

IRON ORE MANUAL 2003 - 2004

CONTENTS

INTERNATIONAL MARKET (PRICE NEGOTIATION)

Iron Ore Price Negotiation for 2003	3
Iron Ore Price Negotiation for 2004	7
Seaborne Trade of Iron Ore in 2002 - 2003	15
Changes of First Price Setters in Japanese and European Markets	17
World Steel Production and Seaborne Trade of Iron Ore	22

INTERNATIONAL MARKET (STEELWORKS AND STEEL INDUSTRY)

Raw Material-Related Investment by Japanese Steelmakers	33
Steelmakers Engaged in Full-Scale Cost Reductions	37
Movements in and outside Japan over Procurement of Iron Ore	38
Strategical Alliances in and outside Japan by Japanese Steelmakers	42
Reorganization and Consolidation of European Steel Companies	55
Consolidation and Reorganization of US Steel Companies	61
Merger, Tie-up and Alliance of Steelmakers in USA, Europe and Japan	62

INTERNATIONAL MARKET (CHINA)

Supply & Demand Trend of Chinese Steel Industry and Situation of Ferrous Raw Materials Procurement	67
Countermeasures for and Investments in Raw Material Procurement by Chinese Steelmakers	74
Iron Ore Import Ports	77

INTERNATIONAL MARKET (RESOURCES)

West Angelas Iron Ore	89
Beasley River Iron Ore	90
Hamersley Iron Enhances Shipping Capacity at Dampier	91
MAC, Deposit C	92
Hope Downs	95
Mount Gibson Iron Limited	97
CVRD Breaking Every Operational Record	99

DRI AND PELLETS

Current Status of World DRI Production and Future Prospects	109
Process-wise Current Status of DRI Production in the World	112
DRI Plants by Region and Country	115
World Pellet Plants under Operation	137

SEABORNE TRANSPORTATION AND PORTS

Seaborne Freight Market Developments and Tendencies in 2003	145
Japanese Shipping Companies Aggressively Respond to China's Sharp Increase in Iron Ore Imports	147
Long-Term Contracts for Transport of Ferrous Raw Materials Highly Appreciated Again	151
Dedicative Carriers and Long-Term COA's Held by Five Japanese Steel Mills	157

CONTENTS

Spot Chartering for Iron Ore Haulage During Jan. - Dec. '03	160
STATISTICAL DATA IN AND OUTSIDE JAPAN	
Japan's Iron Ore Imports and Value by Source	171
Japanese BF Steelmakers' Pig Iron Production in FY 2003	182
Japanese BF Steelmakers' Crude Steel Production in FY 2003	183
Iron Ore Demand and Supply	184
Ferrous Scrap Demand and Supply	184
Major Supplementary Raw Materials Purchases and Consumption	186
Consumption of BF Raw Materials	188
Consumption of Ferrous Raw Materials	188
Crude Steel Production by Major Countries (1997 - 2003)	190
Apparent Consumption of Iron Ore in the World in 2003	191
World Crude Steel Production by Process in 2003	192
World Pig Iron Production	193
World Crude Steel Production	195
World Direct Reduced Iron Production	197
 WESTERN AUSTRALIAN IRON ORE INDUSTRY DEVELOPMENTS AND PROSPECTS IN 2003 (Excerpt)	
201	
 DATA & INFORMATION ON AUSTRALIA	235
 DATA & INFORMATION ON SOUTH AMERICA	271
 DATA & INFORMATION ON INDIA AND GOA	315
 DATA & INFORMATION ON AFRICA AND CANADA	341
 DATA & INFORMATION ON IRON SAND, FERRUGINOUS MANGANESE ORE AND FLUORSPAR	355

Units and Abbreviations

In this Iron Ore Manual the following units and abbreviations have the meanings hereby assigned to them, except where the context otherwise requires:

(N.B. Those enumerated herein-below are exemplified ones hence do not necessarily cover all the units or abbreviations employed in this Manual. Where deemed appropriate, definitions are provided also in the main texts. Words importing the singular only also include the plural and vice versa where the context requires.)

