

Iron Ore Manual 2017-2018

CONTENTS

INTERNATIONAL MARKET (PRICE NEGOTIATIONS)	1
Futures Lead Iron Ore Market, Pellet Premium Prices Rise	3
China's Excess Capacity Cuts Bring Good Influence on Global Iron&Steel Market	4
Particular Notes on Past Iron Ore Negotiations	7
World Iron Ore Trade	16
Exports of Major Iron Ore Exporting Countries by Destination	22
Australia	22
Brazil	24
India	25
Venezuela	26
Chile	26
Peru	26
Canada	27
U.S.	28
Mexico	28
Ukraine	29
Kazakhstan	29
Sweden	30
New Zealand	30
S.Africa	31
Mauritania	32
Bahrain	32
Oman	32
Russia	33
Malaysia	34
Indonesia	34
Imports of Major Iron Ore Importing Countries by Source	35
Japan	35
S.Korea	35
China	36
Taiwan	37
Indonesia	38
Malaysia	38
India	38
EU 28 Countries	39
France	40
Belgium	40
Netherlands	41
Italy	41
Germany	42
Turkey	42
UK	43
Finland	43
Spain	44

CONTENTS

Romania	44
U.S.	45
Mexico	45
Argentina	45
Pakistan	46
Saudi Arabia	46
Bahrain	46
Oman	46

INTERNATIONAL MARKET (STEELWORKS AND STEEL INDUSTRY) 47

Nippon Steel & Sumitomo Metal Corporation (NSSMC)	49
JFE Holdings, Inc.	54
Kobe Steel Ltd (Kobelco)	58
Nisshin Steel Co., Ltd.	61
Pretreatment Technologies of Japanese Integrated Steel Mills	64
COURSE50 (Hydrogen Steelmaking)	69
South Korean Steel Industry	70
POSCO	70
Hyundai Group	74
Taiwanese Steel Industry	76
China Steel Corporation (CSC)	76
East Asia United Steel Corporation	78
Formosa Ha Tinh Steel	79
Chinese Steel Industry	80
Baosteel Group Co., Ltd and Baoshan Iron and Steel Co., Ltd	81
Russian Steel Industry	83
Outline of Russian Major Steelmaking Groups	83
Indian Steel Industry	85
Indian Steel Companies' Expansion Projects	86
Steel Authority of India Ltd (SAIL)	86
Rashtriya Ispat Nigam Limited (RINL)	87
Tata Steel	86
National Mineral Development Corporation Limited (NMDC)	86
Essar Steel	86
Jindal Group	86
JSW Steel	86
North American Steel Industry	94
US Steel	94
AK Steel	94
Latin American Steel Industry	96
Usiminas	97
Gerdau	98
Temium	99
CSN	99
New Steelworks Projects in Vietnam	101
ArcelorMittal	102
Overview of European Major Steel Companies	105

INTERNATIONAL MARKET (RESOURCES & SEABORNE SHIPPING) 109

[Resources]	111
Raw Materials Prices: Sharp Rise To Cooling Growth	111
India Increases Iron Ore Imports Due to Steel Expansion; Mining Bans Lifted	112
India's Movements over Iron Ore Export Ban	113
Iron Ore Resources in Africa	118
Roy Hill Iron Ore Project in Western Australia (March 2012)	124
Sojitz And Kobe Steel Proceed With Southdown Project	125
Six Japanese Trading Companies Strive to Acquire Iron Ore Interests	126
[Seaborne Shipping]	133
Capesize Market Is On The Recovery Trend	133
Strategic Alliance Forged with Jiangsu Shagang	136

DRI AND PELLETS..... 139

World's DRI Production Volume in 2016 Totals 72.76 Million Tonnes	141
World DRI Production and Shipments	142
World's DRI Production by Process	143
Process-wise DRI Facilities and Locations	145
DRI Operations in Latin America	149
DRI Operations in North America	154
DRI Operation in East Asia	161
Malaysia	167
Indonesia	168
India	169
Bolivia	172
DRI Operations in Africa	174
DRI Operations in the Middle-East	175
DRI Operations in Russia	178
DRI Operations in Australia	179
Iron-Making Processes	180
Pellet Production by Region	181
Pellet Plants by Region	183

