BOOK REVIEW

Lignite Atlas of India. NLC India Ltd., Neyveli - 607801. 1st Edition, 2019, 82p.

The Lignite Atlas of India was prepared by NLC India Limited (formerly known as Neyveli Lignite Corporation Limited), a 'Navratna' Government of India Enterprise as per the decision of the 11th meeting of the Central Geological Programming Board (CGPB) Committee – V on "Energy Minerals and Resources" held on 25th August 2015. The Atlas was prepared by the Geology Department of NLCIL and was released during the 58th CGPB meeting held on 15th February 2019.

The Atlas has 11 chapters. The first chapter on 'Lignite Exploration in India' gives a brief history of the exploration in different lignite fields from pre-independence period to the recent. An overview of quality and quantity of the lignite in different lignite fields of India is included. A comparison of the India's reserve position with other coal/lignite producing countries is also made. The next six chapters deal with brief geological set ups of lignite fields along with geological maps and schematic sections and resource potential of the lignite bearing states – Tamil Nadu & Puducherry, Rajasthan, Gujarat, Jammu & Kashmir, Kerala and West Bengal.

The Chapter on 'Lignite Mining in India' provides the statistics of the production of lignite for the period 2009-10 to 2017-18 from different lignite fields of Tamil Nadu, Gujarat and Rajasthan. The annual production has increased from 26 m.t. in the year 2002-03 to 47 m.t. in 2017-18. The maximum production of 23.57 m.t. is from Neyveli Lignite field of Tamil Nadu, followed by 13.78 m.t. tonnes from Gujarat and the rest being from Rajasthan.

Out of the total of 45663.58 m.t. geological resources, only 8940.39 m.t. (19.58%) is available within a depth of 150 m, and this can be mined with the presently available technology. The rest of the resources are considered as deep seated and are to be exploited by technologies such as Underground Coal Gasification (UCG) and Coal Bed Methane (CBM). The Chapter on 'Exploitation of

Deep-seated Lignite' gives an account of these technologies.

National Lignite inventory prepared and maintained by Geological Survey of India is included in the next chapter. It gives geological resources under the UNFC classification – measured (331), Indicated (332) and inferred (333) categories, for depth ranges from 0 – 150 m, 150 – 300 m and > 300 m for all the blocks in different lignite fields of India based on the exploration data of Geological Survey of India, Mineral Exploration Corporation, and other State Government organisations. The chapter also provides the statistics of lignite mined till 31.03.2018, which includes 687.47 m.t. from Neyveli Lignite Field of Tamil Nadu, 237.61 m.t. from different lignite fields of Gujarat and 66.64 m.t. from Bikaner, Barmer and Nagaur fields of Rajasthan, totalling 991.72 m.t.

The last chapter on 'Petrography and Palynology of Lignite' gives brief account of petrological and palynological studies carried out in different lignite fields and synthesis the data to derive at the conclusion that the lignites were formed from mixed mangrove angiospermic tropical forest vegetation in mangrove swamps parallel to existing coastline.

The atlas is a useful reference book for the students and researchers and the NLC India Limited is to be appreciated for bringing out such a nice publication. An addition of a section on bibliography would have added its value, particularly for researchers. The Atlas can be obtained from the Office of Chief General Manager (Geology-Mines & Coal Blocks), J.N. Salai, Block-16, Neyveli, 607801 (cgm.geo@nlcindia.com).

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