

PREFACE TO THE 1992 EDITION

【Japan's FY 1990 Coal Demand】

* Coal Demand In Japan For JFY 1990 Up 2.0% From A Year Ago That For Jan-June 1991 Also Up 4.1% From Comparable Period A Year Before	1
[REFERENCE] Steel Production, Ratio Of Continuous Casting In Steel Production, Consumption Of Coking Coal, Coal Coke, Fuel Oil, Steel Scrap, Etc. In Recent Year	1
* Coal Demand By B. F. Steelmakers Remaining Nearly Unchanged From A Year Ago At 1.7%, In Growth, Showing Up 1,540,000 MT For PCI Use, But Down 1,570,000 MT For Cokemaking Use ..	2
* Semi-Soft Coking Coal Purchases Estimated At 18 Million MT In JFY 1991	2
[REFERENCE] Changes In Work Forces Of Japanese Blast Furnace Steelmakers	2
* Kobe Steel's PCI Coal Of 183.8 kg Achieved At No.3 B.F. Unit Of Kobe Steelworks In August 1991	3
* With Bubble Economy Burst Here. Japanese Steel Output Also Turning Into Decline For First Time In 47 Months Since October 1987, U.S. Crude Steel Output For January-September 1991 Down 15.6% From Same 1990 Period	3
* [REFERENCE] Japan's Trend In (Local, Export) Shipments Of Ordinary Steel Products	4
* Steel Product Demand In JFY 1990 2nd Largest Ever In Japan Next To JFY 1979	5
* R. & D. Project For DIOS Steelmaking Process Entering 2nd Stages	5
* Pace Of Employees' Layoff Largely Slow Down In B. F. Steel Makers In Japan	5
* Coal Demand By Power Utilities In JFY 1990 Up 4.7% From A Year Ago At 26,284,000 MT	5
* Thermal Coal Demand By Power Utilities In 2000 Forecast To Be Boosted To 59 Million MT, Construction Plan For Coal-Fired Thermal Power Stations To Be Inevitably Moved Up	5
* Power Generation And Purchases In Japan's 10 Regional Power Companies	6
* Coal Demanded By Cement Industry In JFY 1990 Up 9.4% From A Year Earlier	6
* Coal Demanded Cokemaking Industry Here In JFY 1990 Down 4.6% From A Year Before	7
* Coal Demanded By Chemical Industry, Gas Utilities In JFY 1990 Down 8.9%, Down 16.3%, From A Year Ago, Respectively	7
【Volume Of Imported Coal Cleared Through Customs Office】	
* Australian Coal Increased To 52.6% of Total Importers Here In 1990 As Well, Indonesian Coal Indonesian Coal Boosted At Higher Pace. Coal Imports For Jan-June 1991 Up 0.2% From Same 1990 Period	8
【Reviewal Of Long Range Energy Supply & Demand Outlook】	
* IEA's Emergency Oil Supply Measures At A Time Of Hostilities	9
* Long Range Energy Strategies In U.S.	9
* Co-Generation Type Fuel Battery Developed By MITI, But Still Pretty Expensive, Through ...	9
* Rail The Most Energy Saving Means Of Transportation	9
* Cooperative Accord Reached To Control Carbon Dioxide Between Cement Industries In Japan And Europe	10
【REFERENCE STATISTICS】	
JFY 1991 FOBT Price of Import Coking Coal for Export to Japan	11
JFY 1991 FOBT Import Contract Prices of Thermal Coal for Export to Japan	13
Post-Oil-Crisis Trend, Values of Japanese Coking Coal Imports from Major Sources	14
Thermal Coal Imports from Major Source	15
Recent Crude Oil Prices and Fuel (residual) Oil Prices Meant for Power Utilities	16
LONG TERM ENERGY SUPPLY AND DEMAND OUTLOOK IN JAPAN	17
IISI Estimate of World Crude Steel Consumption by Countries	18
WORLD COAL RESERVES	19
[LATEST NEWS] OUTLINE OF JFY 1992 CONTRACTS OF COKING COAL FOR JAPAN	20

PAST AND PRESENT AS VIEWED FROM STATISTICS

Domestic: General

Domestic/Imported Coal Deliveries (Sales), by Industries and Japanese Fiscal Years	21
Demand and supply of Domestic/Imported Coals in JFY 1990	22
CY 1990 Sales of Imported and Domestic Coals by User Industries and Coal Type	23
JFY 1990 Sales of Imported and Domestic Coals by User Industries and Coal Types	24
Japan's CY 1990 Local Sales of Imported Coal by Coal Types and Industries	25
Japan's JFY 1990 Local Sales of Imported Coal by Industries, Coal Types and Sources	26
Local Sales of Imported Coal in January-June 1991 by Countries of Origin and	

User industries	27
Local Sales of Imported/Domestic Coals by January-June 1991	28
Coke Consumption (JFY 1981-1990)	29
Japan's Coke Production by User Industries and Years	30
Japan's Total Energy Consumption by Type	31