STATISTICAL DATA OF JAPAN AND THE WORLD 187

Crude Steel Production & Ranking in Japan by Quarter and Year	189
Operating Results by Four Japanese Major Steel Mills	190
Imports of Iron Ore Into Japan During 2014-2017	191
Japan's Iron Ore (Non-Agglomerated Iron Ore) Imports in 2017	192
Japan Agglomerated Iron Ore Imports in 2017	193
Iron Ore Imports by Four East Asia Countries (China, Japan, S. Korea and Taiwan)	194
World Crude Steel Production in 2013-2017	195
Japan's Iron & Steel Production / Steel Exports and Imports	196
World Crude Steel Production (Preliminary) (2010 - 2017)	197
World Crude Steel Production by Region (2010 - 2017)	199
Direct Reduced Iron (2010 - 2017)	199
World Pig Iron Production (Preliminary): 2010 - 2017	200
World Iron Ore Production: 2009 - 2016	201
World Iron Ore Exports: 2009 - 2016	202

World Iron Ore Imports: 2009 - 2016	203
Japan's Iron and Steel Production	204
REGIONAL PARTICULARS ON CHINA	205
Chinese Companies' Investment Activities in Resource Industry Near An End	207
Domestic Iron Ore Development Passes A Peak	208
China's Excess Production Capacity	209
Chinese Companies' Investment in Ports and/or Port Terminal Companies	210
Major Initiatives of Chinese Central and/or Regional Governmental Bodies	216
REGIONAL PARTICULARS ON AUSTRALIA AND NEW ZEALAND	223
About 59.6% of Japan's Iron Ore Imports Come from Australia in CY2017	225
Australian Leading Resources Companies' Output, Shipments by Year	226
Production and Shipments of Australian Iron Ore by Suppliers	227
Rio Tinto	230
BHP	248
Mount Gibson Iron	261
Cleveland Cliffs Asia Pacific Iron Ore	262
Fortescue Metals Group	263
Atlas Iron	267
GFG Alliance	268
Arrium (former OneSteel)	269
Grange Resources	271
Gindalbie Metals	273
Taharoa Iron Sand (New Zealand)	274
Pilbara Ports Authority	277
Iron Ore Shipments from Port of Port Headland in 2017 Stand at 497 Mil Tons	278
REGIONAL PARTICULARS ON SOUTH AMERICA	287
Vale	289
Itabira Iron Ore (Southern System)	289
Carajás Iron Ore (Northern System)	289
Vale-Owned Pelletizing Plants	291
Vale's Long-Term Supply Contracts	292
Vale's Contract Tonnage by Region	293
Vale's Iron Ore Production and Reserves	294
Vale Envisages Expansion of Iron Ore Sales in Asia	295
Construction of New Ore Centers	295
Placement of Order for Twelve 400,000-DWT VLOC's	295
Conclusion of Extra Long-Term Transportation contracts with Major Shipping Companies	295
Vale Starts Up S11D Project	296
CLN S11D Project	296
Caue Itabiritos Project	296
Vale's Infrastructure Investment	297
Vale Develops World's Largest Iron Ore Project, S11D (June, 2012)	297
Vale Opens Distribution Center And Pelletizing Plant in Oman (March, 2012)	297
Vale Began Transshipment In Subic Bay, The Philippines (February, 2012)	297
Vale Completes Sale of 19 VLOCs in Total	298

Oman's Iron Ore Trade Rapidly Increases	298
Vale to Establish Integrated Logistics System	299
Nibrasco Pellets	300
Summary of Nibrasco (Nippo-Brazilian Pelletizing Joint Venture company)	300
Vale and Japanese Mills - Equal Partners	300
Nibrasco Pellets Supply Contract	301
Japan - Vale Regular Annual Conference	301
Vale Iron Ore Exports by Destination	303
Samarco Iron Ore	307
Five-Year Contract with Kobe Steel	307
Fundao Dam Failure	308
Foundation Establishment Agreed for Restoration of Damaged Villages	308
Renova Foundation Launched	308
Anglo American	309
Minas Rio System (Stakeholders: Anglo American 100%)	309
Strategies	309
NAMISA	309
CONGONHAS MINERIOS	310
Other Entities Developing Iron Ore in Brazil	311
USIMINAS	311
Essar Group	312
ArcelorMittal	312
ENRC	312
Chilean Iron Ore: Compañía Minera del Pacífico S.A. (CMP)	313
Peruvian Iron Ore (Shougang Hierro Perú)	317
Venezuelan Iron Ore (C.V.G. Ferrominera Orinoco)	318

