

Bharat Lime Association to Train Manpower



H. T. Makhijani graduated with Honours in Mechanical Engineering from King's College, Newcastle – England in 1956. He worked in Germany from 1956 to 1959, Tatas from 1959 to 1960, and with WESTERWORK from 1960 to 1980.

In 1981 along with partner, Mr K.B. Mansharamani, Makhijani promoted Nirvan Group of Industries. He brought to India many new technologies now widely used in Indian Metallurgical, Mining & Chemical Industries.

He travelled widely throughout the world including Europe, USA, Middle East China, Japan etc. He is a member of German Iron & Steel Institute, The Institution of Engineers (India), Stephenson Engineering Society etc. He is also the President of Bharat Lime



H.T. MAKHIJANI

Association (BLA) and Aluminium Extrusion Council (ALEX).

In an interview to Sanjay Singh, Associate Editor of Steelworld, H.T. Makhijani says that Bharat Lime Association plans to organise courses to train manpower for operation & maintenance of modern lime kilns. He also spoke on various issues facing the lime industry. Excerpts

What is the current production status of Lime in the country in terms of demand and supply?

- Current supplies from Indian Lime Manufacturers more or less meet the demand. According to United States Geological Survey of 2015, world production of lime in 2014 was 350 million tons.

Four leading lime producing countries are as follow : China > 230 MTA, USA > 19 MTA, India > 16 MTA (valued at over US \$2 billion) and USSR > 11 MTA.

In terms of imports supplies from

Vietnam / South East Asia – ASEAN countries are exported to India at “dumping” prices, and may not exceed 5 % of total consumption.

Who are the major users of calcined lime?

Calcined Lime as such has very vast applications in various sectors of economy. Government Programs like Swachh Bharat, and Smart Cities will further accelerate demand for lime. Its end-users include : Waste Water Purification (In India major rivers are highly polluted.

Government of India plans to rectify this

situation over next 2 to 3 years)

- Effluent Treatment Plants (Govt. Regulations have made it mandatory that water provided to the industry will be discharged as effluent only after suitable treatment)

- Soil Conditioning: Over 1 / 3 of Indian Soil is “acidic”. Calcined Lime is the cheapest source of “Soil Conditioner”

Other users are as follows :

- Steel Industry
- Aluminium / Copper / Zinc / Gold Industry
- Soda Ash Plants
- Paper Industry
- Sugar Industry
- Building Industry
- Power Industry – Coal Fired Power Plants
- Paint Industry
- Rubber Industry
- Poultry Feed Plants
- Pharma Industry
- Oil Refineries / Fertilizer Plants to remove sulphur from their effluents

What is the current consumption of Lime by the steel industry in India, and what forecast you make till the year 2022 ?

- The current consumption of lime by the steel industry is 8 million tons with CaO content exceeding 90 %. The forecast for 2022 is 12 million tons with CaO content exceeding 90 %.

Rest of the industry catering to various



The future growth of Lime Industry will be driven more and more by Merchant Lime Plants to replace existing unorganised lime industry which is causing enormous pollution.

other applications is expected to grow faster resulting an additional requirement of lime estimated at 15000 tons per day. (This is equivalent to 50 New Kilns, each with capacity of 300 tons of lime per day)

It is noted that in last two years, 2 Nos modern designed kilns – each with daily production capacity of 300 tons per day – have been commissioned in Rajasthan replacing scores of small sized country built kilns.

How many kilns are presently active to produce lime in India and which are the new projects in the pipeline ?

- The modern designed Kilns are around 100 in number with capacities varying from 150 tons per day to 600 tons per day.

Country built kilns exceed 10,000 spread all over the country in capacities varying from 10 tons per day to 50 tons per day. The future growth of Lime Industry will be driven more and more by Merchant Lime Plants to replace existing unorganised lime industry which is causing enormous pollution.

In terms of availability of raw materials, what are the major challenges faced by the industry ?

- Limestone is the raw material for Lime Industry. Limestone is one of the most common mineral available all over the world. However, for production of high grade lime- CaO content exceeding 90 % limestone with low SiO₂ is required. That is available in India mainly in Rajasthan.

Hence last year about 18 million tons of

low silica high grade limestone was imported from UAE alone.

How many captive mines are in operation for the extraction of limestone, and where are these mines located ?

- Limestone quarries are located in around eight clusters spread all over the country. These clusters are in Rajasthan, Gujarat, Madhya Pradesh, North Eastern States, Andhra Pradesh, Orissa, Eastern Maharashtra and Karnataka.

However, as mentioned earlier except in Rajasthan, most of these quarries have limestone of higher SiO₂ quality.

How is the government response towards the demands of the lime industry and are enough policy in place for the betterment of the industry ?

- Limestone Mining Industry so far has been mostly either government owned (NMDC or Steel Plants) or in unorganised sector. A lot of mining is carried out illegally.

One of the reasons is that until recently, Lime Industry was classified as Small Scale Industry. Small Scale Industry - employing a large number of workers- could not adopt modern technology due to size of its operation. This resulted in large scale illegal mining.

In more advanced countries, Merchant Lime Industry because of scale of its operations can afford to have modern technology and operate plants conforming to latest pollution norms.

The government has started identifying

large limestone deposits and is auctioning mining blocks in Rajasthan since about a year back.

Such measures will result in growth of Merchant Lime Industry to produce quality lime as well as conform to current pollution norms.

What is the current status of technology employed in lime industry ?

- As mentioned earlier small scale industry- with over 10,000 country built kilns - has been operating at very low level of technology.

On the other hand, steel plants having captive lime plants have opted for world class technologies.

With consolidation of small scale plants into bigger sizes – it is expected that in next 3 to 5 years- Merchant Lime Industry will grow in size and adopt latest world class technologies to produce high grade lime and at the same time conform to latest pollution norms.

What challenges you foresee for the lime industry ?

- Whilst in the near future Indian Lime Kiln Industry has great future (new kilns worth US \$ One Billion to be built), it has its own built-in constraints too. The main constraints are availability of:

- trained man-power
- bank finance at reasonable rate of interest
- high grade low SiO₂ limestone