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Bry-Air®

DRI™

TDS™

News on Compressed Air Treatment

Vol. 4

We are pleased to bring our next issue of Delfact. In this issue we have highlighted the updates of our company, case study and application of Compressed Air Dryer in Automobile Industry. Please send your review and suggestion to delairmarketing@pahwa.com

Our AirGineers...

Delair Engineers keeps upgrading our product range. Delair have added 4 more standard models in Refrigeration type Dryer viz FDI 7000, FDI 8000, FDI 9000 and FDI 10000, which ranges from 7000 m³ / hr to 10000 m³/hr. Similarly, 1 more standard model is added in Desiccant based Dryer viz DC 135 for 1200 cfm.

Block you dates :
National Expo, Raipur
16 – 18 Dec, 2011
PlastIndia, New Delhi
01 – 06 Feb , 2012
ACREX India, Bengaluru
23 – 24 Feb , 2012

Delair at Engineering Expo, Rudrapur

Delair successfully participated in Engineering Expo in Rudrapur, showcased Refrigeration based & Adsorption based Compressed Air Dryer and accessories. The main objective of participation was to expand our reach. Rudrapur being one of the developed industrial area in north India have many companies like Ashok Leyland, Bajaj Motors etc where Delair dryers are installed.



Dealer Meet

Delair - Leaders in compressed air drying, successfully organized Dealer's meet at Dalhousie in July, 2011 which was fulfilled yet professional. The meeting energized the synergy of our dealers. It was attended by Delair team and Delair dealers from all over the country.



Sitting left to (right): Sarabjit Singh- Polyuno Venture, Rajeev Thapan- Delair –Service, D.Bhowmick - Delair – Sales - East , R.K.Guha- Delair – CEO, Naveen Zutshi- Delair – National Sales and Service head, P.K.Chauhan- Delair – Engineering, Rajinder Singh- PEC

Standing (left to right): Himanshu Chauhan- Delair – Marketing, Rohit Pandita- Delair – Sales, Partha Pramanik- Delair Sales – East, Kannan- Delair – Sales – South, Dhurba Paul- Deion Techno Optimizers, S.Sebastin- Delair – Sales – South, Praveen- Praveen Traders, S.R.Dhuri- Delair – Sales – West, Samson Moses- Huper Airo, Ashish Wardhe- Halward, Gurjit Singh- Punjab Engineering Company.

News from Group Companies

Bry-Air

Bry-Air, sets new benchmarks in Gas Phase Filtration with " Honeycomb Matrix Technology". This patent pending technology from Bry-Air stable replicates the natural advantage of the Honeycomb matrix. This is the 9th Patent from the stable of the Bry-Air Group and is one of the five patents filed by the group in the last 2 years.

DRI

DRI DOAS was selected for the project to supply primary air to chilled beams and cater to the latent load in the building. The Eco Commercial Building (ECB) maintains 30% additional outdoor air over benchmark set by ASHRAE Standard 62.1-2004 to enhance Indoor Air Quality (IAQ) and provide occupant comfort.

MARUTI SUZUKI CASE STUDY



Though you might not realize it, dry compressed air affects each and every unit in Automobile industry.

Company Profile

Maruti Suzuki India Limited (MSIL, formerly Maruti Udyog Limited), a subsidiary of Suzuki Motor Corporation of Japan, is India's largest passenger car company, accounting for over 50 per cent of the domestic car market

Frequently Faced Problems

In automobile industry almost all companies use compressed air for spray painting. In MARUTI SUZUKI Bumper paint shop they use compressed air for spraying in two ways :

1. Manually - through electrostatic guns
2. Automatic - through painting robots

A major problem in compressed air systems is the presence of water, dust particles, oil (oils particles are introduced by lubricated air compressors) and solid contaminants which can adversely affect air quality. When compressed air mixes with paint before spray then all these pollutants found in compressed air lead to blisters in paint surfaces, water droplet marks in surface and low quality shining in bumpers which leads to low quality finish.

When spray painting is done through painting robots then contaminated compressed air causes low quality final finishing and rust / corrosion in painting robots. This leads to malfunctioning on pneumatic systems, high maintenance cost and decrease in durability of painting robots.

Also, there were rust and corrosion on compressed air pipe lines.

The shining quality of bumpers used to be increased by manually polishing them by cream.

General Recommendation

Remove water, dust particles, oil (oils particles are introduced by lubricated air compressors) and solid contaminants from compressed air.

Our Solution

After reviewing the situation, engineers and management decided to overhaul the compressed air drying system to increase efficiency.