Domestic: Iron and Steel

(1) Production of Pig Iron, Crude Steel and Finally Rolled Steel Products	32
a) Tonnages by Calendar Years (1958-1990) and Fiscal Year (JFY 1958-1990)	32
b) Monthly and Quarterly Production (from January 1989 to Jan-Sept 1991)	33
(2) Steelmills' Production of Pig Iron and Crude Steel (JFY 1981-1990)	34
(3) Pig Iron and Crude Steel Production, Coking Coal Consumption by Origin, Coke Ratio, Fuel Oil Injection Volume in Past 15 Years	35
(4) Domestic Coal Production and Coal Imports in Past 15 Years	35
(5) Steelmills' Purchased Quantities of Coking Coal by Origin in Past 15 Years	36
(6) Steelmills' Purchasing Ratio of Coking Coal by Origin in Past 15 Years	36
(7) Average Import Prices of Coking Coal by Origin in Past 15 Years	37
(8) Average Prices of Domestic and Imported Coking Coal in Japanese Yen in Past 15 Years ...	37
(9) Steelmills' Coking Coal Consumption and Ratio by Origin in Past 10 Years	38
(10) Coking Coal Consumption by Japanese Steelmills in JFY 1990	39
(1) Tonnages of Imported and Domestic Coal, Anthracite and Pet. Coke, by Steelmills	39
(2) Coal Ratio, Blending Ratio of Domestic Coking Coal and Pig Iron Production	39
(3) Consumption Tonnages by Origin and Steelmills	39
(4) Purchase Tonnage by Origin and Steelmills	40
(5) Purchase Shares by Origin and Steelmills	40
(6) Degree of Purchase Dependence (Consumption basis) by Type of Coal, Steelmills, Origin	41
Appendix 1: Steelmills' Purchase Tonnage of Semi-soft Coking Coal in JFY 1990	
Appendix 2: Steelmills' Purchase and Consumption of Anthracite and Petroleum Coke in JFY 1990	41
(11) Japanese Steelmills' Coking Coal Purchase Ratio by Major Origin	42
① U.S. Low Volatile Coal ② All U.S. Coal ③ Australian Coal ④ Canadian Coal	
(12) Coking Coal Consumption by Japanese Steelmills in Calendar 1989	42
(1) Imported and Domestic Tonnages by Steelmills	
(2) Blending Ratio of Domestic Coal	
(3) Tonnage by Origin and Steelmills	
(13) Steelmills' Blending Ratio of Coking Coal by Origin in Past 5 Years	44
Appendix 1: Steelmills' Purchase Tonnages of Semi-soft Coking Coal in CY 1990	
Appendix 2: Steelmills' Purchase/Consumption of Anthracite and Pet. Coke in CY 1990	
(14) Five Major B.F. Steelmills' Fuel Consumption per Pig Iron ton in Fiscals 1973 and 1983-1990	45
(15) Recent Blast Furnace Steelmills' Consumption of Coking Coal, Pet. Coke Oil, Kerosene, Gas Oil, LPG, B.F. Gas, Converter Gas and Oxygen in Past 10 Years (1981-1990)	46
(16) CY 1990, JFY 1990 and January-June 1991 B.F. Steelmills' Consumption of Petroleum Fuel, Gases, Oxygen by Use	47
(17) Recent Petroleum Coke Consumption by B.F. Steelmills	48
(18) Blast Furnace Steelmills' Recent Consumption of Steel-making Raw Materials	48
(19) Steelmills's Recent Coal (including Anthracite and Petroleum Coke) Consumption for Blast-Furnace Operation	50
(20) Recent Blast Furnace Steelmills' Consumption of Fuel Oil, Kerosene, Gas Oil, LPG and LNG	51
(21) B.F. Steelmills' Recent Consumption of Coke and Petroleum Coke	51
(22) Blast Furnace Steelmills' Consumption of B.F. Gas, Oxygen, Converter Gas and Electric Power	52
(23) Steelmills' Recent Imports of Steel-making Raw Materials on Customs Cleared Basis	53
(1) Value in Yen (2) Value in U.S. Dollar (CIF)	
(24) Steelmills' Recent Imports of Steel-making Raw Materials by Origin	55
(1) Imports of Iron Ore and Pig Iron	
(2) Imported Tonnages of Coking Coal and Steel Scrap	
(25) Recent Workforce of Japanese Steel Industry	57
(26) Yearly Pig Iron and Crude Steel Production Capacities of Furnaces	57
[Appendix] Average Monthly Exchange Rate of Yen to US Dollar (1975-1991)	58

Custom Cleared Statistics

Recent 44-year (CY 1947-1990) Customs-Cleared Imports of Coking Coal, Thermal Coal and Anthracite by Origin	59
Recent 39-Year (CY 1952-1990) Customs-Cleared Imports of Petroleum Coke	62
Recent 44-Year (CY 1947-1990) Customs-Cleared CIF Import Values of Coking Coal, Thermal Coal and Anthracite by Origin	64
Recent 44-Year (CY 1948-1990) Customs-Cleared Imports (Quantity, Value, Average Value) of Crude and Raw Oil (and relevant exchange rates)	67
Imports of Coking Coal, Thermal Coal and Anthracite in Calendar 1990	68
Imports of Crude Oil, Fuel(residual) Oil and LPG in Calendar 1990	71
Imports of Coking Coal, Thermal Coal and Anthracite in JFY 1990	72
Petroleum Coke Imports in JFY 1990	74
Coke Exports in JFY 1990	74
Imports of Crude Oil, Fuel(residual) Oil and LPG in JFY 1990	75
Coking Coal, Thermal Coal and Anthracite Imports for January-June 1991	76
Petroleum Coke Imports for January-June 1991	78
Imports of Crude Oil, Fuel(residual) and LPG in January-June 1991	79
Recent 48-month Customs-Cleared Imports of Coking Coal, Thermal Coal and Anthracite	80
① Yen per wet MT) ② U.S. Dollar per wet MT	
Recent 48-month Customs-Cleared Imports and CIF Prices of Coking Coal	83
Recent 45-month Customs-Cleared Imports and CIF Prices of Petroleum Coke by Origin	89

OVERSEAS: GENERAL STATISTICS

(1) World Pig Iron Production (CY 1981-1990) by Countries	92
(2) World Crude Steel Production (CY 1981-1990) by Countries	93
(3) Crude Steel Production by World Major Companies (CY 1985-1990)	94
(4) Coal Production by World Major Countries (CY 1983-1990)	96
(5) Export of Coal by World Major Countries (CY 1983-1990)	96
(6) Blast Furnace Coke Ratio by World Major Countries (CY 1971-1990)	97
(7) Crude Steel Consumption per man by Nations (1979-1989)	97
(8) Coke Exports/Imports of World Major Countries (CY 1979-1989)	98
CY 1990 KOREA IMPORTS OF COALS	100
RECENT TAIWAN IMPORTS OF COALS	101
CY 1990 HONG KONG IMPORTS OF COALS	101
INDONESIA EXPORTS/IMPORTS OF COAL IN CY 1990	102
PHILIPPINES IMPORTS OF COAL IN CY 1990	103
Malaysian Imports of Coal in CY 1990	104
Indian Imports of Coal in 1990 (Include Coke)	104
Colombian Exports of Coal (Thermal) in 1990	104
Major three Countries' Exports of Coal	105
IISI Countries' Steel Production in January-October 1991	106

COKING COAL

CONTRACT STATUS OF IMPORT COKING COAL FOR SHIPMENT IN JFY 1991

(1) Contract Tonnage by Consumers and Origin	107
(2) JFY 1991 Import Contracts of Semi-soft Coking Coal by Trading Firms and Consumers	107
(3) Steelmakers Contract Tonnages by Origins, Coal Type, and Ratio of Hard/Soft to Semi-soft Coking Coal	108
(4) Rates of Hard/Soft to Semi-soft Coking Coals, and Rates of Imported Domestic Coals, Calculated from Contract Tonnages	108
(5) Contract Tonnages and Shares by Importers and Origin	109
(6) Contract Tonnages by Importers and Consumers	110
JFY 1991 IMPORT CONTRACTS OF SEMI-SOFT COKING COAL FOR EXPORTS TO JAPAN	112

UNITED STATES

*1990 U. S. Coal Production Stands At 933,525,000 MT, Up 4.9% From A Year Ago Due Mainly To Inventory Build-Up	113
(Appendix) Trend of Export Price on U.S. Coal	113
(Appendix) Trend of Japanese Steel mills' Imports of U.S. Coal in the Past 10 Years	113
*Production in Wyoming Rises By 7.7% To 167,590,000 MT	114
*Production In First Half of 1991 Declines By 20 Million MT From Same Period A Year Ago, But Wyoming Along Marks A Rise Of 8.7%	114
*U.S. Coal Exports Grow 4.9% From A Year Before To 95,984,000 MT.	

