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Preface

Conservation and development of minerals other than fuel, atomic and minor minerals in the country is the cardinal function of Indian Bureau of Mines. For achieving this objective, it pursues multi-faceted efforts in both statutory and non-statutory modes. One such effort is the publication of monographs, etc. relating to mining, mineral beneficiation, mineral-based industries with the objective to disseminate much-needed current information in a processed and analysed format to the mineral industry in particular. A vast deal of current information and data on mineral production, resources, etc. available exclusively with IBM, are further reinforced into these publications, thus elevating the publications' utilities.

Iron ore is a steel input mineral which assumes a pride of place in the industrial milieu of the country. Realizing this importance, the first edition on 'Iron Ore Monograph' was brought out in 1972. Subsequent developments in resource identification, production, trade and the most importantly the Govt.'s liberalised policy on investment in mining sector, have all accelerated, or rather impelled the need to fast bring out, yet another edition. Thus, the genesis of this edition in 1997.

The manuscripts for this publication were finalised in late 1996, and then taken up for printing in 1997. In the final stages of printing, the latest data on Indian Iron Ore Production 1996-97 became available and were included as 'Addenda' along with World Iron Production for 1991-1995. With this, the essential data contents have by and large been updated in the publication.

The Monograph provides comprehensive information on geology, prospecting, exploration, Indian and World deposits and resources, mining, beneficiation, uses, specifications and consumption, trade, future prospects and world review apart from due coverage on environmental aspects of mining of iron ore in the country.

Indian iron ore, being generally of superior quality, proper utilisation thereof assumes greater importance. After meeting domestic requirement, the export of iron ore was of the order of 26 million tonnes during 1994-95 mainly to Japan, Korea and China. It should be the national endeavour to utilise the excellent iron ore resources of the country in ever-increasing quantities for improving the domestic steel production.

India is in a very comfortable position with regard to the reserves of iron ore. In view of the distinct advantages of having low cost raw material with variety of grades of iron ore, Indian steel industry has bright future to harness the natural resources to our competitive advantage.

This Monograph is intended primarily for dissemination of information to the producers, exporters, consumers, industrialists, research scholars and as a useful reference material for government departments dealing with mines, minerals, iron and steel metallurgy in the country.

Nagpur
19th September 1997

A.N. BOSE
Ag. Controller-General
INDIAN BUREAU OF MINES

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While bringing out this Monograph, information available in various published and unpublished reports of Geological Survey of India have been made use of which is thankfully acknowledged.

Thanks are given to Mines Control and Conservation of Minerals Division, Mining and Mineral Statistics Division, Mineral Economics Division and Mineral Map Cell of Indian Bureau of Mines, who actively cooperated by providing required data/information/drawings.

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ABBREVIATIONS

BEML	Bharat Earth Movers Ltd.
BIF	Banded Iron Ore Formation
BHQ	Banded Haematite Quartzite
BHJ	Banded Haematite Jasper
BMQ	Banded Magnetite Quartzite
BSP	Bhilai Steel Plant
cm	centimeter
DGM	Department of Geology & Mining
dia	diameter
Dist.	District
GSI	Geological Survey of India
g	grammes
HDA	High Density Aggregates
hp	horse power
ha	hectare
IISCO	Indian Iron & Steel Company
IBP	Indo-Burma Petrochemical
IDL	Indian Detonator Ltd.
IBM	Indian Bureau of Mines
kg	kilogramme
KIOCL	Kudremukh Iron Ore Company Limited
km	kilometre
kW	kilowatt
LOI	Loss on ignition
m	metre
mm	millimetre
MMTC	Minerals & Metals Trading Corporation
MSL	Mean Sea Level
mRL	metre Reduced Level
MEL	Maharashtra Explosive Ltd.
MECL	Mineral Exploration Corporation Ltd.
MPEB	Madhya Pradesh Electricity Board
Mt	Million tonnes
NFCL	National Fertilizer & Chemical Ltd.
NMDC	National Mineral Development Corporation
OMC	Orissa Mining Corporation
OMQ	Operation of Mines and Quarries
OMS	Output per Man Shift