

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No.: 200805-040A

Date: 20/05/2008

A cargo of approximately 73623 metric tons of coal described by the Exporter as
 SOUTH AFRICAN STEAMCOAL IN BULK
 was loaded at the Richards Bay Coal Terminal between 16/05/2008 and 17/05/2008 on board the
 M.V. CYCLADES
 This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2:2001,
 prepared in accordance with ISO 13909-4:2001 and tested by the SABS in accordance with the relevant
 standard methods, with the following results:

ASTM Analysis

Gross Calorific Value (MJ/kg)		ASTM D5865-04
Gross Calorific Value (kcal/kg)		ASTM D5865-04
Gross Calorific Value (Btu/lb)		ASTM D5865-04
Net Calorific Value (kcal/kg) constant volume		ASTM D5865-04
Total Moisture	%	ASTM D2961-01
Moisture in Analysis Sample	%	ASTM D3173-03
Ash	%	ASTM D3174-04
Volatile Matter	%	ASTM D3175-02
Fixed Carbon	%	ASTM D3172-89(02)

As Received	Air Dry	Dry
26.01	27.48	28.33
6210	6560	6770
11180	11810	12180
5990	6360	6580
8.2		
	3.0	
14.1	14.9	15.4
23.2	24.5	25.3
54.5	57.6	59.3
100.0	100.0	100.0
0.55	0.58	0.60
	3.74	
	1.70	
	0.005	
	0.011	
104	110	113
47	50	52

Sulphur (Total)	%	ASTM D4239-04a
Hydrogen in coal	%	ASTM D5373 - 02
Nitrogen in coal	%	ASTM D5373 - 02
Chlorine in coal	%	ASTM D4208-02
Fluorine in coal	%	ASTM D3761-96(02)
Fluorine in coal	ppm	ASTM D3761-96(02)
Chlorine in coal	ppm	ASTM D4208-02

Hardgrove Grindability Index		ASTM D409-02	53	
HGI Yield	%	ASTM D409-02	60	
Ash Fusion Temp. °C (Reducing)	Deformation	°C	ASTM D1857-04	1450
	Softening	°C	ASTM D1857-04	1480
	Hemispherical	°C	ASTM D1857-04	+1500
	Flow	°C	ASTM D1857-04	+1500
Ash Fusion Temp. °C (Oxidising)	Deformation	°C	ASTM D1857-04	1470
	Softening	°C	ASTM D1857-04	+1500
	Hemispherical	°C	ASTM D1857-04	+1500
	Flow	°C	ASTM D1857-04	+1500

Emission Factor per European Parliament Directive 2003/87/EN = 98.4 metric tons CO₂/TJ

Issued at loadport by: _____

Technical Signatory



South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
 Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

The sampling and testing were performed by SABS Commercial (Pty) Ltd. While every endeavour has been made to ensure that a sample is representative and that the results quoted above are accurate, the SABS or its officers shall in no way be liable for any error or omission occurring therein nor for any damage or loss whatsoever that may arise from the issue of this certificate. Copyright of this certificate is owned by SABS.

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Certificate No. 200805-040A

Date: 20/05/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	50.42
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	30.00
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.26
Calcium Oxide (CaO)	%	ASTM D3682-01	7.02
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.09
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.94
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.52
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.08
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	1.88
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.86
Phosphorus in coal (A.D.)	%	BS 1016:Part 14:1963	0.121

Ultimate Analysis (Dry)			
Carbon	%	ASTM D5373 - 02	73.44
Hydrogen	%	ASTM D5373 - 02	3.86
Nitrogen	%	ASTM D5373 - 02	1.75
Sulphur	%	ASTM D4239-04a	0.60
Ash	%	ASTM D3174-04	15.36
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%	ASTM D3176-89(02)	4.99

Emission Factor per European Parliament Directive 2003/87/EN = 98.4 metric tons CO₂/TJ

Issued at loadport by: _____

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Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No: 200806-0631 Date: 27/06/2008

A cargo of approximately 62918 metric tons of coal described by the Exporter as SOUTH AFRICAN STEAM COAL IN BULK was loaded at the Richards Bay Coal Terminal between 24.06.2008 and 25.06.2008 on board the M.V. CMB SAKURA. This is to certify that the coal was mechanically sampled in accordance with ISO 13999-2:2001, prepared in accordance with ISO 13999-4:2001 and tested by the SABS in accordance with the relevant standard methods with the following results.

ISO Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)	ISO 1928:1995		26.17	27.41	28.26
Gross Calorific Value (kcal/kg)	ISO 1928:1995		6250	6550	6750
Gross Calorific Value (Btu/lb)	ISO 1928:1995		11250	11780	12150
Net Calorific Value (kcal/kg) constant volume	ISO 1928:1995		6020	6330	6550
Total Moisture	% ISO 589:2003(C)		7.4		
Moisture in Analysis Sample	% ISO 11722:1999			3.0	
Ash	% ISO 1171:1997		14.3	15.0	15.5
Volatile Matter	% ISO 562:1998		25.7	26.9	27.7
Fixed Carbon	%		52.6	55.1	56.8
			100.0	100.0	100.0
Sulphur (Total)	% ASTM D4239-04a		0.56	0.59	0.61
Hydrogen in coal	% ISO/TS 12902:2001 (F-1)			4.02	
Chlorine in coal	% ASTM D4208-02			0.005	
Fluorine in coal	% ASTM D3761-96(02)			0.020	
Fluorine in coal	ppm ASTM D3761-96(02)		191	200	206
Chlorine in coal	ppm ASTM D4208-02		48	50	52
Hardgrove Grindability Index	ASTM D409-02			48	
HGI Yield	% ASTM D409-02				56
Ash Fusion Temp. C (Reducing)	Deformation	C ISO 540:1995			1410
	Spherical	C ISO 540:1995			1430
	Hemispherical	C ISO 540:1995			1440
	Flow	C ISO 540:1995			1460
Ash Fusion Temp. C (Oxidising)	Deformation	C ISO 540:1995			1440
	Spherical	C ISO 540:1995			1450
	Hemispherical	C ISO 540:1995			1460
	Flow	C ISO 540:1995			1470

Issued at loadport by:

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The sampling and testing were performed by SABS Commercial (Pty) Ltd. While every endeavour has been made to ensure that a sample is representative and that the results quoted above are accurate, the SABS or its officers shall in no way be liable for any error or omission occurring therein nor for any damage or loss whatsoever that may arise from the issue of this certificate. Copyright of this certificate is owned by SABS.

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/3

Certificate No: 200806-0631

Date: 27/06/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	50.82
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	28.50
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	4.38
Calcium Oxide (CaO)	%	ASTM D3682-01	6.88
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.46
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.76
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.63
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.16
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	2.10
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.34
Phosphorus in coal (A.D.)	%	BS 1016 Part 14:1963	0.088

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	72.14
Hydrogen	%	ISO/TS 12902:2001 (E)	4.14
Nitrogen	%	ISO/TS 12902:2001 (E)	1.69
Sulphur	%	ASTM D4239-04a	0.61
Ash	%	ISO 1171:1997	15.46
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%		5.96

Issued at loadport by: _____

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CERTIFICATE OF SAMPLING AND ANALYSIS

080922.0368

Consignment Shipper : 59,468 MT OF INDONESIAN STEAM COAL IN BULK
 : **PT. INDOMINCO MANDIRI**
 VENTURA BUILDING, 8TH FLOOR
 JL.R.A. KARTINI NO. 26
 JAKARTA 12430
 Name of Vessel : **MV. CONSUL POPPE**
 Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
 Port of Discharging : ITALIAN PORT(S)
 Consignee : TO THE ORDER OF: ENEL TRADE SPA
 Notify Address : ENEL TRADE SPA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY
 Date of Sampling : JUNE 03 UP TO 05, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).
 - Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample
 - Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory (accreditation by KAN / National Accreditation Committee - Indonesia for ISO/IEC 17025:2005 Cert No. LP-352-IDN) in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Total Moisture, Weight %	(ISO 589:2003(E))	14.20	As Received Basis
Proximate Analysis, weight %			
Moisture in the Analysis Sample	(ISO 11722:1999(E))	10.24	Air Dried Basis
Ash Content	(ISO 1171:1997(E))	5.04	As Received Basis
Volatile Matter	(ISO 562:1998(E))	37.96	As Received Basis
Fixed Carbon	By calculation	42.80	As Received Basis
Total Sulphur, Weight %	(ASTM D 4239-04a)	0.86	As Received Basis
Gross Calorific Value, Kcal/kg	(ISO 1928:1995(E))	6,169	As Received Basis
Net Calorific Value		5,870	As Received Basis
Hydrogen, Weight %	(ASTM D 5373-02)	4.27	As Received Basis
Ash Fusion Temperature, °C	(ASTM D 1857-04)		As Received Basis
Hemispherical Temperature		Reducing Atm	
Hardgrove Grindability Index	(ASTM D 409-02)	1,310	
Size Analysis, Weight %	(ASTM D 4749-87)	47	
0 mm - 50 mm		98.30	
Under 1 mm		5.23	

SAMARINDA JUNE 11, 2008

Signed on behalf of
PT. CARSURIN

RUJAT GUNAWAN
 Laboratory Manager



CARSURIN Laboratory

Coal, Mineral, Petrochemical

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080922.0368AA

Page : 1 of 2

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 59,468 MT OF INDONESIAN STEAM COAL IN BULK
Shipper : **PT. INDOMINCO MANDIRI**
VENTURA BUILDING, 8TH FLOOR
JL.R.A. KARTINI NO. 26
JAKARTA 12430

Name of Vessel : **MV. CONSUL POPPE**
Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
Port of Discharging : ITALIAN PORT(S)
Consignee : TO THE ORDER OF: ENEL TRADE SPA
Notify Address : ENEL TRADE SPA
VIALE REGINA MARGHERITA 125
00198 ROME - ITALY

Date of Sampling : JUNE 03 UP TO 05, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).

Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

Four bags for general analysis, each contains 5 kg of -3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Ultimate Analysis, Weight %

Carbon	(ASTM D 5373-02)	65.39	Air Dried Basis
Nitrogen	(ASTM D 5373-02)	1.19	Air Dried Basis
Sulphur	(ASTM D 4239-04a)	0.90	Air Dried Basis
Oxygen	by calculation	12.54	Air Dried Basis

Ash Analysis, Weight %

Silicon dioxide, SiO ₂	(ASTM D 3682-01)	51.17
Aluminum Oxide, Al ₂ O ₃	(ASTM D 3682-01)	22.60
Ferric Oxide, Fe ₂ O ₃	(ASTM D 3682-01)	9.14
Calcium Oxide, CaO	(ASTM D 3682-01)	3.51
Magnesium Oxide, MgO	(ASTM D 3682-01)	2.37
Sodium Oxide, Na ₂ O	(ASTM D 3682-01)	1.86
Potassium Oxide, K ₂ O	(ASTM D 3682-01)	1.53
Titanium Oxide, TiO ₂	(ASTM D 3682-01)	0.56
Manganese, MnO ₂	(ASTM D 3682-01)	0.04
Sulphur Trioxide, SO ₃	(ASTM D 5016-01)	5.60
Phosphorus Pentoxide, P ₂ O ₅	(AS 1038-1982 Part 14.1)	0.63

Ash Fusion Temperature, °C

Initial Deformation Temperature	(ASTM D 1857-87)	1,220
Softening Temperature		1,250
Hemispherical Temperature		1,310
Fluid Temperature		1,340

Reducing Atm.





