

dry facts

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A+H
SORPTIONSSYSTEME

Join

Bry-Air®

Group

Bry-Air®

PRESS RELEASE

A+H joins Bry-Air Group

October 25, 2007, **Hamburg, Germany** **Ohio, USA** **Delhi, India**

A+H GmbH and Bry-Air today announced signing of an agreement by which A+H becomes a part of the Bry-Air global group.

A+H is a leading manufacturer of dehumidification products in Germany/Europe. A+H prides itself for providing client-orientated solutions most appropriate for meeting a wide variety of requirements for high quality conditioning of industrial process air.

Speaking about this relationship, **Michael Ahlberg, Managing Director, A+H (Ahlberg + Hennrich GmbH, Germany)** said "being a member of the Bry-Air group will strengthen our position in our served markets and will provide opportunities for our product offering in new market as well as expand our base to other markets outside Europe."

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"On behalf of Bry-Air Inc. USA, I would like to welcome A+H to the global group of Bry-Air companies. The addition of A+H to our global network will allow us to better serve our customers in Europe something we have needed since the license agreement with Delair expired some years ago", **said Mel Meyers, President & CEO of Bry-Air Inc., USA.**

Bry-Air is a marketing driven company with a history of innovation, new product development, and successful business growth with a philosophy of "Never being too far from the customer".

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"In the global family of Bry-Air, Europe was the missing segment. With this relationship, we will now have the combined expertise and experience to serve our customers better, world wide in the field of air treatment / humidity control" **commented Deepak Pahwa, Managing Director, Bry-Air (Asia) and Group Chairman, Pahwa Enterprises.**

"It reiterates our commitment to provide our customers with high quality products, services and solutions. This expansion aligns with our strategy as a leader in air treatment solutions provider for our industrial customers. The relationship broadens our geographical coverage as well as expands our capability to provide equipment suited for every application world over from any corner of the globe, significantly increasing our sales potential." Pahwa concluded.

Bry-Air in Asia is a part of Pahwa Enterprises, and is recognized as a solution provider for complete environmental control. An innovative technology leader in humidity control, dehumidification, drying, storage, preservation, air and gas purification and plastics auxiliaries, Bry-Air has customers in almost every industry and touches people's lives in round the clock.

Pahwa Enterprises is a group of six engineering companies with four manufacturing plants in India, fully owned subsidiaries in Malaysia and China and a network of offices in India, China, Korea, Thailand, Indonesia, Malaysia, UAE, South Africa, Europe, USA and Brazil.

The three flagship companies in the group are **Bry-Air Asia, Bry-Air, Inc. USA and DRI. DRI is a global provider of components, products and systems for energy recovery, IAQ, ventilation, humidity control, evaporative cooling and humidification.**

Economic Times, Ahmedabad November 03, 2007

Pahwa Enterprises to up European presence

Kalpesh Damar
VADODARA

AFTER establishing its footprint in the US, China, Australia and Japan, Pahwa Enterprises, a rapidly growing industrial group having expertise in air engineering and environmental control technologies, is now aiming to strengthen its presence in Europe.

Pahwa Enterprises through its six group companies, has presence in around 90 countries across the globe. However, the group's share is weaker in Europe. In order to strengthen its presence in Europe, Pahwa Group company recently acquired Germany-based A+H GmbH, one of the leading manufacturers of dehumidification products in Germany and Europe through one of its group companies called Bry-Air (Asia). The company is a global solution provider for environmental control with specialisation in humidity control, dehumidification, drying, storage, preservation, air and gas purification and plastics auxiliaries.

"The addition of A+H to our global network will allow us to better serve our customers in Europe and increase our market share in that region," said Mr. Jagdeep Singh, global business head, Desiccant Rotors International Pvt (DRI), one of the group companies of Pahwa Enterprise.

Pahwa Enterprises' another company DRI is also betting big on green buildings concept and setting up of two new manufacturing facilities near Manesar and Gurgaon in north India. These two new facilities will manufacture Treated Fresh Air Unit (TFA) and Energy Recovery Ventilators as well as evaporated cooling pads. DRI is a global provider of components, products and systems for energy recovery and indoor air quality.

