

AIR FACTS

www.bryair.com News on Gas Phase Filtration

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Volume VII

We are Never too Far from You...

Thank You for your overwhelming response

Bry-Air Airineers discussed various queries related to airborne pollutants and molecular contaminants and shared the latest trends in gas phase filtration in a series of events, tradeshow and seminars.



ACREX India, Bengaluru



EV Expo New Delhi, India



Fispal Tecnologia, Brazil



HVACR 2018



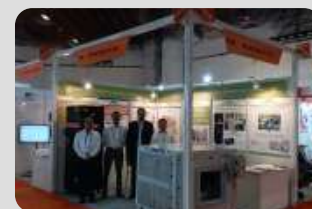
Nigeria Manufacturing and equipment Expo 2018



PlastIndia, Ahmedabad



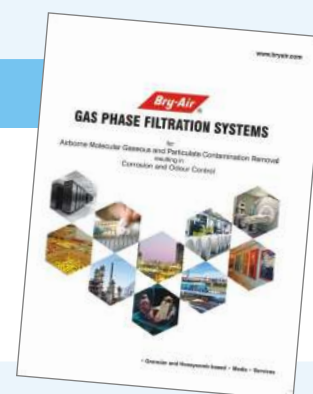
Propack Srilanka



Paperex 2017

The All **NEW** Gas Phase Filtration Systems Brochure

Bry-Air's Gas Phase Filtration(GPF) Division is excited to share its new brochure. The new brochure illustrates the increasing breadth and depth GPF division products and service lines. Comprising latest product images and technical data for a better clarity and understanding of its functioning, it reflects Bry-Air's continued commitment to innovation, performance and being the industry leader in the Gas Phase Filtration. Write to us to receive a copy of our new brochure. We would be happy to share it with you. Alternatively, you can download the brochure from Gas Phase Filtration products page on our website www.bryair.com.



We look forward to meeting you at



September 26-28, 2018
BIEC, Bengaluru, India
Stall No. – PB-95



15-17 November, 2018
CHENNAI TRADE CENTRE - CHENNAI
Stall No. – A40



Date: 20 - 23 February, 2019
Venue: Mumbai
Stall No. – E-48

WAGs, Pungent Odour reduces Research Labs' efficiency

Researchers' exposure to Waste Anaesthetic Gases (WAGs) and pungent odours due to the animal leftovers and excreta is raising serious concern for their health globally



Inhaling harmful gases and odour by researchers and other employees in animal research labs is a rising concern today. The various sources of these gases and foul odour constitute

- **Waste Anaesthetic Gases (WAGs) such as Isoflurane and Nitrous Oxide released during anaesthesia/euthanasia before/after testing**
- **Gases released by animal excreta**
- **Gases released due to the decay of leftover food by animals**

Prolonged inhaling of even a little amount of these gases leads to many chronic results:

- **Acute effects: Drowsiness, irritability, depression, headaches, dizziness, and nausea**
- **Chronic effects: Liver and kidney disease, adverse reproductive effects and cancer**

These acute and chronic effects lead to decrease in efficiency and increase in absenteeism and hence affecting the quality and speed of work. As a result,



Odour Control Unit



Granular Media

animal research lab managers are now opting for a proper mechanism for adequate and effective removal of these gases from the internal atmosphere of animal research labs. Lab managers are

opting for efficient odour control systems like Bry-Air Odour Control unit which is capable of removing all harmful gases and odour from the environment of labs up to 1 ppb level. A clean and hygienic atmosphere leads to increased work efficiency, healthy staff and low absenteeism.

The Bry-Air Solution

Bry-Air's Odour Control Unit is a state-of-art unit for not only removal of harmful gases and foul odour but also energy saving due to its low-pressure drop.

Conventional air purifiers can trap only common contaminants like dust, pollen and other particulate pollutants.

Bry-Air's Gas Phase Filtration division is a 'One Stop Shop' for all Gas Phase Filtration needs. The company's revolutionary Honeycomb filtration technology ensures efficient removal of the harmful and odorous gases and hence achievement of optimum air quality. Bry-Air is the only company in India which has state-of-art granular media/chemical filter manufacturing facility and Govt. of India approved test labs for granular media/chemical filter residual life testing.

Harmful Gases Cause Corrosion in Control Rooms

Electrical cards and electronic components are prone to corrosion due to constant exposure to an inevitable fertiliser constituent, Ammonia



Fertiliser plants across globe runs 24X7 to meet the rising demand. The fully automated, technology-driven plants are controlled from Control/ Server rooms which house complicated web of electronic cards and electrical components running the entire fertiliser plant.

One of the biggest threats to the continuous and smooth operation of the fertiliser plant is corrosion in the electronic cards and electrical components due to corrosive gases in its automated control rooms. Corrosion is mainly caused by the compounds/by-products of nitrogen, phosphorous and potassium in electrical/electronic circuits which has a potential to disrupt the smooth functioning of a whole plant.

Since gaseous compounds are an inevitable constituent of fertiliser production process, they are the primary reason for corrosion in electronic cards and electrical components in Control/Server Rooms. It is vital to monitor and control the concentration level of these compounds/by-products entering the control rooms. The gases are

harmful not only to the machine but also to the employees. When inhaled for a prolonged duration, employees feel ill-health, vomiting, nausea resulting in a decreased efficiency and increase in absenteeism.

Operations managers in fertiliser industries are therefore focussing on supplying clean air free of airborne contaminants to their control rooms.

