



AJAY POLY PVT. LTD.

Ajay Poly Pvt. Ltd. is a family owned Group. Estb in 1961 earlier it was AJAY GROUP. Now it is DCJ Group having three companies as 1) Ajay Poly Pvt. Ltd. (APPL) Manufacturing of Sealing System & Engineering Thermo Plastics specialty Profiles An = ISO 9001 : 2015, BS OHSAS 18001 : 2007, 14001 : 2015 company. 2) Encraft India Pvt. Ltd. (ENCRAFT) Manufacturing UPVC Doors & windows. 3) Ajay Industrial Polymers Pvt. Ltd. (AIPPL) Manufacturer of water Irrigation & Landscaping Product. Total Group work force is 800 Financially Sound & Pan India Presence.



Atul Tyagi
CEO

“Without focusing on environmental, energy and safety measures there can be no future in manufacturing, so Go Green Makes Good Business sense.”



Key Achievements

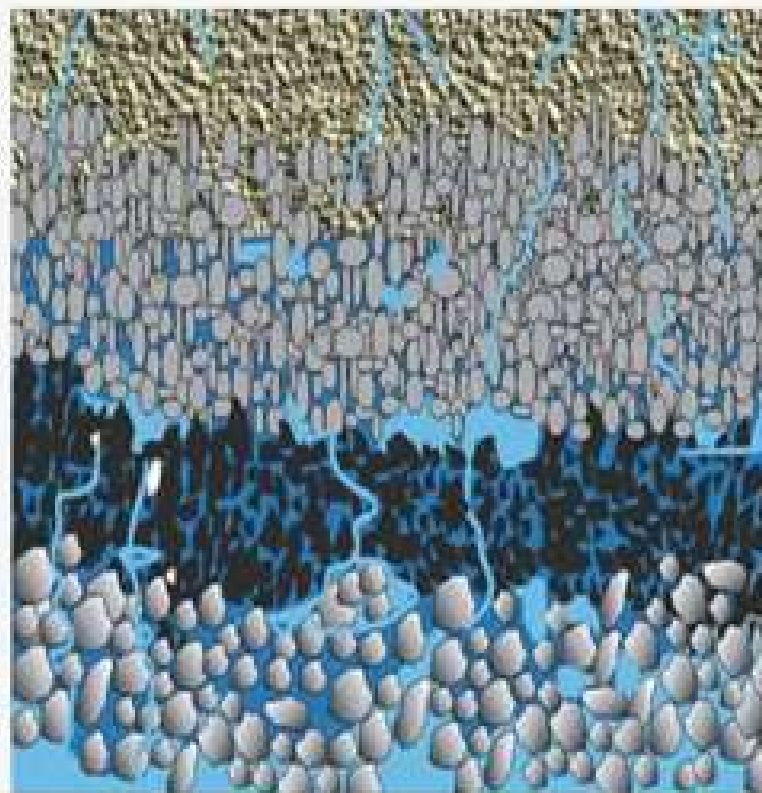
Unit: Shirwal

- Replaced reciprocating compressor by VFD screw compressor
- Installation of double die extrusion machines with VFD Drive
- PLC installation for all welding machines.
- Participated in CII - 8th National Cluster Summit for Kaizen competition - 2015 received Best Kaizen award
- Rain Water Harvesting
- Zero waste to Landfill
- Use of Plastic bins for keeping extrusion cut lengths Instead of corrugated boxes
- First SME to achieve GreenCo Gold Rating in India



Energy Efficiency

- Replaced reciprocating compressor with screw compressor with VFD.
- Installation of double die extrusion machines.



Water Conservation

- Rain water harvesting system to capture 91% of the potential
- Use of push taps & sprinkler system for gardening

Material Conservation

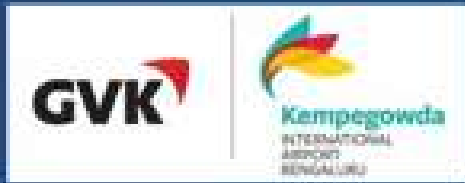
- Photo-sensor for accurate length-cutting at extrusion machine to reduce waste



Green Supply Chain

- Dispatch of PVC off cuts after grinding to Badarpur unit to optimize transportation, GHG reduction - 0.5 tons of CO_{2e}
- Trolley modification to increase capacity by three times to reduce GHG emission by 9 tons of Co_{2e}





Bangalore International Airport Limited.