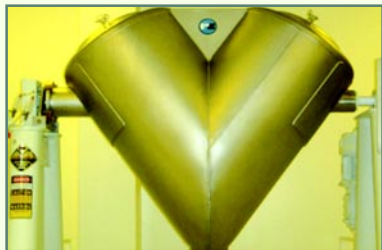
These products are key components for green buildings, a concept that is fast catching up in India. The green buildings reduce energy consumptions and use recycled materials. The basic objects of

the green building is to make buildings more environment friendly. However, Mr Singh did not divulge the details of investment to be made by the company to set up new facilities.

There is huge demand of equipment green building and indoor air systems. This is evident from the fact that currently there are around 50 green buildings in the country number of such buildings is expected to touch, 1,000 by year 2012. It is market leader in this category and 70% market share in India respectively.

The company has three facilities in China, Maldives. Also, the company has USA and Brazil. Settings would enable the growing demand. The group is also expected to have turnover of Rs. 150 crore in 2007-08. Currently, it is over of more than

Jubilant opts for **EcoScrub™** to remove gas odour and limit corrosion



Jubilant Organosys Limited is an integrated pharmaceutical industry player with a wide range of products and services for global life sciences companies. The company

is one of the largest custom research and manufacturing services (CRAMS) and drug discovery services companies in India. The company strives to accelerate the process of pharmaceutical drug discovery by partnering with innovative pharmaceutical companies offering them products and services across the drug discovery process. Jubilant has a presence in generic pharmaceuticals business in the US and supply dosage forms along with regulatory services to European generic companies. The Company is a collaborator who lets innovation work to the advantage of its customers and accelerate global drug development efforts.

The plant is designed with the latest in computer process control and automation.

Each process throughout the plant incorporates its own control center, motor control rooms and computer rack rooms.

The Problem

The entire plant runs with the help of steam turbine. During manufacture of the pharmaceutical chemicals and steam generated by the coal fire boiler, high concentrations of sulphur dioxide, hydrogen sulphide, nitrogen oxides and ammonia gas are emitted. These gases are not only odorous, but also highly corrosive and damages electronic components of the process control.

Power generation and production down time due to corroded circuit was a risk, which Jubilant Organosys was not willing to take.

Bry-Air® provides the Solution

Bry-Air, a leading manufacturer of gas phase air filtration systems did an environment assessment at Jubilant Organosys.

Bry-Air installed Environment Condition Monitors at many locations, TG Control room, Boiler Control room and Pyridine Control room and other areas where corrosion was a concern.

ECM Monitor is a device used to determine the overall corrosive environment before control measures are implemented and which shows results instantly as per the ISA standard S71.04-1985, which defines environment as G1, G2, G3, and GX based on corrosion severity level.

With the help of ECM Monitors, Bry-Air identified the areas which had greatest need for air filtration and installed Bry-Air deep bed **EcoScrub** Air & Gas Purification system

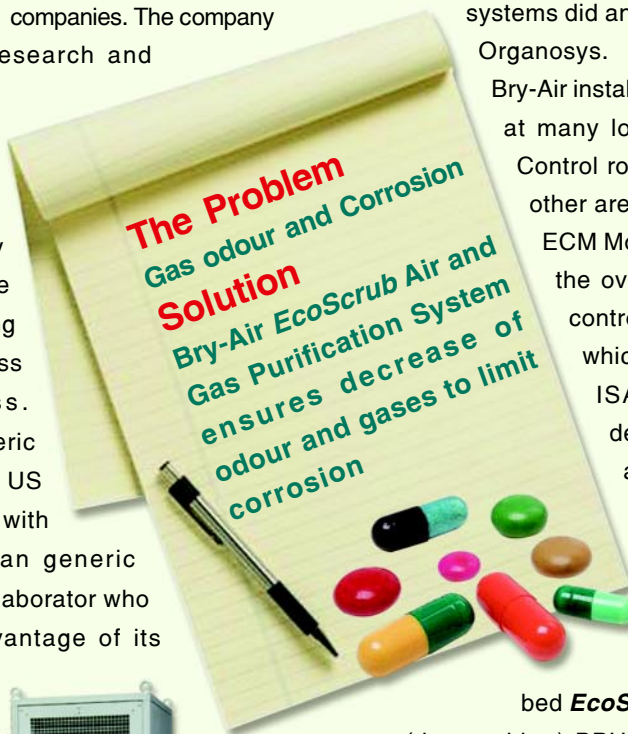
(dry scrubber) BPU-D model outside the control room for pressurization purpose and

vertical stand along **EcoScrub** model BPU-V inside the control room for recirculating the air.