The Bry-Air Solution

First, they measure the corrosivity level of air inside the control room using real-time monitoring devices such as Bry-Air's Atmospheric Corrosivity Monitor (ACM). The ACM estimates the corrosion potential of the environment according to the ISA Standard 71.04-2013 and classifies it from G1 (mild) to GX (severe) environment. To be doubly sure copper and silver corrosion coupons are also used to measure the destructive potential of gases in the control rooms.

Gas phase filtration systems are then custom designed based on the corrosivity levels and types of gases present in the control room. Bry-Air's

DataCenter Air Purifier with patented honeycomb filters is one such advanced gas phase filtration system which captures and permanently neutralise it by an adsorption and chemisorption process.

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Various control rooms present in the fertiliser plants are

- Main Control Room.
- VFD Room Substation (Ammonia and urea).
- VFD Room Substation (Cooling tower)
- VFD Room Substation (Offsite and non plant)
- Switch Yard Building.
- Sub Station Control Room (Steam and power generation)

Corrosion Restricts Normal Functioning of Control Rooms in Refineries

India is witnessing a massive increase in refined fuels consumption. To fulfil this exponentially rising demand, India has confirmed and drawn board plans for 4.7M b/d of additional refinery capacity, which includes 1.1M b/d of confirmed brownfield refinery expansions. These fully automated refineries have to work round the clock 24X7 uninterruptedly to fulfil the demand.

Out of numerous reasons, one of the reasons for disruption in the operation is due to corrosion of electronic cards and electrical components in various control rooms situated within the refinery. Control rooms have a significant threat of corrosion due to the presence of corrosive gases (SO_x , NO_x and Cl_2) released due to various chemical reactions going on during the refinement of the crude oil.

Refineries need clean air free of airborne contamination for uninterrupted operations. The refineries are now opting for real-time monitoring devices such as corrosivity monitors to measure the gaseous contamination level in their control rooms. Bry-Air's Atmospheric Corrosivity Monitor (ACM) is a real-time corrosion measurement tool which measures the corrosivity level of the environment ac-



cording to the ISA Standard 71.04-2013 and rates the corrosivity level G1 (mild), G2 (Moderate), G3 (Harsh) to GX (severe). Real-time monitoring enables the refineries to take timely action before the electronic cards, and electrical components break down.

The Bry-Air Solution

Once the corrosivity level of the air is determined, Airineers design a suitable Gas Phase Filtration System to neutralise the air-borne gaseous contaminants. The Bry-Air EcoScrub™ Deep or Thin Bed System (BPU series) gas phase filtra-

tion systems are capable of removing airborne contaminants up to 1 ppb level. They provide optimum prevention from corrosion on the electrical circuits in the control rooms. The system ensures that the refinery is running without any disruptions or production breakdowns due to the presence of corrosive gases and airborne contaminants.

Bry-Air Gas Phase Filtration division is a 'One Stop Shop' for all gas phase filtration needs. The company provides the complete solution for monitoring, preventing environmental corrosion related detection and control.



Atmospheric Corrosivity Monitor



EcoScrub™ systems

Three Easy Ways to Reach Us



www.bryair.com



bryairmarketing@pahwa.com



Locate and call your nearest office



Leaders in Dehumidification... Worldwide

BRY-AIR (ASIA) PVT. LTD.

Corporate Office:
21C, Sector-18, Gurugram 122015
Phone: +91-124-4091111
Fax: +91-124-4091100
E-mail: bryairmarketing@pahwa.com
Registered Office:
20, Rajpur Road, Delhi 110054
Phone: +91-11-23906666
Fax: +91-11-23906600
E-mail: enquire@pahwa.com
Web.: www.bryair.com
CIN: U74210DL1981PTC012456

City	Phone
DELHI	+91-11-23906666
CHANDIGARH	+91-172-4678806/7
MUMBAI	+91-22-24935155/24947475
VADODARA	+91-265-2351493
KOLKATA	+91-33-22814841/22814877
BENGALURU	+91-80-25271232
HYDERABAD	+91-40-27154243
CHENNAI	+91-44-26163820/29/40
KOCHI	+91-484-2395940

E-mail
enquire@pahwa.com
bryairchandigarh@pahwa.com
bryairmumbai@pahwa.com
bryairbaroda@pahwa.com
bryairkolkata@pahwa.com
bryairbangalore@pahwa.com
bryairhyderabad@pahwa.com
bryairchennai@pahwa.com
bryairkochi@pahwa.com

BRY-AIR (USA)
Phone: +1-740-965-2974
Fax: +1-740-965-5470
E-mail: bryair1@bry-air.com
Website: www.bry-air.com

BRY-AIR (CHINA)
Phone: +86-21-34126537
E-mail: info@bryair.com.cn
Website: www.bryair.com.cn

BRY-AIR (MALAYSIA)
Phone: +60-3-89256622
Fax: +60-3-89259957
E-mail: bryair@bryair.com.my
Website: www.bryair.com.my

BRY-AIR (BRAZIL)
Phone: +55-11-36982222
E-mail: contato@bryair.com.br
Website: www.bryair.com.br

Country
BRY-AIR (UAE)
BRY-AIR (PHILIPPINES)
BRY-AIR (INDONESIA)
BRY-AIR (VIETNAM)
BRY-AIR (NIGERIA)
BRY-AIR (SWITZERLAND)
BRY-AIR (BANGLADESH)

Phone	E-mail
+971-6-5574622	support@bryair.ae
+63-2-8078436	mail@bryair.com.ph
+62-21-79199023	indomark@bryair.com.my
+84-8-39956498	vietmarketing@bryair.com.my
+234-8097276772	bryairnigeria@pahwa.com
+41-91-6830971	info@pro-kon.ch
+880-1819409100	bryairbangladesh@pahwa.com

Website
www.bryair.com/uae
www.bryair.com/philippines
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