Marking Buoyancy In Succession To Previous Year	114
*U. S. Coal Exports For January-June 1991 Fall Off By 2.6% From Same Period A Year Before	114
*U. S. Coal Stocks At 1990 Year-End Reach 182 Million MT	115
(Appendix) Production & Exports of U. S. Coal for CY 1979-1990	115
(Appendix) Recent U. S. Coal Exports by Customs Districts (CY 1981-1990)	115
QUARTERLY U. S. DEMAND AND SUPPLY OF COAL	116
(1) Coal Production, Imports, Consumption, Exports and Stocks	116
(2) Coal Consumption by End-Use Sector	116
(3) Coal Production Trends (CY 1971-1990) by Mining and Coal Types	117
(4) U. S. Coal Production Trends by States (CY 1986-1990)	117
(5) CY 1990 U. S. Coal Exports by Destinations	118
(6) CY 1990 U. S. Thermal Coal Exports by Destinations	119
(7) CY 1990 U. S. Coking Coal Exports by Destinations	120
(8) CY 1990 U. S. Exports of Bituminous Coal by Destinations	121
(9) Coal Export in January-June 1991	123
(10) CY 1990 U. S. Coal Exports by Customs District	124
(11) CY 1990 U. S. Coal Imports by Origin	124
(12) CY 1990 U. S. Coal Imports by Customs District (in ST)	125
(13) Recent Quarterly Production, Imports, Consumption, Exports and Stocks of Coke	125
(14) Coal Stocks (1973-1990, January-June 1991)	126
(15) Coal Imports by Custom Districts	127
(16) Coke Production, Imports, Consumption, Exports and Stocks	127
(17) Coke Exports by Destinations	128
(18) Coke Imports by Origin	128
Recent Average Prices of Coal Receipts By End-users (CIF per ST)	129
PRINCIPAL BRANDS FOR JAPAN, PRODUCERS, IMPORTERS, QUALITY SPECIFICATIONS AND LOADING PORTS	130
(A) Low Volatile Coal	130
(B) Medium Volatile Coal	132
(C) High Volatile Coal	134
JAPANESE STEEL MILLS' CONTRACT STATUS OF U. S. COKING COAL IN JFY 1991	136
(1) Consumers' Contract Tonnages by Brands, Types of Coal	136
(2) Importers' Contract Tonnages by Brands and Consumers	136
(3) Importers' Total Contract Tonnages by Consumers	138
(4) Shippers' Contract Tonnages by Consumers	138
(5) Shippers' Contract Tonnages by Brands	138
DETAIL OF LONG-TERM CONTRACTS OF U. S. COKING COAL SUPPLY TO JAPAN	139

AUSTRALIA

*Australian Coal Production In 1990 Boosted By 5.5% From A Year Ago In Total, Up 6.9% In NSW, Up 3.8% In QLD	144
«Trend Of Japanese Imports Of Coking Coal from Australia For Blast Furnace Steel Mills»	144
*Mining Productivity Up In New South Wales, But Down In Queensland	145
*Coal Production For 1st Half Of 1990 Boosted In Queensland Compared To Comparable Period A Year Ago	145
*Coal Exports From Australia In 1990 Clearing A Hurdle Of 100 Million MT With A New Record High	145
*Japan's Share In Total Exports Reduced By 2.1 Percentage Point From A Year Ago, While Those For U. K., France, The Netherlands, India Distinctly Rise	145
*Mining Productivity Per Man/Year Upgraded By 2.5% In 1990, But Reduced By 1.1% At Open-Cut Coal Mines	146
«Japanese Dependence on Australian Coal Supply»	146
«Recent Australian Coal Production and Exports»	146
AUSTRALIAN COAL PRODUCTION, DEMAND & SUPPLY AND EXPORTS	147
(1) Coal Supply and Disposal (CY 1971-1990, AFY 1980-81~1989-90)	147
(2) Coal Supply and Disposal by States in CY 1990	147
(3) Production and Deliveries and Stocks by States (CY 1990)	148
(4) Coal Industry Stock by States (CY 1981-1991)	148
(5) Raw Coal Production by States and Years	149
(6) Saleable Black Coal Production by States and Years	150
(7) Raw Coal Production by Method of Mining and States	151
(8) Raw Coal Production by Collieries and Districts in N. S. W.	152
[Reference] Number of Coal Mines in Production, Australia	153
[Reference] Underground Coal Production by Mining Units, N. S. W.	154
[Reference] Longwall Coal Production and Number of Mining Face by Districts (NSW)	154
(9) The Twenty Five Largest Coal Mines in Australia (CY 1990)	154
(10) Queensland Clean Coal Production by Districts and Mines	155

