

“WE NEED TO HAVE CLEAR LEGAL GUIDELINES TO PROMOTE SUSTAINABLE WASTE MANAGEMENT.”

- **Dirk Lechtenberg**, Managing Director, MWV Lechtenberg & Partner (Germany)



INDIA has tremendous potential to implement a sustainable waste management industry which should create a large number of jobs and help achieve a significant, cost-effective reduction of the carbon footprint. **Dirk Lechtenberg, Managing Director, MWV Lechtenberg & Partner (Germany)** talks to ICR about the technologies used for alternate fuels in India, challenges and support required from the government for promoting alternative fuels. Excerpts from the interview.

Brief us on the technology used in your Ajmer plant in India.

The technology which was implemented at the Ajmer plant consists of well-known components for the pro-

cessing of mixed waste. It comprises equipment for screening (by drum screens), air separation, ferrous and non-ferrous metal separation, shredding and handpicking. The equipment was manufactured in India by Tecpro Systems. The technology in the machinery follows the basic designs by MVW Lechtenberg & Partner, Germany. Only the shredder was partly purchased from a well-known Austrian equipment supplier, Lindner Recycling Technique. However, the adaptation of the technology is the key factor. A mechanical biological treatment plant which is successful in central Europe may not be the right solution for India. Such a plant and technology will not be able to cope with the different waste composition (high organic

and inert content in India) will be too expensive and therefore, not affordable by Indian municipalities and habitants.

Tell us about the different technologies that you have used in India for alternate fuels.

In the past, there was no need for the Indian cement industry to use alternative fuels. The reason was the rapidly growing market with an immense need for clinker and cement. At that time, the production costs were of minor importance; it was all about large production volumes. With increasing fossil fuel prices and a stagnating need for cement, the market has become more competitive. Therefore, the production cost per tonne of clinker has become a key criterion for every ce-



Rice Husks feeding at Precalciner.



The process of screening on site.

ment plant and cement manufacturing company. With reference to clinker production, most cement plants in India have already implemented the most advanced technologies which allow them to produce large quantities efficiently. With reference to the use of alternative fuels, several studies and guidelines have been published, such as Guidelines for co-processing by the Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India) Parivesh Bhawan East Arjun Nagar, Delhi in 2010; The Confederation of Indian Industry, CII – Godrej GBC's efforts to promote Alternate Fuel & Raw Material utilisation in Indian Cement Industry, supported by Shakti Sustainable Energy Foundation in 2011. As the publications show, the use of alternative fuels has been recognised as a possibility for environmentally friendly waste recycling. However, general laws (such as the European waste directive or incineration directive) still need to be enacted and the practical development is still in its very early stages.

Therefore, Indian municipalities and people still have a long way to go until a sustainable waste management system is established in all Indian states.

How technologically advanced is India compared to the international norms of using alternative fuels in the cement kiln?

In each country, the waste composition is different. It might even differ from city to city within a country, depending on the type of businesses, living standards and other factors. In India, there is an unofficial but very efficient waste sector.

Scavengers collect the waste and separate the recyclables therein. Everything which can be recycled is recycled in India and this system ensures the daily survival of hundreds of thousands people – scavengers and their families. However, the current situation is obviously not a sustainable way to secure families life and environmentally friendly waste management. Special efforts have to be made to



The process of recycling the waste.

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responsibly include the scavengers and their families in a sustainable, modern waste management system.

How efficient are alternative fuel projects?

Alternative fuels projects, e.g. separation of recyclables, separation of organics for further processing into fertiliser, separation of hazardous wastes for dedicated handling, production of refuse-derived fuels to substitute fossil fuels, are done all over the world. Many projects have been completed in countries that show a similar waste composition and that lack of a sustainable waste management system. This is the case for example in Africa, Asia or even Eastern Europe. For each country and even for different regions, the adaptation of the implemented technology is the key factor.

What support do you expect from the Indian government on the policy level?

To promote sustainable waste management, it is very important to

have clear legal guidelines and laws, e.g. emission directives with definite emission limits while introducing refuse-derived fuels; clear laws on the types of waste which can be used, how they are to be used, etc.

This should also include alternative raw materials such as fly ash and other waste which can be used in cement plants to reduce CO₂ emissions from cement production. This can be done by creating a commission for market regulation in the field of hazardous and industrial wastes or by starting a permanent 'round table' of government and cement enterprises to develop a control mechanism for the use of alternative fuels and raw materials in Indian cement plants.

Incredible India as it is known in advertisements made by the government, has a tremendous chance now to implement a sustainable waste management industry which creates a large number of new jobs and which is able to achieve a significant, cost-effective reduction of our carbon footprint. **ICR**