Kempegowda International Airport, Bengaluru is the first Greenfield airport in India to be built as a private-public partnership. It is operated by Bangalore International Airport Limited (BIAL). The airport began operations in May 2008 and has significantly enhanced the regional and worldwide air connectivity of Bengaluru and Karnataka.

It is currently the busiest airport in South India and the third largest in the country - having served 22.88 million passengers in FY 2016-17. Kempegowda International Airport, Bengaluru was adjudged the 'Best Regional Airport in India & Central Asia' by Skytrax in 2017.



"BIAL's approach to sustainability incorporates understanding and learning from experience, and we have progressively developed capabilities to respond to industry best practices. BIAL continues to work in collaboration with its partners within the eco-system to

improve and reduce energy consumption, manage and treat waste - constantly working towards minimizing our carbon footprint and sustainable development. We hope our example inspires other airports to be as ambitious in the way they manage their approach to limited resources."

Sanjay Reddy
Managing Director, BIAL



Key Achievements

- 34% reduction in specific energy consumption per passenger from FY 2014-15 to FY 2016-17
- Reduction in carbon emissions by 32% from FY 2014-15 to FY 2016-17
- Specific water consumption reduction by 36% in the last three years
- BIAL installed and commissioned three renewable energy projects; 503KW Rooftop Solar Power on various utilities buildings, 2.5MW ground-mounted Solar Power installation at Airside next to the Runway, 440 KW Solar Car Parking installation opposite the Administrative building
- Certified carbon emission Level 3+ Neutrality by Airport Carbon Accreditation (ACI)
- 100% use of recycled water for HVAC, irrigation and firefighting at the Airport
- Enhanced rainwater holding capacity up to 1710 KL by collecting rooftop rainwater from the terminal building
- Installed online continuous ambient air quality monitoring station to evaluate the pollutant level in the air due to activities in and around the airport



Unique Initiative

Recovery & Reuse of Condensate Water from AHU's and Conversion of Rain Water into Potable

BIAL has a dedicated HVAC plant in the Airport to cater to the passenger terminal building and other associated

buildings. Condensate water from the AHUs which were earlier let off to the sewage line was captured and used for drinking.

Project at a glance

- Cooling tower make up water - 7 million liters / month
- Average flow per AHU - 0.72m³/day
- Total no. of AHUs - 94
- No. of AHUs connected to RWH line - 79 (unable to connect the other AHUs due to existing site condition)
- Condensate recovery from AHU expected - 56.8m³/day*
- Total water savings - 20 ML / annum



Renewable Energy

BIAL has completed a 2.5 MWp Solar power project in March 2017. With this, BIAL will get over 37 lakh units of renewable energy per annum for airport operation.



- BIAL has completed a 440 kWp solar power project in March 2017, which will generate 690,000 units of renewable energy per annum for airport operation
- BIAL has completed a 503 kWp solar power rooftop project in March 2016. This will generate 790,000 units of renewable energy per annum for airport operation.

Water Conservation

- Groundwater Enhancement by Constructing Rain Water Recharge Pits - 315 pits



Roof Rainwater Harvesting System

- The entire rain water from the rooftop of the Passenger Terminal Building is collected and connected to a rainwater harvesting sump, which is then pumped to the main pumping station for further distribution. The capacity of the rainwater harvesting collection sump is 1710 cum.

Implementation of drip irrigation landscaping

- To reduce the use of water at the BIAL landside we have provided flow restructures and drip irrigation systems

Development of Surface Wells

- BIAL has developed its own source of water through surface wells on in their premises
- Rejuvenated 2 airside wells
- Rejuvenated 3 Landside wells



Other initiatives



Elimination of plastic bags, substituted with jute bags in Terminal outlets (approx. 5,00,000 bags per annum)

- Reduction in the use of tissue paper in washrooms with the introduction of hand driers
- Elimination of paper cup in the passenger terminal by introducing drinking water fountains
- Every 1Kg of food waste is subjected to bio-gas generation, from which about 0.089 m³ of bio-gas is generated
- After the extraction of bio-gas, the expelled material contains about 70% water; 30 grams/kg is converted to compost
- Every 100 grams of pet bottle contains waste of about 10-12 grams (cap, ring, label) of reusable plastic; the rest is shredded and sent to authorised recyclers
- Newspaper and other waste paper is sent to ITC Ltd., for recycling
- Tetra packs are sent to an NGO (SAHAS: authorized to collect tetra packs) in Bangalore

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Burckhardt Compression (India) Pvt. Ltd.