(11) Queensland Raw and Clean Coal Production by Mines, Mining Methods and Yield	157
(12) Queensland Production of Saleable Coal per Man/Year and Manshift	158
(13) Production per Man/Year by States	159
(14) Annual Production per Employee by States and Mining Method, CY 1990	159
(15) Employment at Australian Coal Mines by States	159
(16) Coal Exports by Year and Coal Type	160
(17) Coal Exports from Australia by Destinations and Year	160
(18) Australian Coal Exports by Destinations and Coal Type (CY 1990)	161
(19) Queensland Coal Exports by Mines	163
(20) Queensland Coal Exports by Destinations	163
(21) Queensland Coal Exports by Mines, Types and Destinations	164
(22) Export Coal Shipment from Australia by States and Size of Load, AFY 1990-91	166
(23) Coal Exports from Australia by Ports and Coal Type, AFY 1990-91	166
(24) Australian Coal Exports by Ports	167
(25) [LATEST NEWS] AFY 1990-91 Demand and Supply of Coal (Preliminary)	168
(26) Australian Coal Exports in January-June 1991	169
(27) Consumption of Black Coal by Major Consumers	170
(28) Consumption of Black Coal by States	170
[AUSTRALIAN COAL RESERVES] ① Reserves by States ② Recoverable Reserves by States	
③ NSW Recoverable Raw Coal Reserves by Districts, Mining Methods and Depth	171
QUEENSLAND COAL RESOURCES (As of December 1988)	172
PRINCIPAL BRANDS FOR EXPORTS TO JAPAN, PRODUCERS, IMPORTERS, QUALITY SPECIFICATIONS,	
TONNAGES FOR EXPORTS, PORTS OF SHIPMENT	174
(1) New South Wales	174
(2) Queensland	176
CONTRACT STATUS OF AUSTRALIAN COKING COAL FOR EXPORTS TO JAPAN IN JFY 1991	178
(1) Consumers' Contract Tonnages by Brands	178
(2) Importers' Contract Tonnages by Brands and Consumers	180
(3) Shippers' Contract Tonnages by Brands	181
LONG TERM CONTRACT TONNAGES BY BRANDS, YEARS AND CONSUMERS	182
(1) JFY 1991 Contract of Coal Cliff Hard Coking Coal	182
(2) JFY 1991 Contract of South Bulli Hard Coking Coal	182
(3) JFY 1991 Contract of Tahmoor Hard Coking Coal	182
(4) JFY 1991 Contract of Wollondilly Semi-hard Coking Coal	182
(5) JFY 1991 Contract of Daiyon soft Coking Coal	183
(6) JFY 1991 Contract of Lemington Soft Coking Coal	183
(7) JFY 1991 Contract of Rathluba Soft Coking Coal	183
(8) JFY 1991 Contract of Hunter Valley Soft Coking Coal	183
(9) JFY 1991 Contract of Hunter Valley Semi-soft Coking Coal	183
(10) JFY 1991 Contract of Big Ben Soft Coking Coal	184
(11) JFY 1991 Contract of Big Ben Semi-Soft Coking Coal	184
(12) JFY 1991 Contract of Pelton-Ellalong Soft Coking Coal	184
(13) JFY 1991 Contract of Newdell Semi-Soft Coking Coal	184
(14) JFY 1991 Contract of Howick Semi-Soft Coking Coal	184
(15) JFY 1991 Contract of Vickery Semi-Soft Coking Coal	184
(16) JFY 1991 Contract of Warkworth Soft Coking Coal	185
(17) JFY 1991 Contract of Warkworth Semi-Soft Coking Coal	185
(18) JFY 1991 Contract of Saxonvale Semi-Soft Coking Coal	185
(19) JFY 1991 Contract of United Semi-Soft Coking Coal	185
(20) JFY 1991 Contract of Six Soft Coking Coal for Japanese Steelmills	185
(21) JFY 1991 Contract of Semi-Soft Coking Coal for Japanese Steelmills	186
(22) JFY 1991 Contract of Moura Hard Coking Coal	186
(23) JFY 1991 Contract of "K" Semi-Soft Coking Coal	187
(24) [REFERENCE] JFY 1990 Contract of Blackwater Hard Coking Coal	187
(25) JFY 1991 Contract of Blackwater for Weak Coking Coal	187
(26) JFY 1991 Contract of Goonyella Hard Coking Coal	188
(27) JFY 1991 Contract of Peak Down Hard Coking Coal	188
(28) JFY 1991 Contract of Saraji Hard Coking Coal	188
(29) 15 Year Contract of Collinsville Hard Coking Coal	189
(30) 15 Year Contract of Gregory Hard Coking Coal	189
(31) JFY 1991 Contract of UHV Coal	189
(32) 15 Year Contract of Riverside Hard Coking Coal	189
(33) JFY 1991 Contract of ULV Coal	190
(34) JFY 1991 Contract of South Blackwater Hard Coking Coal	190
(35) 10 Year Contract of German Creek Hard Coking Coal	190
(36) JFY 1991 Contract of German Creek Semi-Soft Coking Coal	191
(37) JFY 1991 Contract of Oaky Creek Hard (Semi-Soft) Coking Coal	191

(38) JFY 1991 Contract of Curragh Hard Coking Coal	191
(39) JFY 1991 Contract of Curragh Semi-Soft Coking Coal	191
(40) JFY 1991 Contract of Jellinbah East Semi-Soft Coking Coal	191
TERMS AND CONDITIONS OF LONG-TERM CONTRACTS FOR AUSTRALIAN COKING COAL	192
【NEW SOUTH WALES】	
(1) JFY 1991 Contract of Coal Cliff Hard Coking Coal	192
(2) JFY 1991 Contract of South Bulli Hard Coking Coal	193
(3) JFY 1991 Contract of Tahmoor Hard Coking Coal	194
(4) JFY 1991 Contract of Wollondilly Hard Coking Coal	195
(5) JFY 1991 Contract of B.V.Blend Semi-soft Coking Coal	196
(6) JFY 1991 Contract of Lithgow Semi-soft Coking Coal	196
(7) JFY 1991 Contract of Bayswater Semi-soft Coking Coal	197
(8) [REFERENCE] JFY 1990 Contract of Clarence Semi-Soft Coking Coal	197
(9) JFY 1991 Contract of Hunter Valley Soft Coking(S.	198
(10) JFY 1991 Contract of Hunter Valley Semi-soft Coking Coal	199
(11) [REFERENCE] JFY 1989 Contract of Liddell Semi-Soft Coking Coal	199
(12) [REFERENCE] JFY 1988 Contract of Newdell Soft Coking Coal	200
(13) JFY 1991 Contract of Newdell Semi-soft Coking Coal	200
(14) JFY 1991 Contract of Howick Semi-soft Coking Coal	201
(15) JFY 1991 Contract of Lemington Soft Coking Coal	201
(16) 10-Year Contract of Warkworth Soft Coking Coal	201
(17) JFY 1991 Contract for Warkworth Semi-soft Coking Coal	202
(18) JFY 1991 Contract of Big Ben soft Coking Coal.....	203
(19) JFY 1991 Contract of Big Ben Semi-Soft Coking Coal.....	203
(20) JFY 1991 Contract of Daiyon Semi-Soft Coking Coal	204
(21) JFY 1991 Contract of Peko Semi-Soft Coking Coal	205
(22) JFY 1991 Contract of Pelton-Elialong Soft Coking Coal	205
(23) JFY 1991 Contract of Rathluba of Soft Coking Coal	205
(24) JFY 1991 Contract of Donaldson Semi-Soft Coking Coal	206
(25) JFY 1991 Contract of Woodlands Semi-Soft Coking Coal.....	206
(26) JFY 1991 Contract of Wambo Semi-Soft Coking Coal	206
(27) JFY 1991 Contract of Hoskisson Semi-Soft Coking Coal	207
(28) JFY 1991 Contract of Melville Semi-Soft Coking Coal	207
(29) [REFERENCE] JFY 1990 Contract of Charbon Semi-Soft Coking Coal	207
(30) JFY 1991 Contract of Metropolitan Semi-Soft Coking Coal	208
(31) JFY 1991 Contract of Saxonvale Semi-soft Coking Coal	208
(32) JFY 1991 Contract of United Semi-soft Coking Coal	208
(33) JFY 1991 Contract of Camberwell Semi-Soft Coking Coal	209
(34) JFY 1991 Contract of Vickery Semi-Soft Coking Coal	209
【QUEENSLAND】	
["Revolving 3-Year Evergreen Letter of Understanding on Coal Supply" Between Japanese Steelmills and BHP-Utah Coal Ltd.]	210
(1) JFY 1991 Contract of Moura Hard Coking Coal	210
(2) JFY 1991 Contract of "K" Semi-soft Coking Coal	211
(3) [REFERENCE] JFY 1990 Contract of Blackwater Hard Coking Coal	211
(4) JFY 1991 Contract of Blackwater Weak Coking Coal	212
(5) JFY 1991 Contract of Goonyella Hard Coking Coal	213
(6) JFY 1991 Contract for Peak Downs Hard Coking Coal	214
(7) JFY 1991 Contract for Saraji Hard Coking Coal	214
(8) 15-Year Contract of Gregory Hard Coking Coal	215
(9) JFY 1991 Contract for URV (Gregory) Semi-soft Coking Coal	216
(10) JFY 1991 Contract for ULV (Norwich Park) Semi-soft Coking Coal	216
[REFERENCE] As Outlined Below Is The Old 8-Year Contract on Hard Coking Coal	216
(11) JFY 1991 Contract of South Blackwater Hard Coking Coal	217
(12) 15-Year Contract of Collinsville Hard Coking Coal	217
(13) 10-Year Contract of German Creek Hard Coking Coal	218
(14) JFY 1991 Contract of German Creek Semi-Soft Coking Coal	219
(15) 14.5-Year Contract of Riverside Hard Coking Coal	219
(16) JFY 1991 Contract of Curragh Hard Coking Coal	220
(17) JFY 1991 Contract of Curragh Semi-soft Coking Coal	221
(18) JFY 1991 Contract of Oaky Creek Hard Coking Coal	221
(19) [REFERENCE] JFY 1987 Contract of Oaky Creek A Semi-Soft Coking Coal	221
(20) [REFERENCE] JFY 1990 Export Contract of Cook Soft Coking Coal	222
(21) 5-Year Long-Term Contract of Gordonstone Hard Coking Coal	222
(22) 5-Year Long-Term Contract of North Goonyella Hard Coking Coal	223
(23) JFY 1991 Contract of Jellinbah East Semi-Soft Coking Coal	224