The deep bed **EcoScrub** BPU-D model units are self-contained units incorporating all particulate filters, chemical filters and supply fan.

Bry-Air installed total number of 10 EcoScrub units in various control rooms. These not only maintains the environment as per ISA 71.04 but also removes odour from the control room which affects the human health.

The monitoring program ensured G1 level all the time as per Instrument Society of American standard 71.04.



WHEN MOISTURE IS TORTURE !

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

Biodiesel : Fuel for future ! Moisture can 'brake' the process !

As oil becomes more expensive, alternative and renewable replacements become viable. **Biodiesel** is processed fuel derived from biological sources that can be readily used in diesel engine vehicles.

Biodiesel is renewable energy carrier and is much cleaner than fossil diesel. It is environment friendly. It reduces emissions by up to 75%. Its ozone-forming potential is 50% less than the conventional diesel. Much of the world uses a system known as the "B" factor to state the amount of biodiesel in any fuel mix, in contrast to the "BA" or "E" system used for ethanol mixes. For example, fuel containing 20% biodiesel is labeled B20. Pure biodiesel is referred to as B100.

Biodiesel can be used as a 100% replacement (B100) or in any mix. (e.g.: B20 20% biodiesel, 80% fossil diesel). **Biodiesel** reduces engine wear and extends engine life as it is a much better lubricant.

The Problem

For the manufacture of biodiesel, caustic soda or sodium hydroxide is used as a catalyst for the transesterification of methanol and triglycerides.

Transesterification is based on the chemical reaction of triglycerides with methanol to form methyl esters and glycerine in the presence of an alkaline catalyst.

Caustic soda dosing is from the enclosed dosing room and mixed with methanol and edible oil in a mixer settler unit to produce biodiesel.



White crystalline solid caustic soda is highly hygroscopic and very soluble in the water. It is stored in airtight containers or drums. During the dosing process, caustic soda is exposed to high moisture environment and absorbs moisture until it liquefies. The mixture of liquefied soda and solid soda causes problem in the dosing process.

Bry-Air solution

To avoid caustic soda from liquefying and causing problem in dosing process, the enclosed dosing room, approx 300 ft. needs

to maintain low relative humidity.

Bry-Air dehumidifiers maintain RH at $20 \pm 5\%$ at 28°C (82°F) to overcome the problem of moisture pickup or moisture regain.

Due to the powdering environment in the dosing room, 100% fresh air system was suggested. The Bry-Air dehumidification consists of pre-cooled and after cooled system.

Bry-Air has helped many biodiesel manufacturing plants to process without moisture problem

Biodiesel Plants

- Malaysia
 - Carotino Phase 1
 - Carotino Phase 2
 - Banting
 - Klang
- Thailand
 - Thai Biodiesel Plant



Bry-Air®

at

2007 FRIGAIR
EXPO + WORKSHOP — South Africa



RHVAC 2007 — Bangkok



adhi trikarya mandiri

Bry-Air® Rep at Indonesia



Djoni Prawira is the “dry air” man in Indonesia. An expert in Air-Conditioning and Compressed Air Purification Systems, Mr. Djoni Prawira, is the Managing Director of PT Adhi Trikarya Mandiri, Bry-Air’s representative in Indonesia for Bry-Air range of Dehumidifiers. Djoni Prawira has many years of rich experience in dehumidification. He has provided moisture/humidity control solutions through Bry-Air.

Some of the major jobs handled out of Indonesia are for Danone Group, Sanbe Farma, Dexa Medika, Soho Industries, East West Seed Indonesia, National Library and many more.

Contact PT Adhi Trikarya Madiri team for all your moisture and humidity problems in Indonesia.

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