

IRON ORE MANUAL 1996 - 1997

Table of Contents

INTERNATIONAL MARKET	1
World Iron Ore Market for 1996	3
Price Hike Realized for Two Consecutive Years	3
Iron Ore Prices Repeat Up/Down Movement every other Three Years	3
International Iron Ore Trade in 1995 at a Record High	
of 446 Million Tons	4
Situations of Buying and Selling Sides before Price Talks	5
CVRD Called for Price Hike by Up 12.9% for Fines	
at the 1st Price Talks in Europe	9
LKAB Proposed Price Hike for Fines by Up 11.9% in European Market...	9
Process of the 1st-Round Price Talks in Japanese Market	10
Price Negotiations Started firstly in the European Market	12
The 2nd-round Price Talks Started on January 16, '96 in Japan	13
Prices Settled for Mt. Newman Iron Ore At Up 6.0% for Fines,	
Up 5% for Lump Ore	14
European Market: German Steel Mills and CVRD Settled Prices	
on January 29, 1996	16
Japanese Market: Price Settlement during February 1996	17
Prices for Pellets Settled on Feb. 27 '96 in the European Market ...	20
Price Changes of Fine Ore between Japanese and European Markets	21
Price Changes of Major Ore Brands in Japanese Market	
for FY1992 - FY1996	22
Price Changes of Major Ore Brands in European Market	
for 1990 - 1996	23
Price Gap between Ore Types	24
World Trade of Iron Ore Achieved Unprecedented Level in 1995	28
Changes of First Price Setters in Both Japanese/European Markets ...	32

Chronological Noticeable Records of Price Settlements	33
Operating Pellet Plants in the World	35
World DRI Plants by Process	40
World DRI Production by Country/Process	44
Kobe Steel And Midrex Develop SPIREX Process, A New DR Technology...	47
China's Major Steel Industry: Crude Steel/Pig Iron Production	48
South Korea: Iron-/Steelmaking Facilities at POSCO	49
Taiwan: Iron-/Steelmaking Facilities at CSC	49
Construction Plan for New Steelworks	49
World Iron & Steel Production, and Iron Ore Output and Trade	50
World Iron Ore Exports by Country (1984 - 1994)	50
Exports of Major Iron Ore Exporting Countries by Destination	51
Australia	51
Brazil, Peru	52
Venezuela, Chile	53
India, Canada	54
Sweden, South Africa	55
Mauritania	56
Exports of Australian Iron Ore by Destination for Jan. - Jun. '96	56
World Iron Ore Imports (1985 - 1995)	57
Iron Ore Imports of Major Importing Countries by Source	58
Japan, Germany, South Korea	58
France, U.S.A., Italy	59
U.K., Taiwan, China	60
SUMMARY OF JAPANESE STEEL MILLS	61
Procurement of Iron Ore Resources for the 21st Century	63
Japan's Medium-to-Long-Term Procurement of Iron Ore (1996 - 2000)	64
(1) Contracts for Australian Iron ore	65
(2) Contracts for Brazilian Iron Ore	66

(3) Contracts for Indian Iron Ore	67
Long-Term Contracts for Iron Ore by Region	68
Long-Term Contracts for Iron Ore by Country	68
Long-Term Contract Status by Eight Major Blast Furnace Steel Mills ...	69
Import Contracts on Australian/Brazilian Iron Ore by Steel Mill	69
Nippon Steel	70
NKK	72
Kawasaki Steel	73
Sumitomo Metal	75
Kobe Steel	76
Nisshin Steel	78
Nakayama Steel	79
Steel Mill's Iron Ore Imports by Ore Brand and Importer in FY1996	80
NSC (Nippon Steel Corp.)	80
NKK	82
Kawasaki Steel	84
Sumitomo Metal Industries	86
Kobe Steel	88
Nakayama Steel	89
Nisshin Steel	90
Estimated Ore Brand-wise Iron Ore Intake Tonnage for FY 1996	91
Importers' Share for FY 1996 by Steel Mill	92
Importers' Share for FY 1996 by Region	93
Importers' Handling Tonnages Classified by Brand and Steel Mill	94
Mitsui & Co., Nissho Iwai	94
Mitsubishi Corp., Marubeni Corp., Itochu Corp.	95
Sumitomo Corp. Kawasho Corp., Nittetsu Shoji	96
Okura & Co., Tomen Corp., Tonan Trading, NKK Trading	97
Sumikin Bussan, Nomura Trading, Kanematsu Corp., Shinko Corp.	98
Nichimen Corp., Tokyo Boeki, Kokan Mining, Mitsubishi Material	99