CARSURIN Laboratory

Coal, Mineral, Petrochemical



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080922.0404

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 60,630 MT OF INDONESIAN STEAM COAL IN BULK
 Shipper : **PT. INDOMINCO MANDIRI**
 VENTURA BUILDING, 8TH FLOOR
 JL.R.A. KARTINI NO. 26
 JAKARTA 12430
 Name of Vessel : **MV. DANAE**
 Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
 Port of Discharging : ITALIAN PORT(S)
 Consignee : TO THE ORDER OF: ENEL TRADE SpA
 Notify Address : ENEL TRADE SpA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY
 Date of Sampling : JUNE 26 -- 27, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).
 - Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample
 - Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory (accreditation by KAN / National Accreditation Committee - Indonesia for ISO/IEC 17025:2005 Cert No. LP-352-IDN) in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Total Moisture, Weight %	(ISO 589:2003(E))	13.87	As Received Basis
Proximate Analysis, Weight %			
Moisture in the Analysis Sample	(ISO 11722:1999(E))	8.45	Air Dried Basis
Ash Content	(ISO 1171:1997(E))	6.10	As Received Basis
Volatile Matter	(ISO 562:1998(E))	38.06	As Received Basis
Fixed Carbon	By calculation	41.97	As Received Basis
Total Sulphur, Weight %	(ASTM D 4239-04a)	0.65	As Received Basis
Gross Calorific Value, Kcal/kg	(ISO 1928:1995(E))	6,150	As Received Basis
Net Calorific Value		5,841	As Received Basis
Hydrogen, Weight %	(ASTM D 5373-02)	4.49	As Received Basis
Ash Fusion Temperature, °C	(ASTM D 1857-04)	Reducing Atm	
Hemispherical Temperature		1,330	
Hardgrove Grindability Index	(ASTM D 409-02)	48	
Size Analysis, Weight %	(ASTM D 4749-87)		
0 mm - 50 mm		98.47	
Under 1 mm		1.43	

SAMARINDA, JULY 02, 2008

Signed on behalf of
PT CARSURIN

KUATAY GUNAWAN
 Laboratory Manager



CARSURIN Laboratory

Coal, Mineral, Petrochemical



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080922.0404A A

Page : 1 of 2

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 60,630 MT OF INDONESIAN STEAM COAL IN BULK
 Shipper : **PT. INDOMINCO MANDIRI**
 VENTURA BUILDING, 8TH FLOOR
 JL.R.A. KARTINI NO. 26
 JAKARTA 12430

Name of Vessel : **MV. DANAE**
 Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
 Port of Discharging : ITALIAN PORT(S)
 Consignee : TO THE ORDER OF: ENEL TRADE SpA
 Notify Address : ENEL TRADE SpA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY

Date of Sampling : JUNE 26 - 27, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).

- Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample
- Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Ultimate Analysis, Weight %

Carbon	(ASTM D 5373-02)	65.59	Air Dried Basis
Nitrogen	(ASTM D 5373-02)	1.19	Air Dried Basis
Sulphur	(ASTM D 4239-04a)	0.69	Air Dried Basis
Oxygen	by calculation	12.45	Air Dried Basis

Ash Analysis, Weight %

Silicon dioxide, SiO ₂	(ASTM D 3682-01)	52.36
Aluminum Oxide, Al ₂ O ₃	(ASTM D 3682-01)	22.60
Ferric Oxide, Fe ₂ O ₃	(ASTM D 3682-01)	10.06
Calcium Oxide, CaO	(ASTM D 3682-01)	4.28
Magnesium Oxide, MgO	(ASTM D 3682-01)	1.67
Sodium Oxide, Na ₂ O	(ASTM D 3682-01)	1.39
Potassium Oxide, K ₂ O	(ASTM D 3682-01)	1.70
Titanium Oxide, TiO ₂	(ASTM D 3682-01)	0.46
Manganese, MnO ₂	(ASTM D 3682-01)	0.06
Sulphur Trioxide, SO ₃	(ASTM D 5016-01)	4.88
Phosphorus Pentoxide, P ₂ O ₅	(AS 1038-1982 Part 14.1)	0.55

Ash Fusion Temperature, °C

Initial Deformation Temperature	(ASTM D 1857-87)	1,260
Softening Temperature		1,310
Hemispherical Temperature		1,330
Fluid Temperature		1,350

Reducing Atm.

1,260
1,310
1,330
1,350





INCOLAB SERVICES LATVIA

COMMODITY SAMPLERS AND ANALYTICAL CHEMISTS

HEAD OFFICE IN RIGA:

52-5, Rupniecibas iela
LV-1045, Riga,
Latvia

Tel. (371) 7321839

Fax. (371) 7321527

Email: incolab@incolab.lv

TO WHOM IT MAY CONCERN

Certificate of Sampling and Analysis

We have examined the sample(s) of
and report the following to be the result:

Date : 08 June 2008
Our ref. : 0805624L
Material : Coal
Ex : mv "F.D. Gennaro Aurila"
Lot : Average
Weight : 52' 516.690 mt
Port : Riga, Latvia
Sampling date : 05 - 07 June 2008

We, the undersigned Incolab Services Latvia, confirm to have attended the loading and sampling the material of coal, which was loaded on board of mv "F.D. Gennaro Aurila" on 05 - 07 June 2008 at the port of Riga.

SAMPLING

Sampling of coal was carried out during all loading in accordance with I.S.O. Standards.

ANALYSIS

TOTAL MOISTURE	:	9.43 %	ISO 589
INHERENT MOISTURE	:	2.46 %	
SURFACE MOISTURE	:	7.15 %	
ASH IN DRY	:	11.03 %	ISO 1171
ASH IN AIR DRY	:	10.76 %	
ASH AS RECEIVED	:	9.99 %	
VOLATILE MATTER IN DRY	:	34.25 %	ISO 562
VOLATILE MATTER IN AIR DRY	:	33.41 %	
VOLATILE MATTER AS RECEIVED	:	31.02 %	
GROSS AND NET CALORIFIC VALUE			ISO 1928
GROSS CALORIFIC VALUE IN DRY	:	7148 Kcal/kg	29927 Kj/kg
GROSS CALORIFIC VALUE IN AIR DRY	:	6972 Kcal/kg	29190 Kj/kg
GROSS CALORIFIC VALUE AS RECEIVED	:	6474 Kcal/kg	27105 Kj/kg
NET CALORIFIC VALUE IN DRY	:	6912 Kcal/kg	28939 Kj/kg
NET CALORIFIC VALUE AS RECEIVED	:	6208 Kcal/kg	25992 Kj/kg
SULPHUR IN DRY	:	0.39 %	ISO 351
SULPHUR IN AIR DRY	:	0.38 %	
SULPHUR AS RECEIVED	:	0.35 %	
H.G.I.	:	57	ASTM D 409
FIXED CARBON IN DRY	:	54.7 %	ISO 12902
FIXED CARBON IN AIR DRY	:	53.4 %	
FIXED CARBON AS RECEIVED	:	49.6 %	
CARBON IN DRY	:	74.1 %	ASTM D 5373
CARBON IN AIR DRY	:	72.3 %	
CARBON IN AS RECEIVED	:	67.1 %	
OXYGEN IN DRY	:	7.36 %	ISO 12902
OXYGEN IN AIR DRY	:	7.18 %	
OXYGEN AS RECEIVED	:	6.67 %	

HYDROGEN IN DRY	:	4.77	%	ISO 12902
HYDROGEN IN AIR DRY	:	4.65	%	
HYDROGEN AS RECEIVED	:	4.32	%	
NITROGEN IN DRY	:	2.35	%	ISO 12902
NITROGEN IN AIR DRY	:	2.29	%	
NITROGEN AS RECEIVED	:	2.13	%	
CHLORINE IN DRY	:	0.003	%	29 ppm ASTM D 4208
CHLORINE IN AIR DRY	:	0.003	%	28 ppm
CHLORINE AS RECEIVED	:	0.003	%	26 ppm
FLUORINE IN DRY	:	0.011	%	ASTM D 3761
FLUORINE IN AIR DRY	:	0.011	%	
FLUORINE AS RECEIVED	:	0.010	%	
BORON	:	42	ppm	ASTM D 1038
SELENIUM	:	<0.3	ppm	ASTM D 4606-03
ASH FUSION TEMPERATURE IN OXIDIZING ATMOSPHERE				ISO 540
DEFORMATION	:	1485	°C	
SPHERE	:	+1500	°C	
HEMISPHERE	:	+1500	°C	
FLOW	:	+1500	°C	
ASH FUSION TEMPERATURE IN REDUCING ATMOSPHERE				ISO 540
DEFORMATION	:	1425	°C	
SPHERE	:	1470	°C	
HEMISPHERE	:	1495	°C	
FLOW	:	+1500	°C	
ASH MINERAL ANALYSIS				ASTM D 6349
SILICON DIOXIDE	:	60.5	%	
ALUMINIUM OXIDE	:	23.5	%	
IRON OXIDE	:	5.17	%	
CALCIUM OXIDE	:	2.12	%	
MAGNESIUM OXIDE	:	1.88	%	
SODIUM OXIDE	:	0.23	%	
POTASSIUM OXIDE	:	1.73	%	
MANGANESE DIOXIDE	:	0.05	%	
TITANIUM DIOXIDE	:	0.94	%	
PHOSPHORUS PENTOXIDE	:	0.76	%	
SULPHUR TRIOXIDE	:	1.35	%	ASTM D 5016
OTHERS	:	1.77	%	
		100.0	%	

SIZING TEST

	+	50	mm	:	0.5	%
50	-	25	mm	:	9.9	%
25	-	4.75	mm	:	50.3	%
4.75	-	1	mm	:	24.5	%
1	-	0.5	mm	:	5.1	%
	-	0.5	mm	:	9.7	%
					<hr/>	
					100.0	%

For and on behalf of,
Incolab Services Latvia





CARSURIN Laboratory

Coal, Mineral, Petrochemical

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080922.0358AA

Page : 1 of 2

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 67,102 MT OF INDONESIAN STEAM COAL IN BULK
 Shipper : **PT. INDOMINCO MANDIRI**
 VENTURA BUILDING, 8TH FLOOR
 JL.R.A. KARTINI NO. 26
 JAKARTA 12430

Name of Vessel : **MV. GEOSAND**
 Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
 Port of Discharging : BAKAR or KOPER PLUS ITALIAN PORT(S)
 Consignee : TO THE ORDER OF: ENEL TRADE SpA
 Notify Address : ENEL TRADE SPA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY

Date of Sampling : MAY 28 - 30, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).

Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Ultimate Analysis, Weight %

Carbon	(ASTM D 5573-07)	64.05	Air Dried Basis
Nitrogen	(ASTM D 5573-07)	1.19	Air Dried Basis
Sulphur	(ASTM D 4239-04a)	0.94	Air Dried Basis
Oxygen	by calculation	14.28	Air Dried Basis

Ash Analysis, Weight %

Silicon dioxide, SiO ₂	(ASTM D 3682-01)(2006)	51.90
Aluminum Oxide, Al ₂ O ₃	(ASTM D 3682-01)(2006)	20.11
Ferric Oxide, Fe ₂ O ₃	(ASTM D 3682-01)(2006)	10.08
Calcium Oxide, CaO	(ASTM D 3682-01)(2006)	3.60
Magnesium Oxide, MgO	(ASTM D 3682-01)(2006)	2.16
Sodium Oxide, Na ₂ O	(ASTM D 3682-01)(2006)	1.94
Potassium Oxide, K ₂ O	(ASTM D 3682-01)(2006)	1.59
Titanium Oxide, TiO ₂	(ASTM D 3682-01)(2006)	0.56
Manganese, MnO ₂	(ASTM D 3682-01)(2006)	0.04
Sulphur Trioxide, SO ₃	(ASTM D 5016-07)	5.42
Phosphorus Pentoxide, P ₂ O ₅	(AS 1038-1982 Part 14.1)	0.63

Ash Fusion Temperature, °C

Initial Deformation Temperature	(ASTM D 1857-04)	1,230
Softening Temperature		1,260
Hemispherical Temperature		1,300
Fluid Temperature		1,320

Reducing Atm.



**CARSURIN****080922.0358AA**

Page : 2 of 2

Trace Element, ppm

Boron	(ACIRL Work Instruction AL-061 for B)	78	As Received Basis
Fluorine	(ASTM D-3761-96)	40	As Received Basis
Chlorine	(ASTM D-4208-02)(2007)	80	As Received Basis
Selenium	(ASTM D-4606-03)	0.08	As Received Basis

Size Analysis, Weight %

Passing 2 inc. screen	(ASTM D-4749-87)	98.35
Passing 1 inc. screen		87.17
Passing 4 Mesh (4.75 mm)		39.07
Passing 18 Mesh (1.00 mm)		8.11
Passing 35 Mesh (0.500 mm)		1.89

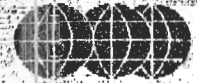
SAMARINDA, JUNE 04, 2008

Signed on behalf of

PT CARSURIN**RU'YAT GUNAWAN**

Laboratory Manager

Certificate No. 00982/GAEAAB
Date: May 5, 2008



SUCOFINDO

Issuing Office:

Jl. Jend. A. Yani No. 1 Gunung Sari Ulu, Balikpapan 76122, Indonesia
Phone/Fax: +62 642 732186/420537
Email: min.bpp@sucofindo.co.id

CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL NAME : MV. GOLDEN SAGUENAY
LOADING DATE : APRIL 26 UP TO 27, 2008
COMMODITY : INDONESIAN STEAM COAL IN BULK
QUANTITY : 60,309 METRIC TONS
LOADING PORT : BALIKPAPAN COAL TERMINAL, INDONESIA
SHIPPER : PT. BAYAN RESOURCES
GRAHA IRAMA 12TH FLOOR, SUITE O
JL. HR. RASUNA SAID BLOK X-1, KAV 1 & 2
JAKARTA SELATAN

Result:

Sampling, preparation and testing were conducted in accordance with ISO standard method except for HGI with ASTM standard, results are as follows :

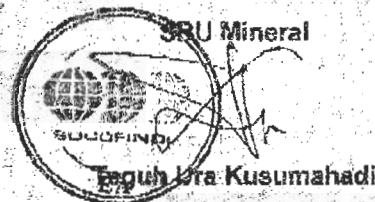
TEST	RESULT
Total Moisture (As Received Basis)	11.1 %
Inherent Moisture (Air Dried Basis)	4.4 %
Ash (As Received Basis)	10.0 %
Volatile Matter (As Received Basis)	36.3 %
Sulfur (As Received Basis)	0.96 %
Fixed Carbon (As Received Basis)	42.6 %
Gross Calorific Value (As Received Basis)	6415 Kcal / kg
Net Calorific Value (As Received Basis)	6117 Kcal / kg
Screen Size :	
Below 50 mm	98.0 %
Below 5 mm	47.2 %
Below 2 mm	31.2 %
Below 1 mm	17.9 %
Hardgrove Grindability Index	59

ULTIMATE ANALYSIS (Dry Basis)

Ash	11.2 %
Carbon	73.32 %
Hydrogen	5.42 %
Nitrogen	1.30 %
Sulphur	1.08 %
Oxygen	7.68 %

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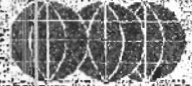
BPP.MIN.00137.2008



0071116

SCI-2007A

Attachment
To Certificate No. 00982/GAEAAB
Date: May 5, 2008



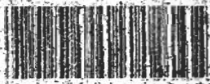
SUCOFINDO

Page 1 of 2

Phone/Fax: +62-542-732166/420537
Jl. Jend. A. Yani No. 1 Gedung San Lito, Balikpapan 76122 Indonesia
Email: min_bpp@sucofindo.co.id

CERTIFICATE OF SAMPLING AND ANALYSIS

<u>TEST</u>	<u>RESULT</u>
Ash Fusion Temperatures (Reducing)	
Initial Deformation Temperature	1350 °C
Spherical Temperature	1380 °C
Hemispherical Temperature	1410 °C
Flow Temperature	1430 °C
Ash Analysis	
SiO ₂ (Dry Basis)	61.82 %
Al ₂ O ₃ (Dry Basis)	26.57 %
Fe ₂ O ₃ (Dry Basis)	9.78 %
CaO (Dry Basis)	1.78 %
MgO (Dry Basis)	1.57 %
Na ₂ O (Dry Basis)	0.85 %
K ₂ O (Dry Basis)	4.17 %
TiO ₂ (Dry Basis)	0.85 %
MnO ₂ (Dry Basis)	0.03 %
P ₂ O ₅ (Dry Basis)	0.62 %
SO ₃ (Dry Basis)	1.91 %
Undetermined (Dry Basis)	0.15 %



0026574

SCI-2007P

P.O. Box 82124,
 Southdale, 2135
 South Africa
 TEL.: (011) 495-2228
 FAX: (011) 495-2239



INSPECTORATE M & L (PTY) LTD.
(Reg. No. 89/0084/07)
 Consulting Industrial Chemists, Analysts & Samplers

Ref. No. : 08/5315M
 Issued at : Richards Bay
 Date : 2008-06-25
 CB/cb

Certificate / Report

CERTIFICATE OF ANALYSIS

COMMODITY : SOUTH AFRICAN STEAM COAL IN BULK
 QUANTITY : 10000 mt of 62709 mt loaded (Sublot 1)
 VESSEL : m.v. "IKAN BILLIS"
 LOADED : At Richards Bay from 2008.06.12.
 SAMPLED : Throughout loading operations in compliance
 with ISO Standard Procedure.
 SAMPLES ANALYSED : Analysis carried out according to ISO procedures.

RESULTS OBTAINED :

Determination	As Received Basis	Air Dry Basis	Dry Basis
Moisture, %	7.60	3.3	
Volatiles, %	23.8	24.7	25.5
Ash, %	14.4	15.1	15.6
Fixed Carbon, % (by diff.)	<u>54.40</u>	<u>56.9</u>	<u>58.9</u>
	100.00	100.0	100.0
Total Sulphur, S %	0.52	0.54	0.58
Gross Calorific Value, kcal/kg	6218	6507	6730
Nett Calorific Value, kcal/kg	5999	6304	6538
Hydrogen, %	3.60	3.77	3.90

Note : Analysis according to ISO analytical procedures

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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E. G. G. G.

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/2

Certificate No. : 200806-0151

Date: 12/06/2008

A cargo of approximately 59831 metric tons of coal described by the Exporter as
SOUTH AFRICAN STEAM COAL IN BULK
 was loaded at the Richards Bay Coal Terminal between 09/06/2008 and 10/06/2008 on board the
M.V. JAG ARNAV
 This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2:2001,
 prepared in accordance with ISO 13909-4:2001 and tested by the SABS in accordance with the relevant
 standard methods, with the following results:

ISO Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)	ISO 1928:1995		25.95	27.21	28.05
Gross Calorific Value (kcal/kg)	ISO 1928:1995		6200	6500	6700
Gross Calorific Value (Btu/lb)	ISO 1928:1995		11160	11700	12060
Net Calorific Value (MJ/kg) constant volume	ISO 1928:1995		25.04		
Net Calorific Value (kcal/kg) constant volume	ISO 1928:1995		5980		
Net Calorific Value (Btu/lb) constant volume	ISO 1928:1995		10770		
Total Moisture	% ISO 589:2003(C)		7.5		
Moisture in Analysis Sample	% ISO 11722:1999			3.0	
Ash	% ISO 1171:1997		14.7	15.4	15.9
Volatile Matter	% ISO 562:1998		23.1	24.2	24.9
Fixed Carbon	%		54.7	57.4	59.2
			100.0	100.0	100.0
Sulphur (Total)	% ASTM D4239-04a		0.47	0.49	0.51
Hydrogen in coal	% ISO/TS 12902:2001 (E)			3.75	
Chlorine in coal	% ASTM D4208-02		0.004	0.004	0.004
Fluorine in coal	% ASTM D3761-96(02)		0.017	0.018	0.019
Fluorine in coal	ppm ASTM D3761-96(02)		172	180	186
Chlorine in coal	ppm ASTM D4208-02		38	40	41
Hardgrove Grindability Index	— ISO 5074:1994			52	
HGI Yield	% ISO 5074:1994				55
Ash Fusion Temp. °C (Reducing)	Deformation °C ISO 540:1995				1380
	Spherical °C ISO 540:1995				1400
	Hemispherical °C ISO 540:1995				1410
	Flow °C ISO 540:1995				1450

S A N A S



ACCREDITED
LABORATORY
10246

Issued at loadport by: *Rainier*

Technical Signatory

South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
 Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

The sampling and testing were performed by SABS Commercial (Pty) Ltd. While every endeavour has been made to ensure that a sample is representative and that the results quoted above are accurate, the SABS or its officers shall in no way be liable for any error or omission occurring therein nor for any damage or loss whatsoever that may arise from the issue of this certificate. Copyright of this certificate is owned by SABS.

