

## Application Industry Case Study

# Corrosion Prevention at Jubilant Life Science



### OVERVIEW

Country : India

Location: Gajraula (UP)

Industry : Pharmaceuticals  
& Life Sciences

**Client Name:**

Jubilant Life Science

**Application area:**

TG Control Room and UPS  
Room

### JUBILANT LIFE SCIENCE

Jubilant Life Sciences Limited (formerly Jubilant Organosys Ltd.) is an integrated pharmaceutical and life sciences company. It is the largest Custom Research and Manufacturing Services (CRAMS) player and a leading Drug Discovery and Development Solution (DDDS) provider out of India”.

**The Problem**

Production losses due to presence of contaminants in TG Control Room and UPS Room.

**The cause of the problem**

Corrosive gases in the surrounding environment.

**The Source of the problem**

When people move in and out of the control room, or power failure occurs there is a fluctuation in temperature

and humidity. Small portions of the circuits, then fall below the dewpoint temperature.

Gaseous contaminants like Hydrogen Sulfide, elemental Sulfur, organic sulfur compounds like mercaptans, oxidised forms of sulfur like SO<sub>2</sub> (Sulfur Dioxide), SO<sub>3</sub> (Sulfur Trioxide), Nitrogen Oxides NO<sub>x</sub>, Cl<sub>2</sub>, Ammonia and derivatives, photochemical species etc., which are present in the Control rooms in low concentrations of PPB, condense on the metal of ICs, and other electronic and electrical parts. It forms a non conducting layer which resists current flow, leading to thermal failures or short circuits.

Corrosion of metals is caused primarily by the attack of gaseous contaminants and is accelerated by heat and moisture. The severity of damage depends on the kind of contaminant. Chlorine for example is over 200 times

**Typical Industries requiring Air and Gas Purification:**

**Corrosion & Toxic Gas Control**

- Paper and Pulp
- Petrochemicals
- Oil Refineries
- Cement
- Fertilizer
- Iron and Steel
- Chemical
- Textile
- Power Generation
- IT/ITES
- Media Houses

**Odour Control**

- Pharmaceuticals
- Leather
- Food Processing
- Sugar
- Sewage Treatment
- IT/ITES

**Degradation Control**

- Museums
- Libraries

**Ethylene Removal**

- Post Harvest Facilities

more damaging than ammonia. Only 10 PPB of Chlorine causes similar amount of damage as 25000 PPB of ammonia.

Heat and moisture are instrumental in furthering damages due to corrosion. Above 50% RH accelerates corrosion while above 80% RH electronic corrosive damages will occur regardless whether contaminants are present or not.

**Bry-Air Airgineers helped Jubliant solve the problem with EcoScrub inside**

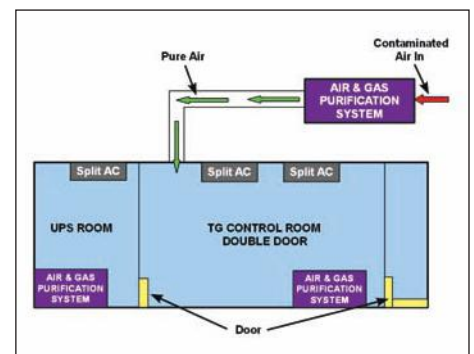
Bry-Air has installed an Air & Gas Purification System outside the control room at a distance of 25ft from control room which sucks the fresh air, removes dust and gases and pressurizes the room with pure air.

Bry-Air has also installed another two Air & Gas Purification Systems in the

UPS and TG Control Room for cleaning of room air as well, this is essential since movement in the room is 10 times/hr. With each movement contaminated air from outside moves into the room. Split AC installed in both these rooms for controlling temperature.

Bry-Air had supplied 10 units to Jubilant in the past.

**Installation System Flow Diagram**



Bry-Air is one the leading business houses in India offering end-to-end energy-efficient environmental control solutions. It is a globally competitive organization pioneering in the areas of Humidity Control, Dehumidification, Drying, Storage, Preservation, Air & Gas Purification and Plastics auxiliaries. Bry-Air ventured in the Air and Gas Purification sector in 2001. Since then, we have effectively maintained optimum working conditions by removing contaminant laden air; the main cause for corrosion and uncomfortable working environments.