Kanematsu Mining, Tsuda Kozai, Okaya & Co. Kakiuchi Co.	100
Importers' Share of Major Brands to Steel Mills for FY 1995	101
Major Steel Mills' Blast Furnaces and Sintering Furnace	106
Hybrid Pelletized Sinter (HPS)	108
Sintering Plant in the Philippines	108
Production Capacity for Pig Iron and Crude Steel in Japan	109
Price Settlement for 1996	110
New Price List of All Brands	110
STATISTICAL DATA (DOMESTIC AND OVERSEAS)	113
Crude Steel Production by Steel Mills	115
Pig Iron Production by Steel Mills	115
Demand/Supply of Raw Materials	116
Crude Steel/Pig Iron Production and Iron Ore Imports	122
Japan's Iron Ore Imports for 1st Half of 1996	123
FY1995 Iron Ore Imports	124
Japan's Iron Ore Imports and Value by Source for FY1995	126
Iron Ore Import Volume by Type of Ore	128
Iron Ore Import Volume/Share by Source in FY1995	128
Iron Ore Imports by Steel Mills and Ore Type	129
Iron Ore Imports by Steel Mills and Ore Brand in FY 1995	131
Iron Ore Receipts and Consumption by Steel Mills in FY 1995	132
Crude Steel Production of World Major Steel Mills	134
Crude Steel Production in Major Steelmaking Countries	135
World Pig Iron Production	136
World Crude Steel Production	139
Crude Steel Production by Steelmakers in the World	142
TRANSPORTATION AND PORTS	147
Seaborne Trade Volume of World's Major Commodities	149
Bulk Carriers under Steel Mill's Cargo Guarantee	150

NSC (Nippon Steel Corporation)	150
NKK, Kawasaki Steel.....	151
Sumitomo Metal, Kobe Steel, Nisshin Steel	152
Vessels under Joint Guarantee	152
Vessels under Six Steelmakers' Guarantee	153
Taharoa Iron Sand (New Zealand) Carriers	154
Share of Japanese and Foreign Vessels for Iron Ore Transport by Source	154
Transportation of Iron Ore and Coking Coal by Japanese Flag Vessels ..	155
Long-Term Affreightment Contracts for Large Combination Carriers	155
Main Ports of Steel Mills	157
Iron Ore Loading Ports in Western Australia	160
Iron Ore Loading Ports (Excludes W. Australia)	162
Major Port Facilities for European Steel Mills	167
Haulage Performance of Japanese Shipping Companies	170
Source-wise Iron Ore Haulage by Japanese Shipping Companies in FY1995	172
Bunker Oil Prices at World Major Ports	174
Spot Chartering for Iron Ore during August 1995 - July 1996	175
MINE PROJECTS	183
Overseas Mine Projects	185
Australia	185
Goldsworthy C-Mining Area, West Angelas Iron Mine	185
Yandicoogina Iron Mine, Coodaiderie Iron Mine, Fortescue Project ...	186
Hope Downs Iron Ore Project	188
Iron Carbide	189
New Terminal at Brazil's Sepetiba (Ferteco)	190
Thack Khe Ore Deposit in Vietnam	192
Information on WA Iron Ore Compiled by DRD	193
IRON ORE OF AUSTRALIA	201
Iron Ore Exports of Australia	199