OUTLINE OF AUSTRALIAN COKING COAL MINES	225
«NEW SOUTH WALES»	
(1) Coal Cliff Coal	225
(2) South Bulli Coal	226
(3) Lithgow Coal	227
(4) Wellondilly Coal	229
(5) Tabmoor Coal	231
(6) Liddell Coal	231
(7) Hunter Valley Coal	233
(8) Warkworth Coal	236
(9) Newdell (or Howick) Coal	238
(10) Mt. Thorley Coal	239
(11) Big Ben Coal	240
(12) Gunnedah Coal	241
(13) Daiyon Coal	241
(14) Hoskisson	242
(15) Melville Coal	244
(16) Pelton/Ellalong Coal	244
(17) Bayswater Coal	244
(18) Rathluba Coal	244
(19) West Wallsend Coal	246
(20) Lemington Coal	246
(21) Wambo Coal	247
(22) Vickery Coal	249
(23) Muswellbrook Coal	249
(24) Charbon Coal	251
(25) Woodlands Coal	251
(26) Howick Semi-soft Coking Coal	252
(27) B. V. Blend Coal	252
(28) Donaldson Semi-soft Coking Coal	252
(29) Metropolitan Semi-Soft Coking Coal	253
(30) Clarence Coal	253
(31) Camberwell Coal	253
(32) Teralba Coal	254
(33) United Coal	255
(34) Peko Semi-Soft Coal	256
(35) Saxonvale Coal	256
«COKING COAL DEVELOPMENT PROJECTS IN N. S. W.»	
(1) Bulga Coal	256
(2) Bargo Coal	257
(3) Glendell Coal	257
(4) Glennies Creek Coal	258
(5) Dartbrook Coal	259
【Locality of Coal Mines in New South Wales and Queensland】	263
«QUEENSLAND»	
(1) Moura Coal	263
(2) Blackwater Coal	265
(3) Summary of C. Q. C. A.'s Coal Coverage	267
(4) Goonyella Coal	268
(5) Peak Downs Coal	270
(6) Harrow Creek Coal	271
(7) Saraji Coal	272
(8) Norwich Park Coal	273
(9) South Blackwater Coal	274
(10) Riverside Coal	276
(11) Gregory Coal	278
(12) Collinsville Coal	279
(13) German Creek Coal	281
(14) German Creek East Coal	283
(15) Daky Creek Coal	283
(16) Curragh Coal	285
(17) Cook Coal	286
(18) Gordonstone Coal Project	287
(19) North Goonyella Coal Project	286
(20) Jellinbah East Coal	290
(21) Ensham Coal Project	291
(22) Hail Creek Project	291

CANADA

* Canadian Coal Production In 1990 Reduced For 2 Year In A Row, Export As Well Changed To Decline By 5.3% To 31 Million MT	293
[APPENDIX] Japanese Steelmills' Imports of Canadian Coking Coal in the 10 Years	293
* Base Price Accord Reach In Quintette Coal For JFY 1991 & Beyond, Final Rehabilitation Plan For QCL Drawn Out At Last	294
* Canadian Coal Exporters Strongly Appealing To Japanese For Easing Off Management Plights	294
[APPENDIX] Annual Shipment of Major Canadian Coal Brands for Exports to Japan	295
JAPANESE INVESTMENTS IN CANADIAN COKING COAL MINES	296
① Balmer Coal Mine ② Gregg River Coal Mine	296
③ Quintette Coal Mine	297
COAL SUPPLY AND DEMAND IN CANADA (CY 1980-1990)	299
(1) Coal Supply and Demand	299
(2) Coal Supply	299
(3) Coal Consumption	299
(4) Coal Production by Type and Total Value	300
(5) Coal Production by Type and Province	300
(6) Coal Exports by Destinations	301
(7) CY 1990 Coal Exports by Type and Destinations	301
(8) Coal Consumption by Province	301
(9) Coal Consumption by Type	302
(10) Consumption of Domestic and Imported Coal by major Uses	302
(11) Domestic Demand for Primary Energy Consumption	303
SUMMARY OF CANADA'S COAL RESOURCES OF IMMEDIATE INTEREST BY PROVINCE	303
OPERATORS, SHIPPERS, JAPANESE IMPORTERS, GUARANTEED SPECIFICATIONS OF PRINCIPAL BRANDS FOR EXPORTS TO JAPAN	304
CONTRACT STATUS OF 1991 CONTRACTS OF COKING COAL FOR EXPORTS TO JAPAN	306
(1) Tonnages of Coal Types and Consumers	306
(2) Tonnages by Importers and Brands	306
(3) Tonnages by Shippers and Consumers	306
(4) Tonnages by Brands, Consumers and Importers	307