Units of Measurement and Technical / Commercial Terms

dltu, DLTU	iron unit per dry long ton
dmtu, DMTU	iron unit per dry metric ton
dwt, DWT	dead weight ton
km	kilometer
Kt	thousand tons, kilotons
Kt/a	thousand tons per annum, kilotons per annum
m ²	square meter
m ³	cubic meter
Mt	million tons, million tonnes
Mt/a	million tons per annum, million tonnes per annum
W.M.T.	wet metric ton
D.L.T.	dry long ton
BC	Bulk Carrier
BCI	Baltic Capesize Index
BDI	Baltic Dry Index
BF	Blast Furnace
BOF	Basic Oxygen Furnace
c&f, C&F	cost and freight
cif, CIF	cost, insurance and freight
COA	Contract of Affreightment
CTS	Central Terminal System (POSCO's terminal operating system)
DRI	Direct Reduced Iron
DSO	Direct Shipping Ore
EAf	Electric Arc Furnace
fob, FOB	free on board
HBI	Hot Briquetted Iron
HGF	High Grade Fines
HGL	High Grade Lump
HIM	Hamersley Iron Marra Mamba Ore
HPS	Hybrid Pelletized Sinter
HRC	hot rolled coil
IPP	Independent Power Provider
j/v, J/V, JV	Joint Venture
LAT	Lowest Astronomical Tide
LDC	Large Diameter Core
LGO	Low Grade Ore
LOA	Length Over All (of a vessel)
LOI	Loss on Ignition
LOI, L/I	Letter of Intent
OBO	Ore/Bulk/Oiler
OC	Ore Carrier
OHF	Open Hearth Furnace
OO	Ore/Oil Carrier
PCI	Pulverized Coal Injection
PFPP	Paraburdoo Fines Processing Plant
RDF	Refuse Derived Fuel
RHF	Rotary Hearth Furnace
ROM	Run-Of-Mine
RPF	Refuse Paper and Plastic (new solid combustion material)
ULOC	Ultra Large Ore Carrier
VLOC	Very Large Ore Carrier (230,000-dwt or more dedicative ore carrier)

Administrative Terms

ABARE	Australian Bureau of Agriculture, Resources and Economy
ABM	Australian Bulk Minerals, a subsidiary of Ivanhoe Mines in Tasmania
ABS	Australian Bureau of Statistics
ANSDK	Alexandria National Iron & Steel, Egypt
BHP Billiton, BHPB	BHP Billiton Iron Ore
BRIC	Four countries of Brazil, Russia, India and China
CAP S.A.	Compañía de Acero del Pacífico S.A.
CISA	China Iron and Steel Association
CLF	Cleveland-Ciffs, Inc.
CMM	Caemi Mineração e Metalurgia S.A.
CMP	Compañía Minera del Pacífico S.A.
COSCO	China Ocean Shipping (Group) Company
CSC	China Steel Corporation
CST	Companhia Siderúrgica de Tubarão S.A.
CVRD	Companhia Vale do Rio Doce S.A.
DIR	The Department of Industry and Resources (Western Australia)
EBM	Empredimentos Brasileiros de Mineração S.A.
FMO	C. V.G. Ferrominera Orinoco C.A.
HDMS	Hope Downs Management Services Pty Ltd.
HI	Hamersley Iron Pty Ltd
IISI	The International Iron and Steel Institute
IMEA	Itochu Minerals and Energy of Australia Pty Ltd
IOC	Iron Ore of Canada
ISG	International Steel Group Inc.
JISF	The Japan Iron and Steel Federation
"K"Line	Kawasaki Kisen Kaisha, Limited
KOBELCO, Kobelco	Kobe Steel Ltd
LKAB	Luossavaara-Kiirinaavaara AB Corp., Sweden
MGI	Mount Gibson Iron, Ltd.
MBR	Minerações Brasileiras Reunidas S.A.
MII	Mitsui-Itochu Iron Pty Ltd.
MIOC	Mitsui Iron Ore Corp Pty Ltd. (Mitsui's Australian subsidiary)
MMTC	The Minerals & Metals Trading Corp. of India, Ltd.
MOL	Mitsui O.S.K. Lines, Ltd
NSC	Nippon Steel Corporation
MSG	Minas da Serra Geral S.A
MSS	Mineração Serra do Sossego S.A.
MVC	Mineração Verra Cruz S.A.
NIBRASCO	Cia Nipo-Brasileira de Pelotização
NYK, NYK Line	Nippon Yusen Kabushiki Kaisha
OEMK	Oskol Electrometallurgical Kombinat
PACE	Production and Capacity Expansion
POSCO	Pohang Iron and Steel Company
PRC	Pilbara Rail Company
PSC	Philippine Sinter Corporation
QCM	Quebec Cartier Mining Co.
RRIA	Robe River Iron Associates
SAIL	Steel Authority of India Ltd.
SMI, Sumitomo Metals	Sumitomo Metal Industries, Ltd.
TKS	Thyssen Krupp Stahl AG
USC	Usina Siderurgica do Ceara
USIMINAS	Usinas Siderúrgicas de Minas Gerais S.A.