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/2

Certificate No.: 200806-0151

Date: 12/06/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	52.18
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	31.88
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	4.08
Calcium Oxide (CaO)	%	ASTM D3682-01	7.35
Magnesium Oxide (MgO)	%	ASTM D3682-01	0.94
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.76
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.53
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.08
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	1.46
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.26

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	72.23
Hydrogen	%	ISO/TS 12902:2001 (E)	3.87
Nitrogen	%	ISO/TS 12902:2001 (E)	1.65
Sulphur	%	ASTM D4239-04a	0.51
Ash	%	ISO 1171:1997	15.88
Chlorine	%	ASTM D4208-02	0.004
Oxygen (By Difference)	%		5.86

Issued at loadport by: Pring

Technical Signatory

S A N A S



ACCREDITED
LABORATORY
T0248

South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
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Certificate No: 01181/GAEAB
Date: May 28, 2008

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Email: min.bpp@sucofindo.co.id

CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL NAME : MV. LOPIZ
LOADING DATE : MAY 21 UP TO 22, 2008
COMMODITY : INDONESIAN STEAM COAL IN BULK
QUANTITY : 61,488 METRIC TONS
LOADING PORT : BALIKPAPAN COAL TERMINAL, INDONESIA
SHIPPER : PT BAYAN RESOURCES
GRAHA IRAMA 12TH FLOOR, SUITE 0
JL. HR. RASUNA SAID BLOK X-I KAV 1 & 2
JAKARTA SELATAN

Result:

Sampling, preparation and testing were conducted in accordance with ISO standard method except for HGI with ASTM standard, results are as follows :

TEST	RESULT
Total Moisture (As Received Basis)	10.2 %
Inherent Moisture (Air Dried Basis)	4.1 %
Ash (As Received Basis)	9.1 %
Volatile Matter (As Received Basis)	36.7 %
Sulfur (As Received Basis)	0.81 %
Fixed Carbon (As Received Basis)	44.0 %
Gross Calorific Value (As Received Basis)	6568 Kcal / kg
Net Calorific Value (As Received Basis)	6278 Kcal / kg

Screen Size :	RESULT
Below 50 mm	97.9 %
Below 5 mm	49.5 %
Below 2 mm	33.3 %
Below 1 mm	18.8 %
Hardgrove Grindability Index	50

ULTIMATE ANALYSIS (Dry Basis)

Ash	10.1 %
Carbon	73.82 %
Hydrogen	5.29 %
Nitrogen	1.52 %
Sulphur	0.90 %
Oxygen	8.37 %

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BPP.MIN.00177.2008





Attachment
 To Certificate No. 01181/GAEAAB
 Date: May 28, 2008

Page 1 of 2

Jl. Jend. A. Yani No. 1 Gunung Sari Ulu, Balikpapan 76122, Indonesia
 Phone/Fax: +62 542 732186/420537
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Issuing Office:

CERTIFICATE OF SAMPLING AND ANALYSIS

TEST

RESULT

Ash Fusion Temperatures (Reducing)

Initial Deformation Temperature	1230 °C
Spherical Temperature	1280 °C
Hemispherical Temperature	1380 °C
Flow Temperature	1420 °C

Ash Analysis

SiO ₂	(Dry Basis)	48.70 %
Al ₂ O ₃	(Dry Basis)	28.52 %
Fe ₂ O ₃	(Dry Basis)	10.20 %
Ca O	(Dry Basis)	2.12 %
Mg O	(Dry Basis)	1.75 %
Na ₂ O	(Dry Basis)	1.15 %
K ₂ O	(Dry Basis)	3.24 %
TiO ₂	(Dry Basis)	0.60 %
MnO ₂	(Dry Basis)	0.04 %
P ₂ O ₅	(Dry Basis)	0.51 %
SO ₃	(Dry Basis)	2.33 %
Undetermined	(Dry Basis)	0.84 %



P.O. Box 82124,
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INSPECTORATE

INSPECTORATE M&L (PTY) LTD.

(Reg. No. 89/03084/07)

Consulting Industrial Chemists, Analysts & Samplers

CONFIDENTIAL

Certificate / Report

Ref. No. : 08/5318M
 Issued at : Richards Bay
 Date : 2008-07-08
 CB/cb

CERTIFICATE OF ANALYSIS

COMMODITY SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY 71 485 metric tons.
VESSEL m.v. "MARITIME HARESHIO"
LOADED At Richards Bay from 2008.07.25 to 2008.07.26
SAMPLED Throughout loading operations in compliance with ISO Standard Procedure.
SAMPLES ANALYSED The following are the computed weighted average results of the 8 individual results of the analysis.
 Analysis carried out according to ISO procedures

RESULTS OBTAINED	As Received Basis	Air Dry Basis	Dry Basis
<u>Determination</u>			
Moisture, %	7.50	3.3	
Volatiles, %	24.8	25.9	26.8
Ash, %	14.30	15.0	15.5
Fixed Carbon, % (by diff.)	<u>53.30</u>	<u>55.8</u>	<u>57.7</u>
Total Sulphur, S %	100.00	100.0	100.0
	0.70	0.73	0.76
Gross Calorific Value, kcal/kg	6245	6529	6751
Nett Calorific Value, kcal/kg	6018	6336	6550
Chlorine, Cl %	0.004	0.004	0.004
HGI		54	
<u>Ash Fusion Temperature</u>	<u>Reducing</u>		<u>Oxidizing</u>
Deformation Temperature	1330° C		1380° C
Softening Temperature	1350° C		1390° C
Hemispherical Temperature	1360° C		1400° C
Flow Temperature	1390° C		+1400° C

Note : Analysis according to ISO analytical procedures

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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CONFIDENTIAL

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Issued at : Richards Bay
Date : 2008.07.08
CB/cb

Certificate / Report

CERTIFICATE OF ANALYSIS

COMMODITY SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY 71,485 metric tons.
VESSEL m.v. "MARITIME HARESHIO"
LOADED At Richards Bay from 2008.06.25 to 2008.06.26
SAMPLED Throughout loading operations in compliance
With ISO Standard Procedure.

ULTIMATE ANALYSIS

	<u>As Received Basis</u>	<u>Air Dry Basis</u>	<u>Dry Basis</u>
Carbon, %	67.26	70.31	72.71
Hydrogen, %	3.76	3.93	4.06
Nitrogen, %	1.64	1.71	1.77
Oxygen, %	4.84	5.02	5.20

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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INSPECTORATE M & L (PTY) LTD.
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Consulting Industrial Chemists, Analysts & Samplers

Ref. No. : 08/5318M
Issued at : Richards Bay
Date : 2008.07.08
CB/cb

Certificate / Report

CERTIFICATE OF ANALYSIS

COMMODITY	SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY	71 485 metric tons.
VESSEL	m.v. "MARITIME HARESHIO"
LOADED	At Richards Bay from 2008.06.25 to 2008.06.26
SAMPLED	Throughout loading operations in compliance With ISO Standard Procedure.

ANALYSIS OF THE ASH

	Dry Basis
Total Silica as SiO ₂ , %	48.90
Aluminium as Al ₂ O ₃ , %	24.70
Total Iron as Fe ₂ O ₃ , %	4.87
Titanium as TiO ₂ , %	1.70
Phosphorus as P ₂ O ₅ , %	0.81
Calcium as CaO, %	7.68
Magnesium as MgO, %	1.76
Sodium as Na ₂ O, %	0.25
Potassium as K ₂ O, %	0.50
Sulphur as SO ₃ , %	7.02
Manganese as MnO, %	0.02

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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CR



PT. GEOSERVICES LTD.

MARINE CARGO SURVEYING

Head Office : BANDUNG. Jl. Setiabudi No. 79-81, Ph. 022-2031316, Fx. 022-2038090, 2035436; Branch Office : BALIKPAPAN. Jl. M.T. Haryono No. 161, Ph. 0542-872156/872155, Fx. 0542-872151; SAMARINDA. Jl. Wijaya Kusumah No. 25A, Ph. 0541-203728, Fx. 0541-203727; BANJARBARU. Jl. Jend. A. Yani Barat No. 8, Ph. 0511-4772616 (Hunting), Fx. 0511-4772324; KOTABARU. Jl. Taman Melati No. 20 RT. 02/RW. 1; Ph. 0518-21529, Fx. 0518-21529 TANJUNG REDEB-BERAU. Jl. Raya Bulungan KM. 01, Gang Muliara-Gunung Tabur, Ph. 0554-23138, Fx. 0554-23354; GUNUNG BAYAN. Manau Laboratory, Manau-Muara Pahau, Kutal Barat, Ph. 0542-593704, TANAH GROGOT. Jl. Cipto Mangunkusumo No. 52, Ph. 0543-23207; ASAM-ASAM. Jl. A. Yani RT. 12 RW. 03, Desa Asam-asam, Kec. Jorong, Ph. 0512-636075, Fx. 0512-636078, BATULICIN. Jl. Raya Batulicin No. 94 RT. 14, RW. 03, Ph./Fx. 0518-71972; RIAU. Jl. Subrantas No. 10 RT. 20/RW. 05, Seberida-Rengat 29371, Ph./Fx. 0769-323410

CERTIFICATE OF SAMPLING AND ANALYSIS

ORIGINAL

VESSEL NAME : MV. MEDI HONG KONG
LOADING DATE : JUNE 18 UP TO 20, 2008
COMMODITY : INDONESIAN STEAM COAL IN BULK
QUANTITY : 66,182 METRIC TONS
LOADING PORT : BALIKPAPAN COAL TERMINAL, INDONESIA
SHIPPER : PT BAYAN RESOURCES
GRAHA IRAMA 12TH FLOOR, SUITE O
JL. HR. RASUNA SAID BLOK X-1 KAV 1&2
JAKARTA SELATAN

Sampling preparation testing and analysis was done in accordance with ISO standard methods, with the exception of Ash Analysis which was completed using AS 1038, Part 14.2-2003 and Hardgrove Grindability Index (ASTM D409).