We installed Refrigeration based Compressed Air Dryer FDI 1690 A, which removed water / moisture from compressed air through refrigeration. We also installed Pre Filters which removed dust particles and other types of solid contaminants present in compressed air. We also installed Oil filters which removed oil particles from compressed air which were caused by lubricated Air Compressor.

Equipments Installed

We installed following equipment & accessories :

- | | |
|--------------------------------------|---------------------------------------------|
| 2 Compressed air Refrigeration Dryer | It removed moisture |
| 2 oil filters | It removed dust particles up to 0.01 micron |
| 2 Pre filters | It removed oil particles up to 5 micron |
| 7 pressure gauges | It indicates the online pressure. |

After Effects of Installation of Delair Dryer

- Pure and Refined dry air.
- Shining surface and high quality finishing
- No corrosion / rust in painting robots and in Electrostatic Guns
- Increased its durability
- No sluggish operation of pneumatic systems
- Low maintenance cost on painting robots and Electrostatic Guns
- No rust and corrosion in compressed air pipelines



Use of Compressed Air in AUTOMOBILE INDUSTRY



Use of Compressed Air Dryer in Automobile Industry

Tool Powering	Spray Painting
Pneumatic control and actuators	Forming
Powder Coating	Conveying
Changing and filling tyres	Stamping
Welding	Molding
Powder coating operation	

Compressed Air Dryer powered Pneumatic systems used in Automobile Industry:

Pneumatic tools	Pneumatic Air Guns
Pneumatic Nailgun	Pneumatic Launchers
Pressure Switch	Compressed-Air Engine
Pressure Regulator	Pneumatic Motor
Pneumatic actuator	Gas-operated reloading
Pressure Sensor	Pneumatic Tyre
Electro-Pneumatic action	Lego Pneumatics
Tubular -Pneumatic action	Pneumatic Cylinder

Problems

Major problems in compressed air systems occurs due to presence of moisture / water, dust particles, oil (oil particles are introduced by lubricated air compressors) and solid contaminants

- Malfunctioning of pneumatic tools and machines
- Sluggish and inconsistent operation of valves and cylinder
- Corrosion in pipe lines, cylinder and other components

- Increase in downtime
- Increase in maintenance cost of pneumatic machines / tools / controls.
- Freezing in exposed lines during cold weather.

During spray painting manually as well as by painting robots, compressed air mixes with paint before spray then all these pollutants found in compressed air lead to blisters in paint surfaces, water droplet marks in surface and low quality shining in bumpers which leads to low quality finish. Moreover there will be rust / corrosion in painting robots. This leads to malfunctioning, high maintenance cost and decrease in durability of painting robots.

During the process of powder coating operation if there will be moisture in compressed air that there will be following problems:

- Lump of powder in pipe lines, this may lead to uneven spray of powder.
- Craters in the finish / surface
- Porosity in the coating

General recommendation

Remove water, dust particles, oil (oils particles are introduced by lubricated air compressors) and solid contaminants from compressed air.

The Delair Solution

Delair offers wide range of Refrigeration Dryer and Adsorption Dryers which removes water / moisture from compressed air.

Delair Refrigeration Dryers operate on the method of cooling the air to near freezing point to remove the moisture.

Delair Adsorption dryer

The dryers is based on the principle of heatless regeneration and the physical properties of their desiccant to adsorb and desorb the water vapour.

Filters

Delair also offers Pre Filters and Oil Filters which removes dust particles, oil particles and other types of solid contaminated present in dry air.

Delair recent Projects :



Delair successfully manufactured Desiccant type Compressed Air Dryer for M/S Andhra Sugars Ltd, Andhra Pradesh.



Delair successfully supplied 12 Refrigeration Dryers to Engineering Projects India Pvt Ltd (EPIL) for E C Railway workshop Project site at Harnaut, Nalanda, Bihar

Why Delair ?

- Over 20 years of experience in compressed air drying solutions
- Widest range of compressed air dryers
- Over 50 years of research, development and experience in air and gas treatment
- Designed and manufactured as per international standard. Such as ASME section VIII, ASME section IX, IS2825 and TEMA – C
- Only Delair dryers have Volume Liquid accumulator and Liquid receivers
- Reliable and of high quality with very low maintenance cost
- User friendly and designed totally according to industrial specification and requirement, this dryer outclasses other dryers in terms of controls and performance
- Eco friendly
- CE certified
- delcare™ for spare & service need supported by experienced team of qualified engineers.

Products & Accessories



Refrigeration
Dryer



Adsorption
Dryer



Customized /
Engineered Adsorption
Dryer



Air Filter



Air
Receiver



Water
Cooled -
After Cooler



Air Cooled
After Cooler



Moisture
Separator



Auto Drain Valve
ZL series



Auto Drain Valve
EO series



Auto Drain Valve
BF series

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