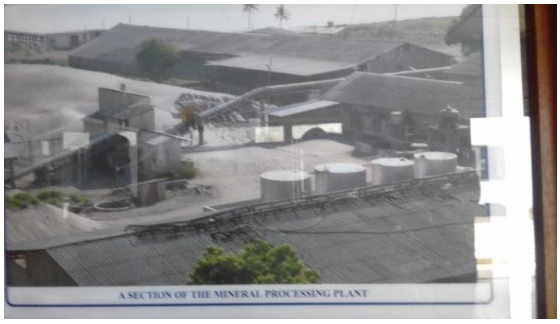
Performance Audit on the utilization of Mineral sand Deposits of Sri Lanka by the Lanka Mineral Sands Ltd.

Sri Lanka is home to highly valuable deposits of mineral sands proven by research as better than those of other countries in the Mineral content and literally known as black gold used in the manufacture of many products needed by all inhabitants of this world.



Photograph No 01- A section of the Pulmuddai Plant

The ilmenite and rutile content of this mineral sand is used in the production of the titanium dioxide and the titanium metal whilst titanium dioxide is an essential raw material for the plastic and the paper manufacture. Titanium metal is used in the manufacture of aircraft and spacecraft and a raw material for manufacturing welding rods. Zircon in the mineral sands is used in the manufacture of ceramic and sanitary ware and in the casting and foundry industry.

Photograph No 02- Mineral Sands Depot in Sri Lanka

Since the discovery of the existence of the deposits of these mineral sands in Sri Lanka in 1950, the Mineral Sands Corporation was established in the year 1957 which was converted in the year 1992 to a Government Owned Company with the ownership of 100 per cent of the shares in the Government. This Government Company pays dividends from its profits annually to the Treasury and the dividends paid to the Treasury from the profits of the year 2011 to the year 2015 amounted to Rs. 2,415 million.

The Factory located in Pulmoddai had been in operation even during the 30 year war earning foreign exchange to the country, paying dividends to the Treasury and adding strength to the economy.

Mining of Mineral Sands

Even though the Company had obtained licences for mining of mineral sands in the areas of authority of the Divisional Secretariat, Kuchchaweli Kokilai and pulmoddai mining operation had not been carried out due to the obstructions for sand transport from to Pulmodddai caused by a dilapidated bridge and due to

the construction of a Hotel Complex in the area of Thewikkallu.

Photograph No 03 -. Bridge blocking sand transport

Availability of high quality mineral sands in the Pulmoddai deposit had been decreasing due to the continuous mining done by the Company even before the natural filling of the mined areas. Mining had also been extended to the land area away from the coastal belt. Due to the need for mineral sands for the operation of the plant conliuously at maximum capacity, it was observed that sand with less than 40 per cent mineral content had also been mined.

Deficiencies in the mining methodologies and mining done in violation of the environmental laws and rules were also observed during the course of audit.

Photograph No 04-Transport of Mineral Sand

The availability of very rich mineral sand from northwards of kokilai Lagoon to kokkuduwail to Nuyaru and Chenmalai.

Photograph No 05 Kokilai Land acquired by the Company

Photograph No 06 - Mineral Sand of the best quality available in the Kokilai Coastal Belt'

In view of the plant of the Company being older than 50 years and the decrease in the production due to ceaseless mining in the Pulmoddai Deposit, plans had been made for the construction of a new plant in Kokilai.

The Company had purchased machinery valued at Rs.39.34 million even before the acquisition of land 17.6938 hectares in extent on 13 February 2013. Despite the difficulties in obtaining the licenses for the projects 120 labourers had been recruited from June 2015. The land with mineral sand deposits acquired had been idling even by the date of audit.