Burckhardt Compression (India) Pvt. Ltd., is solely owned subsidiary of Burckhardt Compression AG, Switzerland; one of the world's leading manufacturer and service provider of reciprocating compressor systems that covers a complete range of reciprocating compressor technologies and services.

Burckhardt Compression India (BCIN) is having advanced manufacturing facility, spread over 6,000 sq. m² in Kondhapuri, Pune is an ISO 9001:2008, ISO 14001:2004 and OSHAS 18001:2007 certified company.

Its customized compressor systems are used in the upstream oil & gas, gas transport and storage, refinery, chemical, petrochemical and industrial gas sectors. Burckhardt Compression's leading technology, high-quality compressor components and the full range of services help customers to minimize life cycle costs of their reciprocating compressor systems around the world.



"Industry is a community & with Industrial revolution, it changed the face of the earth over the past few centuries for the good of mankind. At same time, it also consumed the max resources & has caused the current climatic changes affecting the society at large.

Hence, its of prime importance for the Industry irrespective of its size, category or its geographical location to once again change the face of the earth on the Environment Issue. Going Green is not just a question of Business Sense, but a question of Sustainable Existence in the future.

GreenCo by CII is one step in right direction. Burckhardt Compression Products have a Tag line of "Compressors for Life time". This means lowest life cycle costs & minimum use of resources, during its operational life. GreenCo, hence has been a gradual extension of our Philosophy, which we have been practicing in our operations over past few years, before we joined the GreenCo bandwagon".

Milind Wagle
Managing Director



Key Achievements

Unit: Kondhapuri

- Renewable energy share of 27% in total electrical consumption
- 10% reduction in specific energy consumption; 81% of employees have 100% LED lighting at homes
- 30% reduction in fresh water consumption; zero water discharge company
- Water Index – 84% (Water Credit to Debit Ratio)
- Overall 20% waste reduction achieved & 46% of waste is recycled
- 48.5% reduction in CO₂ emissions (Scope 1 & 2)
- 48% of packing material saved without compromise in quality of packing



Unique Initiative

Developed new compressor for defense application with challenge of weight and space reduction

- Weight of compressor reduced from 1950 to 946 KG in developed model
- 50 % reduction in raw material weight
- Sea water for cooling
- 30 % reduction in floor space occupied



Renewable Energy

- Previous total electrical input power source from MSEDCL
- 350 kW Grid interactive solar system, 3 kW Wind Turbine & Solar Water Heaters
- Annual Energy saving - 526600 kWh
- Annual cost saving - Rs. 3.304 Million
- Investment - Nil



Energy Efficiency

- LED lighting in shop floor & offices area as per lux level mapping
- VFD's for high rated motors
- Use of separate air ring blower for ETP aeration instead of compressor air
- Optimal use of air conditioners in offices
- Automation of machine operations using various sensors
- Motion sensors in offices & shop floor area



Waste Management

- Paper & Plastic waste recycled
- Separation of Industrial & Domestic sludge with changes in process of effluent treatment
- Capacity of treatment increased from 0.5KL to 3.5 KL
- 600 KG of hazardous sludge eliminated by separation of domestic sludge
- Industrial sludge is recycled
- Reuse of wooden packing boxes



Water Conservation

- Arrested leakages; underground lines replaced with overhead lines
- Drip irrigation & sprinkler system
- Waterless urinals
- Reuse of RO reject water
- Rain water collection in tanks & used for industrial purpose



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CUMMINS TECHNOLOGIES INDIA PVT. LTD

Cummins Turbo Technologies designs and manufactures turbochargers and related products, on a global scale, for diesel engines above three liters.

CTT Pithampur: This world class facility in Pithampur, is spread over 11 acres with 16,500 sq m constructed area in Special Economic Zone in Central India. It manufactures Mid-range and HHP turbochargers and components like Fixed Geometry, Waste gated, Variable Geometry and 2-Stage turbocharging systems. One of the most advanced manufacturing facility of Cummins Turbo anywhere in the world, this plant has a capacity of manufacturing 265K units annually of which over 90% contribute to exports. The facility has Gold Rating by GreenCo, TS 16949 and ISO 1400 and is also specially designed to be user-friendly for differently abled people.



"No matter where we live, we are all connected by the need of water. Together, we can make a difference by taking action to do our part at work, at home or in community."