- | | | |
|-------------------|-----------------|---------------------------------|
| ① Balmer | ⑥ Quintette | ⑪ Fording River MV Weaker |
| ② Fording River | ⑦ Greenhills | ⑫ Smoky River |
| ③ Line Creek Coal | ⑧ Bullmoose | ⑬ Westar Special |
| ④ Luscar Std/HV | ⑨ Coal Mountain | ⑭ Aggregated Total of 16 Brands |
| ⑤ Gregg River | ⑩ Devco | |

LONG-TERM CONTRACT TONNAGE OF CANADIAN COKING COALS FOR EXPORTS TO JAPAN		
TO JAPAN, BY CONSUMERS AND BRANDS		309
(1) Balmer (3-year contact)	309	(6) Bullmoose
(2) Fording River H.V./Std(3-year)	309	(7) Gregg River
(3) Luscar Std/HV	309	(8) Greenhills
(4) Line Creek	310	(9) JFY 1991 Contracts of
(5) Quintette	310	Canadian Semi-soft Coking Coal ...
TERMS AND CONDITIONS OF LONG-TERM CONTRACTS		
(1) New 3-Year Contract of Balmer Coking Coal		312
(2) 10-Year Contract of Luscar Coking Coal		314
(3) New 3-Year Contract of Fording River Coking Coal		315
(4) 15-Year Contract of Line Creek Coking Coal		317
(5) 15.5-Year Contract of Gregg River Coking Coal		318
(6) 15-Year Contract of Quintette Coking Coal		321
(7) 15-Year Contract of Bullmoose Coking Coal		326
(8) JFY 1991 Contract of Greenhills Coking Coal		327
(9) [REFERENCE] JFY 1990 Contract of Coal Mountain Coal		328
(10) JFY 1991 Contract of Smoky River Hard Coking Coal		328
(11) JFY 1991 Contract of Smoky River Semi-soft Coking Coal		328
(12) JFY 1991 Contract of DEVCO Hard Coking Coal		329
[LOCALITY OF PRINCIPAL CANADIAN COAL MINES]		331
OUTLINE OF MAJOR CANADIAN COKING COAL MINES		331
(1) Balmer	331	(7) Bullmoose
(2) Greenhills	335	(8) Line Creek
(3) Luscar	337	(9) Coal Mountain
(4) Fording River	339	(10) Smoky River
(5) Gregg River	342	(11) Devco
(6) Quintette	345	(12) Monkman

RUSSIAN COAL

* Russian Coal Production In 1990 Reduced By 5% (37 Million MT) From A Year Ago. Output For First Half Of 1991 Remains Limited To Low Of 645 Million MT At Annual Pace	361
[APPENDIX] Recent Japanese Steelmills Imports of Russian Coking Coal	361
* Crude Oil Production As Well Plummeted By 6.1% A Year Before For 2 Years In A Row	362
* Only Natural Gas Output Continued Rising In 1990 As Well Production For First Half of 1991 Up From Comparable Period A Year Ago At Annual Pace	362
* Iron & Steel Output As Well Greatly Affected By Energy Shortage	362
* Coking Coal Export To Japan Plummeted To A Great Extent	362
* Sumitomo Corp. To Construct New Coal Berth Thermal At Vostochny Shipping Port	363
② Trend in Russian Coal Export	363
③ Trend in Russian Major Economic Index	363
④ Trend in Major Russian Energy Production	363
JFY 1991 CONTRACT OF RUSSIAN COKING COAL FOR EXPORTS TO JAPAN	364
(1) Guaranteed Quality Specifications & FOB Price of Respective Brands	364
(2) Consumer's Contract Tonnage by Coal Brands	364
(3) Contract Tonnages by Consumers and Importers	365
* Summary of the General Agreement on Development and Importation into Japan of Neryungrinsky K-9 Coking Coal	366
* Summary of the General Agreement on the Bank Loan to Russia (The Soviet Union) Concerning the Development of South Yakutsky Coal	368
OUTLINE OF SOUTH YAKUTSKY COAL BASIN	368
Outline of Neryungrinsky Coal Deposits	368
RUSSIAN COAL STANDARD (GOST)	369
① Kuznetsky Coal ② Donetskoy Coal ③ South Yakutsky Coal	369

PEOPLE'S REPUBLIC OF CHINA

* Chinese Raw Coal Production in 1990 At 1.08 Billion MT. Remaining Limited To 55% Annual Average Increment In Past 8 Years	370
[APPENDIX] China's Foreign Currency Reserve	370
[APPENDIX] Trend of Japanese Imports of Coking Coal from China for	

Blast Furnace Steel Mills	370
* Crude Oil Production In 1990 Leveling Off From A Year Earlier	371
* Coal Exports In 1990 About-Faced To Rise	371
* Middling (Semi-soft) Coals From Baodian, Chailli, Jianzhuang Mines To Be Exported To Japan For 1993 & Beyond Following That From Xinglongzhuang Mine	371
* 1990 Major Economic Index In China	372
RECENT CHINESE ENERGY PRODUCTION, CONSUMPTION AND EXPORTS	373
(1) Energy Production and Production Share by Primary Sources	373
(2) CY 1989 Raw Coal Production by Region	373
(3) CY 1989 Clean Coking Coal Production	373
(4) CY 1989 Raw Coal Production by Types	374
(5) Manpower at Coal Mines	374
(6) Coal Export Ratio against the Raw Coal Production	374
(7) Coal Production by Mines Related to Coal Export to Japan	374
(8) Consumption Ratio of Primary Energy	374
(9) Coal Consumption by Use	374
(10) Coal Railing to Major Ports	374
(11) China's Primary Energy Exports	374
(12) Typical Quality Specifications of Coals for Exports	375
(13) CHINESE COAL STANDARD	375
The First (1978-1985) Import Target Of Coking Coal And Thermal Coal Under 8 year Sino-Japanese Trade Agreement	376
(1) FOB Prices by Brands and Years	
(2) Tonnages by Types and Years	
The 2nd (1986-1990) Japan-China Long-term Trade Agreement	376
The 3rd (1991-1995) Japan-China Long-term Trade Agreement	376
OUTLINE OF IMPORT CONTRACT OF CHINESE COKING COAL FOR JFY 1991	377
JAPAN/CHINA JOINT COAL DEVELOPMENT & RELEVANT ADJUSTMENT PLANS	379
(1) Prospective Mines for Joint Development under Ex-Im Bank Loan	379
(2) Agreement of Ex-Im Bank Loans to be Made to China	379
(3) Japanese Steel Industry's Basic Policy of Coking Coal Import From China	379
(4) Infrastructural Adjustment Plans Relating to Coal Developments	380
(5) Yen Loans for Financing Proposed Infrastructural Adjustments	380
OUTLINE OF CHINESE COKING COAL MINES	382
Kailuan Coal Mining Bureau	382
Huaibei Coal Mining Bureau	384
Yanzhou Coal Mining Bureau	383
Shanxi Coal Mining Bureau	386
Zaozhuang Coal Mining Bureau	384
Fengfeng Coal Mining Bureau	387