REGIONAL PARTICULARS ON INDIA 321

Iron Ore-Related Organizations in the Indian Government	323
Transition of Iron Ore Exports to Japan	324
Bailadila Iron Ore	325
Three Ore Brands Shipped Ex-Chennai Outer Harbor (COH)	326
KIOCL (Former "Kudremukh Iron Ore Company Limited")	327
Exploration and Development in Andhra Pradesh	327
Service Agreement in NMDC's Beneficiation and Pelletizing Plant	327
Operation of Coke Handling System	327
Pelletizing Plant at SAIL's Bokaro Steel Plant	327
Other Plans	327
NMDC	328
Bailadila Iron Ore Mines	328
Bacheli Complex	328
(Bailadila Iron Ore Deposits 10 & 11A/B)	328
Kirandul Complex	328
(Bailadila Iron Ore Deposits 11C)	328
Sizing of Lump	328
Donimalai Iron Ore Deposit	328
Kumaraswamy Iron Deposit	328
NMDC's Construction of Steel Plants	329
Visakhapatnam Port Expansion Project	330
EPL Takes Over Visakhapatnam Port Trust's OHC	330

CONTENTS

NMDC's Current Progress of Projects	331
Integrated Steel Plant at Nagarnar in Chhattisgarh	331
Deposit 11B of Bailadila Iron Ore Mine at Kirandul Complex in Chhattisgarh	331
Kumaraswamy Iron Ore Project in Karnataka	331
Donimalai Pellet Plant in Karnataka	331
Screening Plant-III at Kirandul Complex in Chhattisgarh	331
Slurry Pipeline in Chhattisgarh	331
Particulars of Various Other Iron Ore Brands	335
Chowgule Iron Ore	335
Tudou Iron Ore	335
Dempo Iron Ore	335
Dempo LPMC (Low Phosphorous Magnetite Concentrate)	335
Salgaocar Iron Ore	335
Smil/Timblo	336
Bandodkar Iron Ore	336
Vedanta limited. (former Sesa Sterlite or Sesa Goa Iron Ore)	336
Sesa Goa Iron Ore	337
Vedanta Limited	337
Navelim Iron Private Ltd. (A wholly-owned subsidiary of Sesa Goa)	339
Fomento Iron Ore	339
Bandecar Iron Ore	339

REGIONAL PARTICULARS ON SOUTH AFRICA, NORTH AMERICA AND EUROPE 343

Kumba Iron Ore (South Africa)	345
Kumba Iron Ore's Mining Operations	346
Kumba Iron Ore's Consolidated Profit in 2016 Largely Increases	347
Kolomela Mine Officially Opened (June 22 2012)	349
SIOC and AMSA Agree on Iron Ore Supply (November 2013)	349
Disputes on Sishen Mine Resolved (December 2013, October 2016)	349
Assmang Iron Ore (South Africa)	350
Sumitomo Corp Stake-holding in Assmang Reaches About 17%	350
Khumani Iron Ore Mine	351
Iron Ore Resources and Reserves in Beeshoek Mine and Khumani Mine in 2016	351
Carol Lake Iron Ore (Canada)	352
Gist of Technical Presentation on Carol Lake Iron Ore (May 28, 2002)	355
Increase of concentrate production capacity (March, September 2008)	355
Concentrate capacity expansion to be resumed (May 2010)	355
ArcelorMittal Mines Canada : Former QCM (Canada)	356
Cleveland Cliffs: Former Cliffs Natural Resources (U.S.A.)	357
CLF Returns Company Name to Its Old Name "Cleveland Cliffs" (August 15, 2017)	357
CLF's Business Reconstructure	357
CLF's Iron Ore Production and Sales	358
CLF Closes Wabush Mines Permanently	359
Champion Iron to Reconstruct Bloom Lake Iron Ore Mine	359
North American Iron Ore Business Becomes Increasingly Severe	359
Iron Ore Mines and Ports in Canada	360
Mexico's Iron Ore Pellet Industry	361
LKAB (Sweden)	362
LKAB's Financial Results	362
LKAB's Iron Ore Production and Shipment	363

Infrastructure Expansion and Project Suspension	364
New Pelletizing Plants (May 2008)	364
SILA Project Completed (October 2009)	364
KUJ1365 in Kiruna Opens (May 2013)	364
LKAB Starts Narvik Port Expansion (February 2014)	364
LKAB to Develop New Mines after A 50-year Interval (February 2010)	365
Swedish Court Allows Operation in Leveaniemi, LKAB's All 3 Mines Approved (April 2015)	365
LKAB Announces Employee Cutbacks (June 2016)	365
APPENDICES	367
Appendix 1 Australian JORC Code and Moves to International Common Code	369
Appendix 2 Rough Summary of Iron Ore Processing	373
Appendix 3 What is Drilling?	374
Appendix 4 Generality, Units and Abbreviations	376