

## MOIL LIMITED

Kandri Mine, Nagpur (Maharashtra)

### Unit Profile

MOIL Limited is the largest Manganese ore producing company of India. At present total ten nos. mines including underground and opencast mines, are in operation at Madhya Pradesh and Maharashtra. Company share about 55% of Manganese ore production of India. MOIL has established a 10000 TPA capacity Ferro-Manganese plant at Balaghat (M.P.) and a 1200 TPA capacity Electrolytic Manganese Di Oxide plant at Dongri Buzurg in Maharashtra State. For Energy conservation and clean & green environment, MOIL has installed 4.8 MW and 15.2 MW capacity Wind Energy Generator Plants at Dewas (M.P.), which are contributing in energy conservation.



Kandri Mine was established in the beginning of the twentieth century around 1903 AD by Central Provenances of Manganese Ore (CPMO) incorporated in Great Britain. Latter on, it was taken over by MOIL in the year 1962. Kandri Mine is an underground mine of the Manganese Ore (India) Limited, situated in Nagpur District of Maharashtra State. The annual production of Manganese Ore in Mine was 63181 T in 2013-14 and 63105 T during 2014 - 15 in spite of globally recessionary trend in the market due to quality product. Total mining lease hold area of the Mine is 83.06 hectare. The total mineral reserve of the mine is 2.05 million tones. So far 30.0 hectare area of the mine is covered with a forestation.

### Energy Consumption

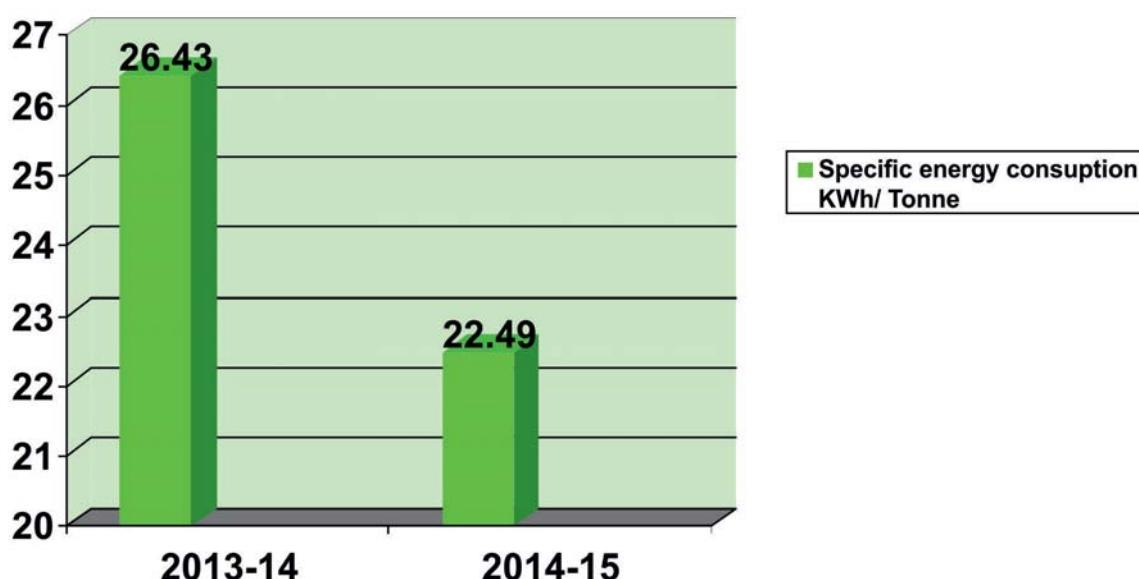
The energy consumption is monitored and controlled by taking various measures like improving system and efficiency of the equipments and regulating

Description	2013-14	2014-15
Specific Energy Consumption in kWh /T	26.43	22.49

the operation of equipments, modernization of equipment, mechanization in mines etc., a comparison between electricity consumption for the year 2013-14 & 2014-15 is as follows,

Total Energy Consumption in Lacs of kWh	16.82	14.27
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### Graphical Representation of Specific Energy Consumption



### *Energy Conservation Measures*

At MOIL Ltd. Kandri mine, electricity consumption for the year 2014-15 has been reduced as compared with 2013-14, to achieve this following measures has been adopted,

- (1) Operation of 50 H.P. pump in place of 100 H.P. pump.: -- Initially a 100 H.P. pump was installed at an open pit of mine, without interrupting working of mine it has been replaced by 50 H.P. centrifugal pump, resulting in reduction of electricity consumption.
- (2) Operation of 200 H.P new. Air compressors in place of 250 H.P. old air compressor: - A old air compressor of 250 H.P. air compressor was in operation, to replace it one no. 200 H.P. capacity compressor of same capacity installed resulting in reduction of electricity consumption.
- (3) Operation of one no. high mast tower in place of two nos. high mast towers :-  
- At mine siding two nos. high mast towers was installed at both ends of siding in place of it one tower was installed at centralized location, resulting in reduction of electricity consumption.
- (4) Modification of delivery pipe line of 150 H. P. pump :-- At delivery pipe line of 150 H.P. underground pump a lot of bands was provided, its route, it was relayed by providing minimum quantity of bands, due to this reason effective load on motor reduced, resulting in reduction of electricity consumption.

### *Energy Policy*

MOIL is the largest producer of Manganese Ore in India and also the market leader, commit to adopt a comprehensive approach towards conservation of energy in all its operations. To accomplish this we will:

- Optimally utilize various form of energy in cost effective manner to effect conservation of energy sources.
- Maximize the use of renewable energy sources and non-conventional sources of energy.
- Train our employees to make energy conservation as a way of life and recognizing their initiatives in this regard.
- Carry out external audit in regular interval and to identify the areas of improvement.
- Reduce specific energy conservation by 1% every year till 2016.
- Improve capacity utilization.