REPUBLIC OF SOUTH AFRICA

* South African Coal Output Reduced In 1990 As Well From The Year Ago. A Bit Up 1.0% For 1991 1st Half of From Same '90 Period, Export To Be Encouraged With Abolishment of Apartheid ..	388
* Coal Exports At 47,420,000 MT In 1990, Up 4.2% From A Year Ago, Remaining Unchanged For 1st half of 1991 From Same '90 Period	388
[APPENDIX] Trend of Japanese Steelmills' Imports of Coking Coal from South Africa	388
* Major Products Exported From South Africa In 1990	389
* DETAILS OF 20.5-YEAR LONG TEAM CONTRACT ON WITBANK COKING COAL	390
* Contract Details of Optimum Semi-soft Coking Coal for JFY 1991	392
Contract Details of Bank Semi-soft Coking Coal for Sumitomo Metal Ind. for JFY 1991	392
Coal (Bituminous, Anthracite) Production and Sales (Local, Export) of Rep. of South Africa ..	393
Operating and Planned Coal Mines in The Republic of South Africa	394
Coal Export Allocations by Coal Companies (or Group)	396
South Africa Recent Coal Exports by Destinations	397

P O L A N D

* Polish Coal Production Plummeted By 29.3 Million, MT In 1990. But Output Decline Slightly Slowing Down In 1991	398
[APPENDIX] Japanese Steelmills Recent Imports of Polish Coking Coal	398
* Coal Export Probably Leveling Off In 1991 From A Year Ago, But Sharply To Be Reduced In 1991, Export To Russia To Be Drastically Cut To One-Tenth From A Year Ago	399
POLISH EXPORTS OF HARD COAL AND COKE BY DESTINATIONS (CY 1986-1990)	400
(1) Coal Exports by Destinations	400
(2) Hard Coal Export by Coal Type	401
(3) Shares of Hard Coal Exports by Destinations	401
(4) Polish Coal and Coke Exports by Ports	401
(5) Polish Coal Exports by Type of Transportation	402

(6) Western Countries Use of Polish Coal by Type of Uses	402
(7) Coal Consumption in Poland by Type of Users	402
POLISH COKE EXPORTS (CY 1986-1990).....	403
(1) Exports by Destinations (2) Exports by Type	403
Polish Recent Imports of Coking Coal, Anthracite and Natural Gas	403

NEW ZEALAND

(1) Buller Hard Coking Coal	404
(2) Strongman Semi-soft Coking Coal	404
Japan's Recent Imports of New Zealand Coal	405
Production of Private and State Mines	405
New Zealand Coal Consumption by Use	405
RECOVERABLE COAL RESERVES IN NEW ZEALAND	406

COLOMBIA

Cerrejon Semi-soft Coking Coal	407
Japan's Recent Imports of Colombian Coal	407
Colombia's Production and Export of Coal	407

THERMAL COAL

Nine Power Companies' Fuel Consumption (JFY 1986-1990) and Consumption Plan for JFY 1991 ..	409
Electric Power Companies' Coal Consumption in January-June 1991	409
JFY 1990 Fuel Consumption for Thermal Power Generation and JFY 1991 Fuel Consumption Plan ..	410
JFY 1990 Fuel Stock Balance for Thermal Power Generation by Main Electric Companies	410
JFY 1991 Fuel Consumption Plan for Thermal Power Generation by Main Electric Companies	412
End-Fiscal Composition of Equipment Capacities, by Types of Electricity Sources	413
End-Fiscal Equipment Capacities & Increase/Decrease by Electricity Sources	414
Electricity Source Development Programs by Type of Electricity Sources	414
Estimated Long-Term Development Volumes of Electricity Sources by Fuels	414
Construction Plans of Coal Burning Thermal Power Plants	415
Startups of Proposed Coal-fired Thermal Power Plants	416
JFYs 1986-1991 Alterations to JFY 1986 Startup Plan of Coal-Fired Thermal Power Plants	417
JFY 1990 Coal Consumption by Thermal Power Plants	418
JFY 1990 Coal Consumption by Thermal Power Plants and Month	418
CY 1990 Coal Consumption by Thermal Power Plants and Month	420
POWER FIRMS' COAL CONSUMPTION PLANS AND COAL IMPORT CONTRACTS BY PLANTS AND BRANDS	421
Recent 35-year Cement Production and Coal and Fuel Oil Consumption	432
Cement Industry's Fuel Consumption by fuel Type, Use and Month	433
SUMMARY OF PROPOSED SHIPPING QUALITY SPECIFICATIONS, CONTRACT TONNAGES & ESTIMATED PRODUCTION (SHIPPING) TONNAGES OF MAJOR THERMAL COAL MINES	435

① Australia	④ China	⑦ New Zealand	⑩ New Zealand
② Canada	⑤ Russia	⑧ Indonesia	⑪ Colombia
③ United States	⑥ South Africa	⑨ Colombia	⑫ Venezuela

6-UTLINE OF OVERSEAS THERMAL COAL MINES	460
---	-----

«AUSTRALIA: New South Wales»

1) Hunter Valley Coal	460	16) Wambo Coal	470
2) Lithgow Coal	461	17) Clarence Coal	471
3) Warkworth Coal	462	18) Drayton Coal	472
4) Lemington Coal	463	19) Saxonvale Coal	473
5) Ulan Coal	463	20) Macquarie Coal	474
6) Wallarah Coal	465	21) Bayswater Coal	475
7) Chain Valley Coal	466	22) Mt. Thorley Coal	476
8) R. W. Miller Coal	466	23) Vickery Coal	476
9) Western Blend Coal	467	24) Berrima Coal	477
10) Avon Coal	467	25) Great Greta Coal	478
11) Muswellbrook Coal	467	26) BHP Illawarra Coal	479
12) Bloomfield Coal	468	27) Metropolitan Coal	480
13) Clutha Coal	469	28) Camberwell Coal	480
14) Western Main Coal	469	29) United Coal	481
15) Peko Blend	470		

«AUSTRALIA: Queensland»

1) Blair Athol Coal	481	4) South Blackwater Coal	485
2) Moura Coal	483	5) Curragh Coal	485
3) Newlands Coal	483	6) Yarrabee Coal	486