Anant Talaulicar
Managing Director

Unique Initiative

Washing of oil contaminated Hand Gloves & Cotton Waste - the company was facing the issue of increase in quantity of hazardous waste specially used hand gloves and cotton waste. Hence they have initiated the process of washing used hand gloves and cotton waste with the help of industrial washing machine. Thus enabling the plant to reuse the hand gloves and cotton waste and also reduce the quantity of hazardous waste. The company was also able to achieve cost reduction through reuse.

Key Achievements

Unit: Pithampur

- 1500 Ltr/Day water conservation through AC Drain Water Collection and reuse in general washing & cleaning and spacer added in Toilet Taps for reducing water in each press
- Beyond the fence water conservation initiative to capture more than 48m³ of rain water
- 6% electricity saving through High Velocity Low Speed fans and LED lights
- Developed guidelines for suppliers for implementation of 'Safe', 'Green', 'Clean', 'Lean' and 'Diverse' practices
- ReCon - A Green initiative to Re-manufacture Turbochargers
- Six Sigma approach on working with suppliers for their performance improvement
- Improved Packaging and Optimized Dispatch of various products
- Returnable Packaging for CIL & CTP (internal customers) to reduce packaging scrap



Energy Efficiency

Roots Air Blower Power Reduction— The company was facing frequent breakdown in blower. When contacted the supplier it was suggested to go for energy efficient motors. The root air blower in ETP was replaced with energy efficient motor. The company successfully installed energy efficient 5.5 KW blower in place of the 2.6 KW blower without any performance impact on ETP.



GHG Mitigation & Green Supply Chain

Improved Packaging and Optimized Dispatch in HIHP Turbo - Earlier the plant used to dispatch 4 containers monthly, each made of single layer of 5 Ply packaging box for CCEC. However recently the team worked on optimising this, and incorporated a few modifications in packaging by using 7 Ply packaging boxes with triple stacking in containers thus reducing the requirement to one container per month.



Waste Management

Returnable Packaging for Customers - Previously the company used to ship HIHP turbo for CIL in corrugated boxes which had generated lots of packaging scrap at customer's end. Now they have implemented returnable packaging for this as well as various customers which had led to reduce the packaging scrap at Customers site. It did not directly impact the waste minimization but this project had a great impact on environmental front.



Water Conservation

AC Drain Water Collection - To be in-line with water conservation target the team worked and identified opportunities for water saving and also identified the areas where the plant actually could able to produce water for the process by collecting drain of shop floor air conditioner. 5% saving was achieved.



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Godrej & Boyce Mfg. Co. Ltd.

Godrej Interio is India's premium furniture brand in both home and institutional segments with a strong commitment to sustainability and centres of excellence in design, manufacturing and retail. The company aims to transform spaces with its smart furniture and create brighter homes and offices with products that have the highest design quotient that combine aesthetics, functionality and technology. Godrej Interio also pursues excellence with a special focus on health and ergonomics. Be it office, home or other specialised application, it has the entire range under one roof.

Key Achievements

Unit: Shirwal

- Received CII- GreenCo Certification with Platinum rating
- Received Excellent Energy Efficient Unit Award at CII Energy Summit 2016
- Received ISO 50001 (Energy Management System) certification
- Conversion of pre-treatment into phosphate free process
- Captured 96% of rain water harvesting potential
- Zero Discharge Facility
- Waste Heat recovery of hot air from compressor for removing moisture content of briquettes
- Recycling of 5 lac litres of water per day through beyond the fence initiative of waste water management in Palshi village
- 35 % of Renewable Energy Share
- 61 % reduction in specific energy consumption over base line FY 2012-13



"Focus on sustainability and the environment has been of prime importance to the Godrej Group decades before it being enforced through various mandates and legislations.

As a result of this, we at Godrej Interio have invested in green mfg. processes and have maintained pressure on

ourselves to reduce energy consumption, water consumption, hazardous waste and our carbon foot print.

We always believe there is a greener way"

Zurvan Marolia
Product Supply Head

Unique Initiative

At Plant Shirwal, briquette based thermic fluid heater (TFH) of capacity 13 Lakh kCal is used for lamination process. The moisture content in briquettes is 17 to 20 % when these are sourced from supplier. As the compressor unit of the plant is located near to TFH, the exhaust hot air of compressor of temperature 60 Deg. was circulated to a briquette storage room where these briquettes are dried before using in TFH. This waste heat recovery initiative benefited in reducing moisture content of the briquettes from 20 % to maximum of 5%. This helped in increasing the efficiency of TFH resulting in reduction of briquette consumption of 84000 kg per year.



