

JK TYRES PIONEERS ENERGY REDUCTION TECHNOLOGY IN INDIA WITH ZERAX[®] AND EC⁺ CONCEPT



THE CHOICE

JK Tyres with its 9 large factories across the country is undeniably one of the leading tyre manufacturers in India. The company pioneered the manufacturing of radial tires and offers a wide range of tyres for different types of vehicles.

The high cost of energy and the increasing level of environmental awareness, spurred JK Tyres to search for modern and more efficient solutions in the field of energy saving for their tyre manufacturing plant in Chennai.

After a large and exhaustive research of all available solutions on the market, including EC fans, JK Tyres in close cooperation with Xero Energy Engineering Solutions Pvt Ltd, chose the market's most efficient and innovative solution known as the EC⁺ concept.

The concept is precisely conceived to increase the efficiency of HVAC systems and comprises high efficiency ZerAx[®] fans, high efficiency motors and the intelligent and high efficiency Danfoss VFDs. The combined system has the potential to deliver efficiencies up to an impressive 85%, which is the highest possible total system efficiency for AHUs available on the market.

Not only the numbers, but also the most modern technology of the EC⁺ concept, convinced JK Tyres to retrofit an old centrifugal fan in an existing air handling unit with a high efficient ZerAx[®] axial flow fan, high efficiency motor and Danfoss VFD.

PIONEERING PROJECT

This project marks the first successful installation of the EC⁺ concept in India

and makes JK Tyres pioneers of the concept in the Asian region. With an original expectation of 30% energy savings and an achieved implementation of more than 50%, this project is pure proof of concept of the magnitude of energy savings that is achievable by retrofitting centrifugal fans with ZerAx[®] axial flow fans based on the EC⁺ concept.



ZerAx[®] axial flow fan

JK TYRES PIONEERS ENERGY REDUCTION TECHNOLOGY IN INDIA WITH ZERAX® AND EC+ CONCEPT

FACTS

- PROMISED ENERGY SAVINGS OF 30%
- ACHIEVED ENERGY SAVINGS ABOVE 50%
- 20+ YEARS LIFETIME
- VERY LOW FAN SECTION SOUND LEVELS
- EASY TO RETROFIT
- REDUCTION IN CARBON FOOTPRINT

HIGH-TECH INSTALLATION

As the first manufacturer in India JK Tyres trusts in the EC+ concept and has retrofitted an existing air handling unit with a high efficiency ZerAx® axial flow fan AZN 900/350-6 in the tyre manufacturing plant in Chennai. The installed system consists of the highly efficient ZerAx® fan, high efficiency motor and the intelligent and high efficiency Danfoss VFD.

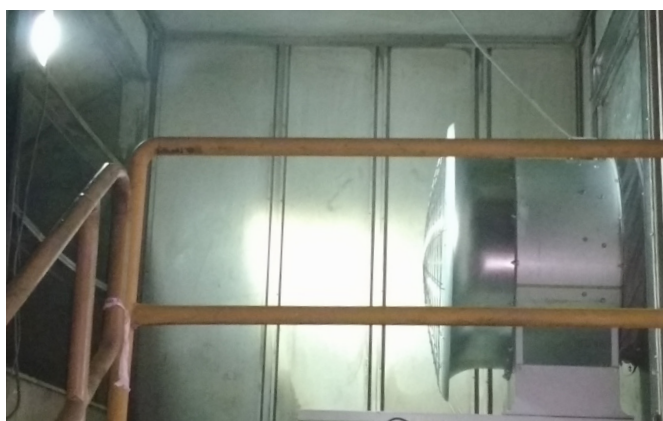
The ZerAx® fan now saves considerable amounts of energy and supplies fresh air to a critical part of the production, where treads are put onto tires to provide grip on the road. This is also the hottest part in the tyre plant with temperatures reaching up to 46 °C when summer peaks and operates almost continuously.

ENVIRONMENTAL EFFECTS

Not only have JK Tyres reduced their energy consumption, but by using NOVENCO EC+ technology, they have also significantly reduced their carbon dioxide emissions, which complements other corporate social responsibility initiatives currently on-going at the Chennai plant.



Before retrofit



After retrofit



“AHUs in a very significant way contribute towards the present fixed power consumption of the Chennai Plant. We have taken a trial with replacing the conventional centrifugal fan with ZerAx axial flow fan and the savings in power consumption is immense for the same comfort levels of the operative team. Based on the actual savings recorded, it is decided to take up the project of 100% replacement existing AHU fans with the ZerAx axial fans. This project is under implementation.” says Unni Nayar, Vice President



90%

x



91%

x



98%

=



EC+ 80%

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