7) Cook Coal	486	13) Oakleigh Coal	489
8) Box Flat Coal	487	14) New Whitwood Coal	490
9) Jeebropilly (Tivoli) Coal	487	15) Aberdare Coal	490
10) New Hope (Bremer) Coal	488	16) Jellinbah Coal	490
11) Rhondda Coal	488	17) Ebenezer Coal	491
12) Walloon Coal	489		
《CANADA》			
1) Coal Valley Coal	491	5) Fording River Coal	493
2) Obed Coal	492	6) Coal Mountain Coal	493
3) Greenhills Coal	492	7) Quinsam Coal	494
4) Line Creek Coal	492		
《SOUTH AFRICA》			
1) Rietspruit Coal	494	6) GENCOR Coal	497
2) Witbank Coal	495	7) Goodhope (Goedehoop) Coal	497
3) Kleinkopje Coal	495	8) Op Goedenhoop Coal	498
4) Ermelo Coal	496	9) Arthur Taylor Coal	498
5) Optimum Coal	496	10) Middelburg Coal	498
《RUSSIA》			
1) Neryungrinsky SS Coal	499	2) Major Export Contracts for Japan ..	499
《COLOMBIA》			
1) Cerrejon Coal (North Block)	500		
《INDONESIA》			
1) Kaltim Prima Coal	502	7) Kitadin Coal	507
2) Multi Harapan Coal	503	8) Ombilin Coal	507
3) Arutmin Coal	504	9) Bukit Asam Coal	507
4) Tanito Harum Coal	505	10) Parambahan Coal	508
5) Bukit Baiduri Coal	505	11) Enviro Coal	509
6) Kutai Coal	506	12) DMH Coal	509
《ALASKA》			
1) Usibelli Coal	509		
《VENEZUELA》			
1) Guasare Coal	510		
OUTLINE OF OVERSEAS THERMAL COAL PROJECTS	511		
《AUSTRALIA: New South Wales》			
1) Maules Creek Coal	512	6) Glendell Coal	514
2) Bulga Coal	512	7) Bargo Coal	514
3) Boggabri Coal	513	8) Glennis Creek Coal	514
4) Mt. Arthur Coal	513	9) Dartbrook Coal	514
5) East Lithgow Coal	514		
《AUSTRALIA: Queensland》			
1) Clermont Coal	514	5) Daunia Coal	516
2) Gordonstone Coal	515	6) Ensham Coal	516
3) Macalister Coal	515	7) Jellinbah East Coal	516
4) Macalister East Coal	515	8) Oaklands Coal	517
《AUSTRALIA: Victoria》			
Loy Yang Coal	517		
《CANADA》			
1) Sage Creek Coal	517	3) Macleod Coal	519
2) Shaughnessey Coal	518		
《ALASKA》			
1) Beluga Coal	519	3) Wishbone Coal	521
2) Chuitna Coal	520		
《COLOMBIA》			
1) La Loma Coal	521	2) Cerrejon Coal (Central Block)	522
《INDONESIA》			
1) Petangis Coal	522	3) Belau Coal	523
2) Kideco Coal	523	4) Chung Hua Coal	524
《NEW ZEALAND》			
1) Greymouth	524		

JAPANESE COAL

MITI's Estimate of Coal Demand and Supply Position During JFY 1991	526
Recent 10-Years (JFY 1981-1990) Demand and Supply for Domestic Coal	526

Recent Coal Demand/Supply in Japan (JFY 1981-1990)	527
JFY 1990 Coal Production by Companies and Collieries	527
Coal Production by Districts in Past 47 Years (JFY 1943-1990)	528
Coal Production by Districts in Coal Types in JFY 1940 (Peak) and 1982-1990	528
Recent Purchase (Deliveries) of Domestic Coal, by User Industries	529
JFY 1990 Purchase (Deliveries) of Domestically Produced Coal (to) User Industries by Type	529
Standard Thermal Coal Prices in JFY 1981-1991	530
Average Coking Coal Prices for Steelmills in JFY 1981-1990	530
Prices of Soft Coking Coal for B.F. Steelmills and Thermal Coal for Electric Power Cos.	531
Distribution Change for Domestic Coal (1984-1990)	531
Recent (JFY 1979-1990, January 1987-September 1991) Price Differences Between Domestic and Imported Coals	532

ANTHRACITE

(1) Source and Channels for Exports to Japan	533
(2) Uses and Users of Respective Brands	535
(3) Quality Specifications by Origin and Brands	536
(4) Export Prices for Japan by Origin and Brands (1989-1991)	537
(5) Recent Import Tonnages and Average Value of Anthracite	538
(6) Japan's Contract of Hongay Anthracite for Shipment in CY 1991	539
(7) Japan's Contract of Anthracite for JFY 1991 Shipment from China	539

BLAST FURNACE

(1) Blast Furnaces in Japan by Steel Works	540
« PCI Facilities at Blast Furnaces »	541
(2) Big Blast Furnaces in the World	542

PORTS AND TRANSPORTATION

(1) 1979-1990 Seaborne Tonnages of Major Japanese Import Cargoes	544
(2) JFY 1990 Local Haulages of Major Items, by Distance	544
(3) Recent Haulages by Japanese Vessels, Freight Revenues Thereof (CY 1980-1990)	545
(4) Composition of Japanese Merchant Fleet as of Mid-1989	545
(5) Vessels by Deadweight and Types (As of mid-1990)	546
(6) Special Carriers Under 44th (JFY 1990) Shipbuilding Programme	546
(7) Recent Trumper Rates of Grain, Coal and Crude Oil	546
(8) Performance of Import Cargo Transport by Japanese Shipping Companies for JFY 1990	547
MAIN PORTS OF JAPANESE STEEL MILLS	548
U.S. Coal Loading Ports	551
Australian Coal Loading Ports	554
Canadian Coal Loading Ports	559
Russian Coal Loading Ports	561
Polish Coal Loading Ports	562
Republic of South African Coal Loading Ports	563
Chinese Coal Loading Ports	564
JAPANESE SHIPPING COMPANIES IRON ORE/COAL CARRIERS OPERATING UNDER STEELMAKERS' CARGO LOAD GUARANTEES	566
Blast Furnace Steel Mills' Load Guaranteed Tonnages by Shipping Companies	569
Haulage Ratio of Imported Iron Ore and Coking Coal by Japanese Flag	569

OUTLINE OF "DIOS - DIRECT IRON ORE SMELTING REDUCTION PROCESS AND OXYGEN BLAST FURNACE METHOD"	570
--	-----

[Abbreviation and It's Spellout Words of Nomenclature in the Coal Industry]	573
---	-----

[Conversion Table of Length, Weight, Volume, Area and Heating Value]	574
--	-----