Value Addition to Mineral Sands

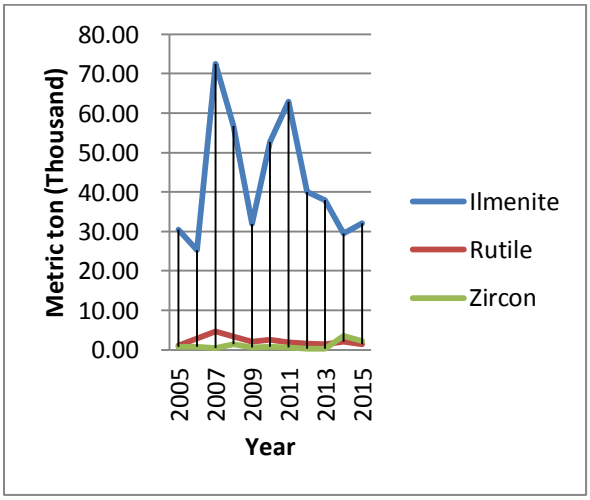
The grant of licences for the mining of Mineral Sands and the export thereof to the Company had been restricted with the objection of discouraging the export

of minerals in the primary form and encouraging the local productivity of mineral based products. In view of the situation, the going concern of the company had become a questionable issue. Similarly finding mineral sands with higher content of minerals for launching into the value added products had also been problematic.

Even though the Geological Survey and Mines Bureau had not issued the annual licensees to the Government Company for not launching into the value addition process, an audit test check carried out in this connection revealed the mining licenses valid for 10 years had been issued to a Private Company. The value addition process to the Mineral Sands is an activity which could cause severe impacts to the environment and such it was observed that the other institutions of the Government should pay greater attention to this matter and provide necessary assistance for the uninterrupted maintenance of production activities.

Production Process

Five main plants are involved in the production process for the production of 3 main products, namely, Ilmenite, Rutile and zircon. The by-products of this process are the non-magnetic Heavy Mineral, Hiti Ilminite and Crude Monozite. The position of these products during the last decade had been as follows.



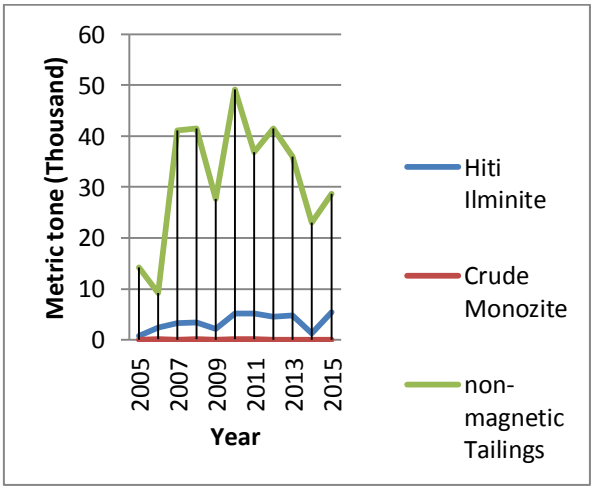


Figure No 01 - Main item of product

Figure No 02 - by-Products

Such gradual minimization of the creation of main products of the Company and the improvement in the creating of other by-products had an adverse impact on the going concern of the industry. It was observed in audit that the following had been the reasons thereto.

- The current production capacity of the plant more than 50 years old being an underutilization of 25 per cent to 75 per cent of the design capacity.
- Failure to take necessary courses of action for the minimization of the major defects in each plant.
- Existence of large variations in the comparison of the standard inputs and outputs and the actual inputs and outputs.
- Lack of quality in the products due to the existence of variances in the expected chemical parameters of each kind of inputs and outputs.
- Failure of the Company to identify the products with capacity for earning higher profit and increase the quantity of production of those products.
- Breakdown in the supply of electricity for 142 hours in 187 out of 181 days available in the first half year of the year 2015.

The plant had been in operating for 24 hours daily on 2 shift basis. A comparison of the time devoted for active production and the inactive periods of production in several preceding years revealed this about half of the time had been inactive due lack of uninterrupted supply of electricity, clean water and raw material.

