



**Product Test Solutions**



**Accelerated Stress Testing (AST)**



**Agree Chambers**

## **A World of Test Solutions**

**Bry-Air is the exclusive representative of Thermotron Industry, USA, in India.**

Thermotron is one of the world's premier manufacturers and suppliers of Environmental Test Chambers, Test System Integration, Screening, and Simulation Equipment. An ISO 9001-2000 company, Thermotron provides total test solutions for testing requirements, instrumentation and data acquisition.

[www.bryair.com](http://www.bryair.com)

**Bry-Air**®

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