Long-Term Contract Status of Australian Iron Ores for Japan	205
Price Transition of Major Australian Iron Ores	205
Hamersley Iron Ore	206
Mt. Newman Iron Ore	215
Robe River Iron Ore	224
Mt. Goldsworthy Iron Ore	229
Yarrie Iron Ore	231
Yandi Iron Ore	232
Savage River Pellets	234
IRON ORE OF SOUTH AMERICA	235
Japan Imports of Brazilian Iron Ore in Past 10 Years	237
Exports of Itabira Iron Ore	237
Shipments from Tubarao	238
Exports of Carajas Iron Ore	238
Exports of MBR Iron Ore	239
Exports of Samarco Iron Ore	240
Exports of Chilean Iron Ore	240
Exports of Peruvian Iron Ore	241
Export Performance of Brazilian Iron ore	241
Long-Term Contracts of South American Iron Ore	242
Contracts Details of Brazilian Iron Ores	243
Itabira Iron Ore	244
Conditions Common to All Contracts	244
South System and North System of CVRD	247
Contract of Affreightment with Doce Nave	249
CAPANEMA Iron Mine	250
Nibrasco Pellets	251
Carajas Iron Ore	254
Japanese Contracts of CVRD Iron Ore	259

MBR Iron Ore	260
Samarco Iron Ore	267
Details of Peruvian Iron Ore Contract	268
Details of Chilean Iron Ore Contract	269
Romeral Iron Ore	269
Romeral Pellet Feed	269
Algarrobo Pellets	270
Los Colorados Iron Mine Project of Chile	271
San Isidro Iron Ore of Venezuela	273
Gist of Technical Presentation on Venezuelan Iron Ore	275
IRON ORE OF INDIA AND GOA	277
Share of Indian Iron Ore in Japanese Market in 10 Years	279
MMTC's Export Tonnage for April 1995 - March 1996	279
Kudremukh's Export Tonnage for April 1995 - March 1996	279
Exports of Goan Iron Ore ex Mormugao in FY 1994	280
Long-Term Contract Tonnages of Indian/Goan Iron Ore	281
Contract Details of Indian Iron Ore	282
Bailadila Iron Ore	282
5-Year Contracts for Three MOH Loading Iron Ores.....	285
Mill-wise Quantities of Donimalai, Basic Grade/High Grade Iron Ore ...	286
Kudremukh Iron Ore	288
Outline of Study Results by Japan's Technical Mission to India	291
Contract of Affreightment with Indian Shipowners-FY 1996	292
Contract Details of Goan Iron Ore	293
Iron Ore Prices Classified by Loading Facilities	294
Chowgule Iron Ore	295
Tudou Iron Ore	295
Dempo Iron Ore	296
Salgaocar Iron Ore	296

SMIL Iron Ore	297
Sesa Goa Iron Ore	297
Foment Iron Ore	298
Terekhol Iron Ore	298
Bandodkar Iron Ore	299
Bandecar Iron Ore	299
Damodar Iron Ore	299
Timblo Iron Ore	299
Shipping Performance at Mormugao Port	300
IRON ORE OF AFRICA, CANADA, AND SWEDEN	301
Contract Status of African and Canadian Iron Ores	303
ISCOR Iron Ore (South Africa)	303
Assoman Iron Ore (South Africa)	308
SNIM Iron Ore (Mauritania)	310
Outline of M'Haoudat (Mauritania)	311
Carol Lake Iron Ore (Canada)	313
QCM Iron Ore (Canada)	316
IRON SAND, FLUORITE, SPECIFICATIONS	317
New Zealand Iron Sand	319
Taharoa Iron Sand (New Zealand)	319
Consumption/Purchase of Iron Sand by Steel Companies	320
Goan Ferruginous Manganese Ore Contracts for 1 Year.....	321
Demand/Supply of Ferruginous Manganese Ore	321
Titaniferrous Iron Ore	322
Import Status of Fluorite	323
Chinese Fluorite, Movement in these 10 Years	324
Ship-to-Ship Variations of Iron Ore Quality in FY 1994	325
Penalties for Main Iron Ore Brands	329