The results of testing and analysis are as follows :

<u>TEST</u>	<u>RESULTS</u>
Total Moisture (As Received Basis)	: 11.5 (%)
Inherent Moisture (Air Dried Basis)	: 6.2 (%)
Ash (As Received Basis)	: 8.4 (%)
Volatile Matter (As Received Basis)	: 36.3 (%)
Sulphur (As Received Basis)	: 0.97 (%)
Fixed Carbon (As Received Basis)	: 43.8 (%)
Gross Calorific Value (As Received Basis)	: 6480 Kcal / kg
Net Calorific Value (As Received Basis)	: 6185 Kcal / kg
Screen Size:	
Below 50 mm	: 97.2 (%)
Below 5 mm	: 40.0 (%)
Below 2 mm	: 22.7 (%)
Below 1 mm	: 12.0 (%)
Hardgrove Grindability Index (HGI)	: 63 Index Point

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
P.T. GEOSERVICES (LTD)

PT. GEOSERVICES
(Subyanto)

Laboratory Manager

Job No. : 09/K.1162

(Page 1 of 3)

REF NO : **76477**

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of exercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.

ORIGINAL

Ultimate Analysis (Dry Basis)

Ash	:	9.5	%
Carbon Total	:	73.8	%
Hydrogen	:	5.04	%
Nitrogen	:	1.47	%
Sulphur	:	1.10	%
Oxygen	:	9.09	%

Ash Fusibility (Reducing atmosphere)

Initial Deformation Temperature	:	1220	°C
Softening Temperature	:	1360	°C
Hemispherical Temperature	:	1380	°C
Fluid Temperature	:	1420	°C

Ash Analysis

SiO ₂	:	54.4	%
Al ₂ O ₃	:	24.6	%
Fe ₂ O ₃	:	11.0	%
CaO	:	2.85	%
MgO	:	1.74	%
TiO ₂	:	0.83	%
P ₂ O ₅	:	0.30	%
SO ₃	:	2.15	%
Na ₂ O	:	1.17	%
K ₂ O	:	0.72	%
Mn ₃ O ₄	:	0.03	%

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
P.T. GEOSERVICES (LTD)



PT. GEOSERVICES
(Subyanto)

Laboratory Manager

Balikpapan, June 24, 2008

Job No. : 09/K.1162

(Page 2 of 3)

REF NO : **76477**

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of exercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.



ORIGINAL

Page 1 of 3

TO WHOM IT MAY CONCERN

Celebrating 125 years
Alfred H Knight

CERTIFICATE OF ANALYSIS

Certificate Number : 45500
Sample Description : U.S.A. Steam Coal
Vessel : MV. PESSADA
Load Port : Hampton Roads, Norfolk, Virginia, U.S.A.
Date Loaded : 10th. - 11th. April 2008
Bill of Lading : 62,499.981 MT

Report of Analysis


PARAMETER	UNIT	AS RECEIVED	AIR DRIED	DRY BASIS	DRY ASH-FREE
TOTAL MOISTURE	%	7.6	-	-	-
AIR DRIED MOISTURE	%	-	1.4	-	-
ASH CONTENT	%	12.6	13.5	13.7	-
VOLATILE MATTER	%	28.9	30.8	31.3	36.2
FIXED CARBON	%	50.9	54.3	55.1	63.8
TOTAL SULPHUR	%	0.88	0.94	0.95	1.10
CHLORINE	ppm	409	437	443	513
FLUORINE	ppm	74	79	80	93
BORON	ppm	18	19	19	22
SELENIUM	ppm	<0.5	<0.5	<0.5	<0.5
CARBON	%	66.8	71.3	72.3	83.7
TOTAL HYDROGEN *	%	5.33	4.93	4.85	5.61
COAL HYDROGEN	%	4.48	4.78	4.85	5.61
NITROGEN	%	1.19	1.27	1.29	1.50
TOTAL OXYGEN **	%	13.19	8.08	6.98	8.08
COAL OXYGEN	%	6.45	6.88	6.98	8.08
GROSS CALORIFIC VALUE	KCal/Kg	6537	6978	7074	8195
" " " " " "	MJ/Kg	27.370	29.217	29.617	34.309
NET CALORIFIC VALUE ***	KCal/Kg	6263	-	-	-
" " " " " "	MJ/Kg	26.222	-	-	-
HARDGROVE INDEX	-	-	56	-	-

Total Hydrogen includes the Hydrogen in the sample moisture *

Total Oxygen includes the Oxygen in the sample moisture **

Net Calorific Value @ Constant Pressure ***

Analyses carried out in accordance with ASTM Standards



Frank Cunliffe, General Manager
 for **KNIGHT ENERGY SERVICES LTD**
INTERNATIONAL
SPECIALISTS OF
COAL AND COKE

KNIGHT ENERGY SERVICES LIMITED
 Hunterston Terminal, Fairlie, Nr.Largs, Ayrshire, KA29 OAZ
 Tel : (01475) 568081 Fax : (01475) 568984
 Email : ahk.scotland@ahkgroup.com



Celebrating 125 years
Alfred H Knight

TO WHOM IT MAY CONCERN

CERTIFICATE OF ANALYSIS


Certificate Number : 45500
Sample Description : U.S.A. Steam Coal
Vessel : MV. PESSADA
Load Port : Hampton Roads, Norfolk, Virginia, U.S.A.
Date Loaded : 10th. - 11th. April 2008
Bill of Lading : 62,499.981 MT

Elemental Ash Analysis

ASH ANALYSIS		
Oxide	Unit	Value
SiO ₂	%	57.44
Al ₂ O ₃	%	31.29
Fe ₂ O ₃	%	4.05
TiO ₂	%	1.56
Mn ₃ O ₄	%	0.02
CaO	%	0.94
MgO	%	1.05
Na ₂ O	%	0.22
K ₂ O	%	2.61
P ₂ O ₅	%	0.55
SO ₃	%	0.27

Sizing

SIZE (mm)	%
>50.0	1.3
50.0 x 0.0	98.7
<1.0	14.9


Frank Cumliffe, General Manager
 for **KNIGHT ENERGY SERVICES LTD**
MEMBERSHIP OF THE ASSOCIATION OF COAL AND COKE

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ORIGINAL

Page 3 of 3

Celebrating 125 years
Alfred H Knight

TO WHOM IT MAY CONCERN

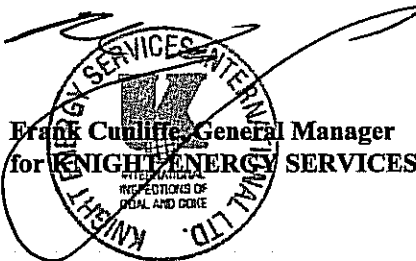
CERTIFICATE OF ANALYSIS

Certificate Number : 45500
Sample Description : U.S.A. Steam Coal
Vessel : MV. PESSADA
Load Port : Hampton Roads, Norfolk, Virginia, U.S.A.
Date Loaded : 10th. - 11th. April 2008
Bill of Lading : 62,499.981 MT

Ash Fusion Temperatures

ASH FUSION TEMPERATURES *		
Parameter	Reducing	Oxidising
DT	1200	1230
ST	>1400	>1400
HT	>1400	>1400
FT	>1400	>1400

* Temperatures in Degrees Celcius


Frank Cunliffe, General Manager
 for **KNIGHT ENERGY SERVICES LTD**
MEMBER OF THE
 GROUP OF COMPANIES
 REGISTERED IN THE
 REPUBLICS OF
 IRELAND AND DENMARK

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Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No	200805-0071	Date	06/05/2008
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A cargo of approximately 62141 metric tons of coal described by the Exporter as
SOUTH AFRICAN STEAM COAL IN BULK
 was loaded at the Richards Bay Coal Terminal between 04/05/2008 and 04/05/2008 on board the
M.V. POS GLORY
 This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2: 2001,
 prepared in accordance with ISO 13909-4: 2001 and tested by the SABS in accordance with the relevant
 standard methods, with the following results:

ISO Analysis

				As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)		ISO 1928:1995		26.09	27.30	28.23
Gross Calorific Value (kcal/kg)		ISO 1928:1995		6230	6520	6740
Gross Calorific Value (Btu/lb)		ISO 1928:1995		11220	11740	12140
Net Calorific Value (kcal/kg) constant volume		ISO 1928:1995		6000	6300	6540
Total Moisture	%	ISO 589:2003(C)		7.6		
Moisture in Analysis Sample	%	ISO 11722:1999			3.3	
Ash	%	ISO 1171:1997		14.0	14.7	15.2
Volatile Matter	%	ISO 562:1998		26.2	27.4	28.3
Fixed Carbon	%			52.2	54.6	56.5
				100.0	100.0	100.0
Sulphur (Total)	%	ASTM D4239-04a		0.56	0.59	0.61
Hydrogen in coal	%	ISO/TS 12902:2001 (E)			4.08	
Chlorine in coal	%	ASTM D4208-02			0.005	
Fluorine in coal	%	ASTM D3761-96(02)			0.021	
Fluorine in coal	ppm	ASTM D3761-96(02)		201	210	217
Chlorine in coal	ppm	ASTM D4208-02		48	50	52
Hardgrove Grindability Index		ISO 5074:1994			48	
HGI Yield	%	ISO 5074:1994				53
Ash Fusion Temp °C (Reducing)	Deformation	°C	ISO 540:1995			1320
	Spherical	°C	ISO 540:1995			1330
	Hemispherical	°C	ISO 540:1995			1350
	Flow	°C	ISO 540:1995			1370
Ash Fusion Temp °C (Oxidising)	Deformation	°C	ISO 540:1995			1340
	Spherical	°C	ISO 540:1995			1350
	Hemispherical	°C	ISO 540:1995			1370
	Flow	°C	ISO 540:1995			1400

Issued at loadport by: _____
 Technical Signatory



South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
 Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/3

Certificate No : 200805-0071

Date: 06/05/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	54.58
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	26.08
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.85
Calcium Oxide (CaO)	%	ASTM D3682-01	6.70
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.60
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.86
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.90
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.20
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	2.23
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.38
Phosphorus in coal (A.D.)	%	BS 1016 Part 14:1963	0.089

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	71.88
Hydrogen	%	ISO/TS 12902:2001 (E)	4.22
Nitrogen	%	ISO/TS 12902:2001 (E)	1.70
Sulphur	%	ASTM D4239-04a	0.61
Ash	%	ISO 1171:1997	15.20
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%		6.39

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South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No: 200806-0371

Date: 20/06/2008

A cargo of approximately 62429 metric tons of coal described by the Exporter as SOUTH AFRICAN STEAM COAL IN BULK was loaded at the Richards Bay Coal Terminal between 17/06/2008 and 18/06/2008 on board the M.V. PRABHU DAS. This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2:2001, prepared in accordance with ISO 13909-4:2001 and tested by the SABS in accordance with the relevant standard methods, with the following results:

ISO Analysis

		As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)	ISO 1928:1995	26.02	27.52	28.31
Gross Calorific Value (kcal/kg)	ISO 1928:1995	6210	6570	6760
Gross Calorific Value (Btu/lb)	ISO 1928:1995	11190	11830	12170
Net Calorific Value (kcal/kg) constant volume	ISO 1928:1995	6000	6370	6570
Total Moisture	% ISO 589:2003(C)	8.1		
Moisture in Analysis Sample	% ISO 11722:1999		2.8	
Ash	% ISO 1171:1997	14.1	14.9	15.3
Volatile Matter	% ISO 562:1998	23.1	24.4	25.1
Fixed Carbon	%	54.7	57.9	59.6
		100.0	100.0	100.0
Sulphur (Total)	% ASTM D4239-04a	0.55	0.58	0.60
Hydrogen in coal	% ISO/TS 12902:2001 (E)		3.76	
Nitrogen in coal	% ISO/TS 12902:2001 (E)		1.67	
Chlorine in coal	% ASTM D4208-02		0.005	
Fluorine in coal	% ASTM D3761-96(02)		0.017	
Fluorine in coal	ppm ASTM D3761-96(02)	161	170	175
Chlorine in coal	ppm ASTM D4208-02	47	50	51
Hardgrove Grindability Index	- ASTM D409-02		53	
HGI Yield	% ASTM D409-02			58
Ash Fusion Temp. °C (Reducing)	Deformation °C ISO 540:1995			1480
	Spherical °C ISO 540:1995			1490
	Hemispherical °C ISO 540:1995			1500
	Flow °C ISO 540:1995			+1500
Ash Fusion Temp. °C (Oxidising)	Deformation °C ISO 540:1995			+1500
	Spherical °C ISO 540:1995			+1500
	Hemispherical °C ISO 540:1995			+1500
	Flow °C ISO 540:1995			+1500

Emission Factor per European Parliament Directive 2003/87/EN = 97.8 metric tons CO₂/TJ

Issued at loadport by: _____

Technical Signatory



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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/3

Certificate No.: 200806-0371

Date: 20/06/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	46.80
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	33.24
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.70
Calcium Oxide (CaO)	%	ASTM D3682-01	6.61
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.32
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.98
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.56
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.10
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	1.91
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.80
Phosphorus in coal (A.D.)	%	BS 1016 Part 14:1963	0.117

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	72.67
Hydrogen	%	ISO/TS 12902:2001 (E)	3.87
Nitrogen	%	ISO/TS 12902:2001 (E)	1.72
Sulphur	%	ASTM D4239-04a	0.60
Ash	%	ISO 1171:1997	15.33
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%		5.81

Emission Factor per European Parliament Directive 2003/87/EN = 97.8 metric tons CO₂/TJ

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SAMARINDA. Jl. Wijaya Kusumah No. 25A, Ph. 0541-203728, Fx. 0541-203727; BANJARBARU. Jl. Jend. A. Yani Barat No. 8, Ph. 0511-4772616 (Hunting), Fx. 0511-4772324; KOTABARU. Jl. Taman
Melati No. 20 RT. 02/RW. 1; Ph. 0518-21529, Fx. 0518-21529 TANJUNG REDEB-BERAU. Jl. Raya Bulungan KM. 01. Gang Muliana-Gunung Tabur, Ph. 0554-23138, Fx. 0554-23354; GUNUNG
BAYAN. Manau Laboratory, Manau-Musara Pahau, Kutai Barat, Ph. 0542-593704, TANAH GROGOT. Jl. Cipto Mangunkusumo No. 52, Ph. 0543-23207; ASAM-ASAM. Jl. A. Yani RT. 12 RW. 03, Desa Asam-
asam, Kac. Jorong, Ph. 0512-636075, Fx. 0512-636078, BATULICIN. Jl. Raya Batulicin No. 94 RT. 14, RW. 03, Ph./Fx. 0518-71972; RIAU. Jl. Subrantas No. 10 RT. 20/RW. 05, Seberida-Pengat 29371, Ph./Fx.
0769-323410

CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL NAME : MV. RIBBON
LOADING DATE : APRIL 16 UP TO 17, 2008
COMMODITY : INDONESIAN STEAM COAL IN BULK
QUANTITY : 62,412 METRIC TONS
LOADING PORT : BALIKPAPAN COAL TERMINAL, INDONESIA
SHIPPER : PT BAYAN RESOURCES
GRAHA IRAMA 12TH FLOOR, SUITE O
JL HR RASUNA SAID BLOK X-1 KAV 1&2
JAKARTA SELATAN

ORIGINAL

Sampling preparation testing and analysis was done in accordance with ISO standard methods, with the exception of Ash Analysis which was completed using AS 1038, Part 14.2-2003 and Hardgrove Grindability Index (ASTM D409).

The results of testing and analysis are as follows :

TEST	RESULTS
Total Moisture (As Received Basis)	: 10.0 (%)
Inherent Moisture (Air Dried Basis)	: 5.1 (%)
Ash (As Received Basis)	: 9.7 (%)
Volatile Matter (As Received Basis)	: 36.3 (%)
Sulphur (As Received Basis)	: 0.76 (%)
Fixed Carbon (As Received Basis)	: 44.0 (%)
Gross Calorific Value (As Received Basis)	: 6548 Kcal / kg
Net Calorific Value (As Received Basis)	: 6245 Kcal / kg
Screen Size:	
Below 50 mm	: 97.8 (%)
Below 5 mm	: 43.0 (%)
Below 2 mm	: 22.1 (%)
Below 1 mm	: 10.8 (%)
Hardgrove Grindability Index (HGI)	: 63 Index Point

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
P.T. GEOSERVICES (LTD)

PT. GEOSERVICES
(Subyanto)

Laboratory Manager

Balikpapan, April 19, 2008

Job No. : 09/K.1109

(Page 1 of 3)

REF NO : 65908

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of exercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.

ORIGINAL

Ultimate Analysis (Dry Basis)

Ash	:	10.9	%
Carbon Total	:	72.8	%
Hydrogen	:	5.33	%
Nitrogen	:	1.69	%
Sulphur	:	0.84	%
Oxygen	:	8.44	%

Ash Fusibility (Reducing Atmosphere)

Initial Deformation Temperature	:	1280	°C
Softening Temperature	:	1420	°C
Hemispherical Temperature	:	1430	°C
Fluid Temperature	:	1500	°C

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
P.T. GEOSERVICES (LTD)



Laboratory Manager

Balikpapan, April 19, 2008

Job No. : 09/K.1109

(Page 2 of 3)

REF NO : **65908**

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of exercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/2

Certificate No.: 200805-0441

Date: 20/05/2008

A cargo of approximately 59951 metric tons of coal described by the Exporter as SOUTH AFRICAN STEAM COAL IN BULK was loaded at the Richards Bay Coal Terminal between 17/05/2008 and 18/05/2008 on board the M.V. ROYAL OCEAN. This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2:2001, prepared in accordance with ISO 13909-4:2001 and tested by the SABS in accordance with the relevant standard methods, with the following results:

ISO Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)		ISO 1928:1995	25.89	27.24	28.05
Gross Calorific Value (kcal/kg)		ISO 1928:1995	6180	6510	6700
Gross Calorific Value (Btu/lb)		ISO 1928:1995	11130	11710	12060
Net Calorific Value (MJ/kg) constant volume		ISO 1928:1995	24.97		
Net Calorific Value (kcal/kg) constant volume		ISO 1928:1995	5960		
Net Calorific Value (Btu/lb) constant volume		ISO 1928:1995	10740		
Total Moisture	%	ISO 589:2003(C)	7.7		
Moisture in Analysis Sample	%	ISO 11722:1999		2.9	
Ash	%	ISO 1171:1997	14.7	15.5	16.0
Volatile Matter	%	ISO 562:1998	23.8	25.0	25.7
Fixed Carbon	%		53.8	56.6	58.3
			100.0	100.0	100.0
Sulphur (Total)	%	ASTM D4239-04a	0.45	0.47	0.48
Hydrogen in coal	%	ISO/TS 12902:2001 (E)		3.81	
Chlorine in coal	%	ASTM D4208-02	0.004	0.004	0.004
Fluorine in coal	%	ASTM D3761-96(02)	0.015	0.016	0.016
Fluorine in coal	ppm	ASTM D3761-96(02)	152	160	165
Chlorine in coal	ppm	ASTM D4208-02	38	40	41
Hardgrove Grindability Index		ISO 5074:1994		50	
HGI Yield	%	ISO 5074:1994			57
Ash Fusion Temp. C (Reducing)	Deformation	°C			1350
	Spherical	°C			1380
	Hemispherical	°C			1410
	Flow	°C			1440

Issued at loadport by: _____

Technical Signatory



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Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

The sampling and testing were performed by SABS Commercial (Pty) Ltd. While every endeavour has been made to ensure that a sample is representative and that the results quoted above are accurate, the SABS or its officers shall in no way be liable for any error or omission occurring therein nor for any damage or loss whatsoever that may arise from the issue of this certificate. Copyright of this certificate is owned by SABS.

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/2

Certificate No.: 200805-0441

Date: 20/05/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	50.65
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	29.56
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.70
Calcium Oxide (CaO)	%	ASTM D3682-01	8.78
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.82
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	2.03
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.48
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.17
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	2.03
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.38

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	71.88
Hydrogen	%	ISO/TS 12902:2001 (E)	3.92
Nitrogen	%	ISO/TS 12902:2001 (E)	1.75
Sulphur	%	ASTM D4239-04a	0.48
Ash	%	ISO 1171:1997	15.96
Chlorine	%	ASTM D4208-02	0.004
Oxygen (By Difference)	%		6.01

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/2

Certificate No: 200804-0621 Date: 28/04/2008

A cargo of approximately 60313 metric tons of coal described by the Exporter as SOUTH AFRICAN STEAM COAL IN BULK was loaded at the Richards Bay Coal Terminal between 24/04/2008 and 25/04/2008 on board the M.V. SILVER MEI. This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2:2001 prepared in accordance with ISO 13909-4:2001 and tested by the SABS in accordance with the relevant standard methods, with the following results:

