

IRON ORE MANUAL 2012-2013

CONTENTS

INTERNATIONAL MARKET (PRICE NEGOTIATIONS)	1
Price by New Pricing on the Decrease in 2012	3
Business Environment Got Worse in FY 2012	4
First Price Setters in Japanese and European Markets (1981 - 2009)	5
Price Changes of Iron Ore in Japan and Europe (1987 - 2009)	6
Particular Notes on Past Iron Ore Price Negotiations	7
Price Changes of Iron Ore and Coking Coal	13
Exports of Major Iron Ore Exporting Countries by Destination	15
Imports of Major Iron Ore Importing Countries by Source	27
INTERNATIONAL MARKET (STEELWORKS AND STEEL INDUSTRY).....	37
Nippon Steel & Sumitomo Metal Corporation (NSSMC)	39
JFE Holdings, Inc.	42
Kobe Steel (Kobelco)	45
Nisshin Steel Holdings Co., Ltd.	47
Production Capacity for Pig Iron and Crude Steel in Japan	48
Pretreatment Technologies of Japanese Integrated Steel Mills	49
Test For Hydrogen Reduction Steelmaking At LKAB's Mini BF Completed	54
Strategic Alliances in and outside Japan by Japanese Steel Mills	59
South Korean Steel Industry	57
Taiwanese Steel Industry	65
Chinese Steel Industry	69
Russian Steel Industry	72
Indian Steel Industry	75
North American Steel Industry	83
Brazilian Steel Industry	84
New Steelworks Projects in Vietnam	85
ArcelorMittal	86
Status of Other European Major Steel Companies	89
World Ranking of Crude Steel Production	90
INTERNATIONAL MARKET (RESOURCES)	91
Raw Materials Prices: Sharp Rise To Cooling Growth	93
India's Increasing Iron Ore Exports Due to Steel Expansion	94
India's Movements Over Iron Ore Export Ban	95
Iron Ore Resources in Africa	98
Roy Hill Iron Ore Projects in Western Australia (March 2012)	103
Sojitz And Kobe Steel Proceed With Southdown Project	104
Japanese Six Trading Companies Holding Iron Ore Resources Interests	105
World's Four Major Resources Companies/2012 Financial Results	108

DRI AND PELLETS	111
World Direct Reduced Iron Production Hit the Record High in 2012	113
Process - wise DRI Production	115
DRI Production by Region and Country	116
DRI Operations in Latin America	120
DRI Operations in North America	125
DRI Operations in East Asia	132
DRI Operations in South - East Asia	138
DRI Operations in India	140
DRI Operations in Africa	143
DRI Operations in the Middle - East	144
DRI Operations in Russia	148
Iron-Making Processes	150
Pellet Production by Region	151
Pellet Production by Major Supplier	152
Pellet Plants by Region	153
STATISTICAL DATA OF JAPAN AND THE WORLD	157
Crude Steel Production & Ranking in Japan by Quarter and Year	159
Crude Steel Production of Japanese Steel Mills by Financial Year (FY 2011)	160
Operating Results by Four Japanese Major Steel Mills	161
Operational Results	161
Japan's Iron Ore Imports by Source in FY 2012	162
Japan's Iron Ore Imports by Source from 2006 to 2012	163
Imports of Iron Ore Into Japan	164
Iron Ore Imports by China, Japan, S.Korea, Taiwan	167
World Crude Steel Production in 2008 - 2012	168
Japan's Iron & Steel Production / Steel Exports and Imports	169
World Crude Steel Production (Preliminary) 2005 - 2012	170
World Pig Iron Production (Preliminary): 2005 - 2012	172
World Iron Ore Production: 2005 - 2012	173
World Iron Ore Exports: 2005 - 2012	174
World Iron Ore Imports: 2005 - 2012	175
SEABORNE TRANSPORTATION AND PORTS	177
Soaring Freight Market Turns Into Over-Supply, and Supply-demand Adjustment	179
Capesize Spot Voyage Charter Rates and Iron Ore Imports to China	180
Shipping Companies Affected By Strong Yen, High Fuel Cost, Oversupply Of Vessels	182
Japanese Shipping Companies Aggressively Respond to China's Surging Iron Ore Imports	183
COA's Secured by Chinese Steel Mills	190
Backlog of VLOC's Exceeds 50 Worldwide	193
Valemax arrives in Oita on trial	195
Mitsui and POSCO Start Bulk Cargo Terminal Operations	200
Recent New Bulk Carriers	201