**BRY-AIR (ASIA) PVT. LTD.**  
An ISO 9001:2008 & 14001:2004 Company

Visit us at  
[www.bryair.com](http://www.bryair.com)

**INDIA**  
Corporate Office:  
21C, Sector-18, Gurgaon 122015  
Phone: +91-124-4091111  
Fax: +91-124-4091100  
E-Mail: [bryairmarketing@pahwa.com](mailto:bryairmarketing@pahwa.com)  
Head Office:  
20 Rajpur Road, Delhi 110054  
Phone: +91-11-23906666  
Fax: +91-11-23906600  
E-Mail: [enquire@pahwa.com](mailto:enquire@pahwa.com)  
Web.: [www.bryair.com](http://www.bryair.com)

**DELHI** +91-11-23906666  
**CHANDIGARH** +91-172-4678806/7  
**MUMBAI** +91-22-24935155/24947475  
**BARODA** +91-265-2351493  
**KOLKATA** +91-33-22814841/22814877  
**BANGALORE** +91-80-25271232  
**HYDERABAD** +91-40-27154243  
**CHENNAI** +91-44-26287231/26203830  
**KOCHI** +91-484-4052940

**E-mail**  
[enquire@pahwa.com](mailto:enquire@pahwa.com)  
[bryairchandigarh@pahwa.com](mailto:bryairchandigarh@pahwa.com)  
[bryairmumbai@pahwa.com](mailto:bryairmumbai@pahwa.com)  
[bryairbaroda@pahwa.com](mailto:bryairbaroda@pahwa.com)  
[bryairkolkata@pahwa.com](mailto:bryairkolkata@pahwa.com)  
[bryairbangalore@pahwa.com](mailto:bryairbangalore@pahwa.com)  
[bryairhyderabad@pahwa.com](mailto:bryairhyderabad@pahwa.com)  
[bryairchennai@pahwa.com](mailto:bryairchennai@pahwa.com)  
[bryairkochi@pahwa.com](mailto:bryairkochi@pahwa.com)

**BRY-AIR (MALAYSIA)**  
**International Marketing Division:**  
Phone : +60-3-89256622  
Fax : +60-3-89259957  
E-Mail : [bryair@bryair.com.my](mailto:bryair@bryair.com.my)  
**Domestic Marketing Division:**  
Phone : +60-3-77259919  
Fax : +60-3-77259957  
E-Mail : [bam@bryair.com.my](mailto:bam@bryair.com.my)  
Website : [www.bryair.com.my](http://www.bryair.com.my)

**BRY-AIR (CHINA)** +86-21-51591555  
**BRY-AIR (UAE)** +971-6-5574622  
**BRY-AIR (AFRICA)** +27-11-6150458  
**BRY-AIR (AUSTRALIA)** +61-8-92762307  
**BRY-AIR (EUROPE)** +49-40-54716250  
**BRY-AIR (THAILAND)** +66-2-5415479  
**BRY-AIR (KOREA)** +82-2-4140629  
**BRY-AIR (TURKEY)** +90-216-4175010  
**BRY-AIR (PHILIPPINES)** +632-8078436  
**BRY-AIR (INDONESIA)** +62-21-45846579  
**BRY-AIR (VIETNAM)** +848 38300 158

**Phone**  
+86-21-51591555  
+971-6-5574622  
+27-11-6150458  
+61-8-92762307  
+49-40-54716250  
+66-2-5415479  
+82-2-4140629  
+90-216-4175010  
+632-8078436  
+62-21-45846579  
+848 38300 158

**E-mail**  
[bryairsh@bryair.com.cn](mailto:bryairsh@bryair.com.cn)  
[info@bryair.ae](mailto:info@bryair.ae)  
[bryairafrika@telkomsa.net](mailto:bryairafrika@telkomsa.net)  
[sundermalkani@bigpond.com](mailto:sundermalkani@bigpond.com)  
[info@a-und-h.de](mailto:info@a-und-h.de)  
[thailand@bryair.com.my](mailto:thailand@bryair.com.my)  
[drikorea@hanmail.net](mailto:drikorea@hanmail.net)  
[cagdanyilmaz@pahwa.com](mailto:cagdanyilmaz@pahwa.com)  
[mail@bryair.com.ph](mailto:mail@bryair.com.ph)  
[Indonesia@bryair.com.my](mailto:Indonesia@bryair.com.my)  
[vietnam@bryair.com.my](mailto:vietnam@bryair.com.my)

**Website**  
[www.bryair.com.cn](http://www.bryair.com.cn)  
[www.bryair.ae](http://www.bryair.ae)  
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