ISO Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)	ISO 1928:1995		26.15	27.43	28.37
Gross Calorific Value (kcal/kg)	ISO 1928:1995		6250	6550	6780
Gross Calorific Value (Btu/lb)	ISO 1928:1995		11240	11790	12200
Net Calorific Value (MJ/kg) constant volume	ISO 1928:1995		25.23		
Net Calorific Value (kcal/kg) constant volume	ISO 1928:1995		6030		
Net Calorific Value (Btu/lb) constant volume	ISO 1928:1995		10850		
Total Moisture	% ISO 589:2003(C)		7.8		
Moisture in Analysis Sample	% ISO 11722:1999			3.3	
Ash	% ISO 1171:1997		13.8	14.5	15.0
Volatile Matter	% ISO 562:1998		23.1	24.2	25.0
Fixed Carbon	%		55.3	58.0	60.0
			100.0	100.0	100.0
Sulphur (Total)	% ASTM D4239-04a		0.43	0.45	0.47
Hydrogen in coal	% ISO/TS 12962:2001 (E)			3.79	
Chlorine in coal	% ASTM D4208-02		0.004	0.004	0.004
Fluorine in coal	% ASTM D3761-96(02)		0.012	0.013	0.013
Fluorine in coal	ppm ASTM D3761-96(02)		124	130	134
Chlorine in coal	ppm ASTM D4208-02		38	40	41
Hardgrove Grindability Index	- ISO 5074:1994			52	
HGI Yield	% ISO 5074:1994				54
Ash Fusion Temp. C (Reducing)		Deformation	C	ISO 540:1995	1420
		Spherical	C	ISO 540:1995	1440
		Hemispherical	C	ISO 540:1995	1470
		Flow	C	ISO 540:1995	+1500

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/2

Certificate No.:	200804-0621	Date:	28/04/2008
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Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	50.38
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	32.83
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.20
Calcium Oxide (CaO)	%	ASTM D3682-01	6.79
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.43
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.61
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.57
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.10
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	1.81
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.40

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	72.40
Hydrogen	%	ISO/TS 12902:2001 (E)	3.92
Nitrogen	%	ISO/TS 12902:2001 (E)	1.63
Sulphur	%	ASTM D4239-04a	0.47
Ash	%	ISO 1171:1997	14.99
Chlorine	%	ASTM D4208-02	0.004
Oxygen (By Difference)	%		6.59

Issued at loadport by: *Ranga*
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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No: 200805-0691

Date: 28/05/2008

A cargo of approximately 62199 metric tons of coal described by the Exporter as
SOUTH AFRICAN STEAM COAL IN BULK
 was loaded at the Richards Bay Coal Terminal between 26-05-2008 and 27-05-2008 onboard the
M.V. TPC ARIRANG
 This is to certify that the coal was mechanically sampled in accordance with ISO 15909-2:2001,
 prepared in accordance with ISO 15909-4:2001 and tested by the SABS in accordance with the relevant
 standard methods, with the following results:

ISO Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)		ISO 1928:1995	26.08	27.39	28.38
Gross Calorific Value (kcal/kg)		ISO 1928:1995	6230	6540	6780
Gross Calorific Value (Btu/lb)		ISO 1928:1995	11210	11780	12200
Net Calorific Value (kcal/kg) constant volume		ISO 1928:1995	6000	6320	6570
Total Moisture	%	ISO 589:2003(C)	8.1		
Moisture in Analysis Sample	%	ISO 11722:1999		3.5	
Ash	%	ISO 1171:1997	13.6	14.3	14.8
Volatile Matter	%	ISO 562:1998	26.6	27.9	28.9
Fixed Carbon	%		51.7	54.3	56.3
			100.0	100.0	100.0
Sulphur (Total)	%	ASTM D4239-04a	0.57	0.60	0.62
Hydrogen in coal	%	ISO/TS 12902:2001 (E)		4.04	
Chlorine in coal	%	ASTM D4208-02		0.005	
Fluorine in coal	%	ASTM D3761-96(02)		0.013	
Fluorine in coal	ppm	ASTM D3761-96(02)	124	130	135
Chlorine in coal	ppm	ASTM D4208-02	48	50	52
Hardgrove Grindability Index		ISO 5074:1994		50	
HGI Yield	%	ISO 5074:1994			54
Ash Fusion Temp. °C (Reducing)	Deformation	°C			1330
	Spherical	°C			1360
	Hemispherical	°C			1390
	Flow	°C			1410
Ash Fusion Temp. °C (Oxidising)	Deformation	°C			1350
	Spherical	°C			1380
	Hemispherical	°C			1410
	Flow	°C			1440

Issued at loadport by:

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Certificate No.	200805-0691	Date:	28/05/2008
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Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	53.71
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	26.37
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	3.82
Calcium Oxide (CaO)	%	ASTM D3682-01	6.76
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.42
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.50
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.83
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.23
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	2.16
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.40
Phosphorus in coal (A.D.)	%	BS 1016 Part 14:1963	0.087

Ultimate Analysis (Dry)			
Carbon	%	ISO/TS 12902:2001 (E)	72.08
Hydrogen	%	ISO/TS 12902:2001 (E)	4.19
Nitrogen	%	ISO/TS 12902:2001 (E)	1.72
Sulphur	%	ASTM D4239-04a	0.62
Ash	%	ISO 1171:1997	14.82
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%		6.57

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MARINE CARGO SURVEYING

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CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL NAME : MV. UNICORN OCEAN
 LOADING DATE : MAY 04 UP TO 05, 2008
 COMMODITY : INDONESIAN STEAM COAL IN BULK
 QUANTITY : 62,747 METRIC TONS
 LOADING PORT : BALIKPAPAN COAL TERMINAL, INDONESIA
 SHIPPER : PT BAYAN RESOURCES
 GRAHA IRAMA 12TH FLOOR, SUITE O
 JL. HR. RASUNA SAID BLOK X-1 KAV 1&2
 JAKARTA SELATAN

ORIGINAL

Sampling preparation testing and analysis was done in accordance with ISO standard methods, with the exception of Ash Analysis which was completed using AS 1038, Part 14.2-2003 and Hardgrove Grindability Index (ASTM D409).

The results of testing and analysis are as follows :

TEST	RESULTS
Total Moisture (As Received Basis)	: 11.3 (%)
Inherent Moisture (Air Dried Basis)	: 5.1 (%)
Ash (As Received Basis)	: 9.2 (%)
Volatile Matter (As Received Basis)	: 36.0 (%)
Sulphur (As Received Basis)	: 0.87 (%)
Fixed Carbon (As Received Basis)	: 43.5 (%)
Gross Calorific Value (As Received Basis)	: 6464 Kcal / kg
Net Calorific Value (As Received Basis)	: 6162 Kcal / kg
Screen Size:	
Below 50 mm	: 98.2 (%)
Below 5 mm	: 42.0 (%)
Below 2 mm	: 22.5 (%)
Below 1 mm	: 11.7 (%)
Hardgrove Grindability Index (HGI)	: 69 Index Point

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
 P.T. GEOSERVICES (LTD)

Balikpapan, May 13, 2008


 PT. GEOSERVICES
 (Alim Nahri)

Act. To Laboratory Manager

Job No. : 09/K.1132

(Page 1 of 3)

REF NO : **76187**

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of exercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.

ORIGINAL

Ultimate Analysis (Dry Basis)

Ash	:	10.3	%
Carbon Total	:	72.4	%
Hydrogen	:	5.23	%
Nitrogen	:	1.46	%
Sulphur	:	0.98	%
Oxygen	:	9.63	%

Ash Fusibility (Reducing atmosphere)

Initial Deformation Temperature	:	1380	°C
Softening Temperature	:	1420	°C
Hemispherical Temperature	:	1430	°C
Fluid Temperature	:	1460	°C

Ash Analysis

SiO ₂	:	55.7	%
Al ₂ O ₃	:	23.9	%
Fe ₂ O ₃	:	9.00	%
CaO	:	1.70	%
MgO	:	1.60	%
TiO ₂	:	0.76	%
P ₂ O ₅	:	0.259	%
SO ₃	:	2.30	%
Na ₂ O	:	0.92	%
K ₂ O	:	2.36	%
Mn ₃ O ₄	:	0.030	%

This certificate refers to sampling for quality analysis and does not certify any other matters. It reflects to our finding at time and place of intervention only and issued without prejudice.

Signed for and behalf of,
P.T. GEOSERVICES (LTD)

Balikpapan, May 13, 2008



PT. GEOSERVICES
(Alim Bahri)

Act. To Laboratory Manager

Job No. : 09/K.1132

(Page 2 of 3)

REF NO : 76187

This Certificate is the true expression of our inspection findings and the relevant method of calculations following standards as generally accepted in trade. We are responsible only up to the limit as it is possible over a reasonable care and due diligence of excercise. However, this certificate is issued on the understanding that it may not relieve parties from their contractual obligations.



ORIGINAL

Page 1 of 4

Celebrating 125 years

Alfred H Knight

TO WHOM IT MAY CONCERN**CERTIFICATE OF ANALYSIS**

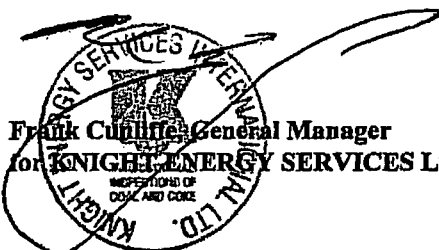
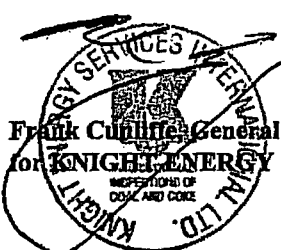
Certificate Number : 46818
 Reference : 46818/05/01-09
 Sample Description : South African Steam Coal
 Vessel : MV. YASA FORTUNE
 Load Port : Richards Bay Coal Terminal, South Africa
 Date Loaded : 9th. - 11th. May 2008
 Bill of Lading : 80,874.00 MT

Report of Analysis

PARAMETER	UNIT	AS RECEIVED	AIR DRIED	DRY BASIS	TEST METHOD
TOTAL MOISTURE	%	7.0	-	-	ISO 589
AIR DRIED MOISTURE	%	-	2.1	-	ISO 11722
ASH CONTENT	%	13.4	14.2	14.5	ISO 1171
VOLATILE MATTER	%	24.9	26.2	26.8	ISO 562
FIXED CARBON	%	54.7	57.5	58.7	By Difference
TOTAL SULPHUR	%	0.67	0.71	0.72	ASTM D4239
CHLORINE	ppm	73	76	78	ISO 587
FLUORINE	ppm	113	119	122	ASTM D3761
BORON	ppm	23	24	25	ICP/OES
SELENIUM	ppm	<0.5	<0.5	<0.5	ASTM D4606
CARBON	%	64.4	67.8	69.3	ASTM D5373
HYDROGEN	%	3.60	3.79	3.87	ASTM D5373
NITROGEN	%	1.64	1.73	1.77	ASTM D5373
OXYGEN	%	9.22	9.71	9.92	By Difference
GROSS CALORIFIC VALUE	KCal/Kg	6321	6656	6799	ISO 1928
	MJ/Kg	26.466	27.867	28.468	ISO 1928
NET CALORIFIC VALUE *	KCal/Kg	6096	-	-	ISO 1928
	MJ/Kg	25.522	-	-	ISO 1928
HARDGROVE INDEX **	-	-	52	-	ISO 5074