REGIONAL PARTICULARS ON CHINA	203
China Accelerates Iron Ore Mine Development	205
China's Iron Ore Price Index	206
Resources Developments by Chinese Major Steel Groups	207
Chinese Companies Overseas Iron Ore Mine Development	210
Longterm Iron Ore Offtake Contracts Held by Chinese Steel Mills	215
Chinese Steel Companies' Investment Projects in Port and/or Terminal Companies	216
China's Crude Steel Capacity and Iron Ore Production	217
Iron Ore Imports into China (2008 - 2012) by Source	218
Year-to-Year Crude Steel Production in China by Steel Mill	219
Development Policy for Chinese Steel Industry (July 20, 2005)	220
China's Major Economic Indices	225
REGIONAL PARTICULARS ON AUSTRALIA AND NEW ZEALAND	229
61.6% of Japan's Iron Ore Imports Comes from Australia	231
Exports of Australian Iron Ore in Calendar 2012	232
Production and Shipments of Australian Iron Ore by Supplier	233
Rio Tinto's Iron Ore Production	235
Rio Tinto's Iron Ore Shipments	236
Rio Tinto to Achieve 360 Mtpa Run Rate	237
Hamersley Iron	238
Mineral Resources Held by Rio Tinto Group	241
Ore Reserves Held by Rio Tinto Group	242
Robe River Iron Associates (RRIA)	243
Production and Shipments of RRIA Iron Ore	245
Beasley River Joint Venture	246
Rio Tinto & Komatsu Take The Next Step In Mine Of The Future Programme	249
BHP Billiton	250
BHPB Consolidated Results For YEJ 2013	251
BHPB's Results of Iron Ore Operations For YEJ 2013	253
Total Production and Shipments of BHP Billiton's Western Australian Iron Ore	254
Mount Newman Iron Ore	256
JFE Steel Agrees To Form New J/V For Western - 4 Deposit	259
BHP Billiton's Mineral Resources and Ore Reserves as of June 30, 2011	261
Mount Gibson Iron	262
Cliffs Natural Resources Pty Ltd, Australia - Asia Pacific Iron Ore	263
Fortescue Metals Group	264
Atlas Iron	267
Arrium (former OneSteel)	268
Grange Resources	270
Territory Resources	271
Gindalbie Metals	271
Taharoa Iron Sand (New Zealand)	272
Australian Iron Ore Mining Companies	273
Australia's Port Infrastructure Projects	274

REGIONAL PARTICULARS ON SOUTH AMERICA	279
Vale - Itabira Iron Ore (Southern System)	282
Vale - Owned Pelletizing Plants	284
Vale's Long - Term Supply Contracts	285
Contract tonnage by region	286
Vale's Iron Ore Production and Reserves	287
Vale's CAPEX Plan for 2013	289
Nibrasco Pellets	292
MBR Iron Ore	297
Samarco Iron Ore	301
MMX Mineracao e Metalicos S. A. (MMX)	302
Anglo American	304
NAMISA	304
Other Entities Developing Iron Ore in Brazil	306
USIMINAS	306
Chilean Iron Ore: Compania Minera del Pacifico S. A. (CMP)	308
Peruvian Iron Ore (Shougang Hierro Peru	311
Venezuelan Iron Ore (C. V. G. Ferrominera Orinoco)	312
REGIONAL PARTICULARS ON INDIA	315
Iron Ore - Related Organizations in the Indian Government	317
Transition of Iron Ore Exports to Japan	318
Bailadila Iron Ore	319
Three Ore Brands Shipped Ex - Chennai Outer Harbor (COH)	320
KIOCL	321
NMDC	322
Particulars of Various Other Iron Ore Brands	326
Sesa Sterlite	327
REGIONAL PARTICULARS ON SOUTH AFRICA, NORTH AMERICA AND EUROPE	333
Kumba Iron Ore (South Africa)	335
Assmang Iron Ore (South Africa)	339
IOC (Canada)	341
ArcelorMittal Mines Canada : Formerly QCM (Canada)	344
Cliffs Natural Resources: Formerly Cleveland - Cliffs, Inc. (The U. S. A.)	345
TSMC (Canada)	347
LKAB (Sweden)	348
MAJOR EVENTS OVER FERROUS RAW MATERIALS (JANUARY 2012 - DECEMBER 2012)	351
APPENDICES	401
Appendix 1. Australian JORC Code and Moves to International Common Code	403
Appendix 2. Rough Summary of Iron Ore Processing	407
Appendix 3. What is Drilling?	408
Appendix 4. Generality, Units and Abbreviations	410