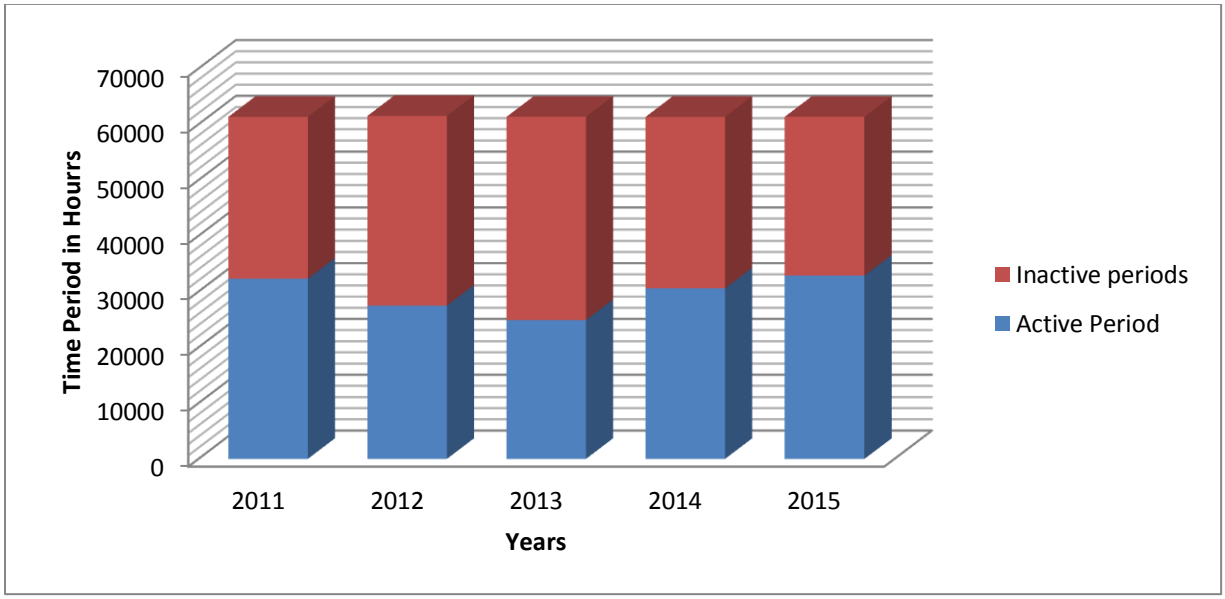


Figure No 03 - Inactive periods of production

Marketing of Mineral Sand Products

The Company had directly exported the Mineral Sand Products up to the year 2007 and the export through intermediaries had commenced thereafter. Nevertheless, in February 2016, the Secretary to the Ministry of Mahaweli Development and Environment had informed the need for reverting to the direct export system. But the Marketing Division had not taken effective action to find new buyers. A proper makerting plan had not been carried out by conducting a marketing research. A comparison of the actual sales with the budgeted sales revealed that there were substantial decreases in the sales of Ilmenite, Rutile and Zircon respectively 18 per cent and 56.7 per cent in the year 2015 as compared with the estimated quantities.

Even though the Company had registered in the "Industrial Minerals" Web Site and sales had been made to the intermediaries by checking the international prices displayed in that Web site there were variances between the prices of the international market and the sale prices. Even the sale of by-products, namely in Spiral Fine concentrate and crude Zircon had not been profitable to the Company. The standards of the Mineral Sands did not conform to the standards of the International Market. The Company had to incur additional transport expenses due to the shipping of mineral sands through the Port of Colombo resulting from the destruction of the Pulmoddai Jetty and the transfer of the Cod Bay premises to the Tokyo Cement Company. The assets of the Cod Bay premises had been valued at Rs.32.32 million in the year 2013 and these were deteriorating due to failure to sell them.