* Net Calorific Value @ Constant Pressure

** Yield of 1.18 x 0.60 mm test sample = 46.8 %


 Frank Cupliffe, General Manager
 for KNIGHT ENERGY SERVICES LTD


KNIGHT ENERGY SERVICES LIMITED

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Email : ahk.scotland@ahkgroup.com



Celebrating 125 years
Alfred H Knight

ORIGINAL

Page 2 of 4

TO WHOM IT MAY CONCERN

CERTIFICATE OF ANALYSIS

Certificate Number : 46818
Reference : 46818/05/01-09
Sample Description : South African Steam Coal
Vessel : **MV. YASA FORTUNE**
Load Port : Richards Bay Coal Terminal, South Africa
Date Loaded : 9th. - 11th. May 2008
Bill of Lading : 80,874.00 MT

Elemental Ash Analysis

OXIDE	UNIT	VALUE	TEST METHOD
SiO ₂	%	47.12	ASTM D4326
Al ₂ O ₃	%	33.02	ASTM D4326
Fe ₂ O ₃	%	2.83	ASTM D4326
TiO ₂	%	1.85	ASTM D4326
Mn ₂ SO ₄	%	0.05	ASTM D4326
CaO	%	7.68	ASTM D4326
MgO	%	1.36	ASTM D4326
Na ₂ O	%	0.18	ASTM D4326
K ₂ O	%	0.58	ASTM D4326
P ₂ O ₅	%	2.99	ASTM D4326
SO ₃	%	2.34	ASTM D5016

Frank Cumie, General Manager
for KNIGHT ENERGY SERVICES LTD

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 Email : medan@carsurin.com

080922.0293

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 61,039 MT OF INDONESIAN STEAM COAL IN BULK
Shipper : PT. INDOMINCO MANDIRI
 VENTURA BUILDING, 8TH FLOOR
 JLR.A. KARTINI NO. 26, JAKARTA 12430

Name of Vessel : MV. YONG FENG
Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
Port of Discharging : ITALIAN PORT(S)
Consignee : TO THE ORDER OF: ENEL TRADE SPA
Notify Address : ENEL TRADE SPA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY

Date of Sampling : MAY 01 - 02, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-07) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).

- Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample
- Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory (accreditation by KAN / National Accreditation Committee - Indonesia for ISO/IEC 17025:2005 Cert No. LP-352-IDN) in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Total Moisture, Weight %	(ISO 589:2003(E))	14.59	As Received Basis
Proximate Analysis, Weight %			
Moisture in the Analysis Sample	(ISO 11722:1999(E))	8.49	Air Dried Basis
Ash Content	(ISO 1171:1997(E))	5.49	As Received Basis
Volatile Matter	(ISO 562:1998(E))	38.15	As Received Basis
Fixed Carbon	By calculation	41.77	As Received Basis
Total Sulphur, Weight %	(ASTM D 4239-04a)	0.70	As Received Basis
Gross Calorific Value, Kcal/kg	(ISO 1928:1995(E))	6,113	As Received Basis
Net Calorific Value		5,820	As Received Basis
Hydrogen, Weight %	(ASTM D 5373-02)	4.10	As Received Basis
Ash Fusion Temperature, °C	(ASTM D 1857-04)	Reducing Atm	
Hemispherical Temperature		1,320	
Hardgrove Grindability Index	(ASTM D 409-02)	48	
Size Analysis, Weight %	(ASTM D 4749-87)		
0 mm - 50 mm		97.85	
Under 1 mm		5.19	

SAMARINDA, MAY 07, 2008

Signed on behalf of
 PT CARSURIN

RUYAT GUNAWAN
 Laboratory Manager



CARSURIN Laboratory

Coal, Mineral, Petrochemical

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080922.0293AA

Page : 1 of 2

CERTIFICATE OF SAMPLING AND ANALYSIS

Consignment : 61,039 MT OF INDONESIAN STEAM COAL IN BULK
 Shipper : **PT. INDOMINCO MANDIRI**
 VENTURA BUILDING, 8TH FLOOR
 JL.R.A. KARTINI NO. 26, JAKARTA 12430

Name of Vessel : **MV. YONG FENG**
 Port of Loading : BONTANG COAL TERMINAL, EAST KALIMANTAN, INDONESIA
 Port of Discharging : ITALIAN PORT(S)
 Consignee : TO THE ORDER OF: ENEL TRADE SPA
 Notify Address : ENEL TRADE SPA
 VIALE REGINA MARGHERITA 125
 00198 ROME - ITALY

Date of Sampling : MAY 01 - 02, 2008

SAMPLING

Samples were taken in accordance with ASTM Standard (D 2234/D 2234M-03) and prepared in accordance with ISO standards (ISO 13909-4:2001(E)).

- Four bags for HGI determination, each contains 5 kg of -4.75 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample
- Four bags for general analysis, each contains 5 kg of - 3.0 mm were distributed to shipper, buyer, PT Carsurin Laboratory and as Retained sample

ANALYSIS

Analysis were performed at PT Carsurin, Samarinda Laboratory in accordance with Standards Method that is shown in parenthesis and the results are as follows:

Ultimate Analysis, Weight %

Carbon	(ASTM D 5373-02)	65.07	Air Dried Basis
Nitrogen	(ASTM D 5373-02)	1.21	Air Dried Basis
Sulphur	(ASTM D 4239-04a)	0.75	Air Dried Basis
Oxygen	by calculation	14.21	Air Dried Basis

Ash Analysis, Weight %

Silicon dioxide, SiO ₂	(ASTM D 3682-01)	49.90
Aluminum Oxide, Al ₂ O ₃	(ASTM D 3682-01)	23.80
Ferric Oxide, Fe ₂ O ₃	(ASTM D 3682-01)	9.69
Calcium Oxide, CaO	(ASTM D 3682-01)	4.05
Magnesium Oxide, MgO	(ASTM D 3682-01)	2.59
Sodium Oxide, Na ₂ O	(ASTM D 3682-01)	1.48
Potassium Oxide, K ₂ O	(ASTM D 3682-01)	1.92
Titanium Oxide, TiO ₂	(ASTM D 3682-01)	0.50
Manganese, MnO ₂	(ASTM D 3682-01)	0.03
Sulphur Trioxide, SO ₃	(ASTM D 5016-01)	5.50
Phosphorus Pentoxide, P ₂ O ₅	(AS 1038-1982 Part 14.1)	0.57

Ash Fusion Temperature, °C

Initial Deformation Temperature	(ASTM D 1857-87)	1,250
Softening Temperature		1,290
Hemispherical Temperature		1,320
Fluid Temperature		1,350

Reducing Atm.





CARSURIN

080922.0293AA
 ,Page : 2 of 2

Trace Element, ppm

Boron	(ACIRL Work Instruction AL-061 for B)	77	As Received Basis
Fluorine	(ASTM D-3761-96)	41	As Received Basis
Chlorine	(ASTM D-2361-02)	72	As Received Basis
Selenium	(ASTM D-4606-03)	0.07	As Received Basis

Size Analysis, Weight %

(ASTM D-4749-87)	
Passing 2 inc. screen	97.85
Passing 1 inc. screen	81.53
Passing 4 Mesh (4.75 mm)	33.24
Passing 18 Mesh (1.00 mm)	5.19
Passing 35 Mesh (0.500 mm)	1.92

SAMARINDA, MAY 07, 2008

Signed on behalf of

PT CARSURIN



RUYAT GUNAWAN
 Laboratory Manager

P.O. Box 82124,
 Southdale, 2135
 South Africa
 TEL.: (011) 496-2228
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INSPECTORATE M&L (PTY) LTD.
 (Reg. No. 19/03244/07)
 Consulting Industrial Chemists, Analysts & Samplers
CONFIDENTIAL

Ref. No. : 08/5065M
 Issued at : Richards Bay
 Date : 2008-05-29
 CB/cb

Certificate / Report

CERTIFICATE OF ANALYSIS

COMMODITY	SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY	62 104 metric tons.
VESSEL	m.v. "YUSHO REGULUS"
LOADED	At Richards Bay from 2008.05.20 to 2008.05.21
SAMPLED	Throughout loading operations in compliance with ISO Standard Procedure.
SAMPLES ANALYSED	The following are the computed weighted average results of the 7 individual results of the analysis. Analysis carried out according to ISO procedures

RESULTS OBTAINED :	As Received Basis	Air Dry Basis	Dry Basis
<u>Determination</u>			
Moisture, %	7.40	3.5	
Volatiles, %	23.2	24.2	25.1
Ash, %	14.1	14.7	15.2
Fixed Carbon, % (by diff.)	<u>55.30</u>	<u>57.6</u>	<u>59.7</u>
	100.00	100.0	100.0
Total Sulphur, S %	0.53	0.55	0.57
Gross Calorific Value, kcal/kg	6261	6524	6761
Nett Calorific Value, kcal/kg	6039	6336	6565
Chlorine, Cl %	0.005	0.005	0.005
HGI		55	
<u>Ash Fusion Temperature</u>	<u>Reducing</u>		<u>Oxidizing</u>
Deformation Temperature	1330° C		1350° C
Softening Temperature	1350° C		1370° C
Hemispherical Temperature	1370° C		1390° C
Flow Temperature	1400° C		+1400° C

Note : Analysis according to ISO analytical procedures

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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(Signature)

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INSPECTORATE

INSPECTORATE M&L (PTY) LTD.

(Reg. No. 89/09084/07)

Consulting Industrial Chemists, Analysts & Samplers

CONFIDENTIAL

Certificate / Report

Ref. No. : 08/5065M

Issued at : Richards Bay

Date : 2008.05.29

CB/cb

CERTIFICATE OF ANALYSIS

COMMODITY	SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY	62 104 metric tons.
VESSEL	m.v. "YUSHO REGULUS"
LOADED	At Richards Bay from 2008.05.20 to 2008.05.21
SAMPLED	Throughout loading operations in compliance With ISO Standard Procedure.

ULTIMATE ANALYSIS

	As Received Basis	Air Dry Basis	Dry Basis
Carbon, %	67.58	70.43	72.98
Hydrogen, %	3.67	3.82	3.96
Nitrogen, %	1.66	1.73	1.79
Oxygen, %	5.06	5.27	5.50

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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INSPECTORATE M&L (PTY) LTD.
Reg. No. 97/03064/07
Consulting Industrial Chemists, Analysts & Samplers
CONFIDENTIAL

Ref. No. : 08/5065M
Issued at : Richards Bay
Date : 2008.05.29
CB/cb

Certificate / Report

CERTIFICATE OF ANALYSIS

COMMODITY	SOUTH AFRICAN STEAM COAL IN BULK
QUANTITY	62 104 metric tons.
VESSEL	m.v. "YUSHO REGULUS"
LOADED	At Richards Bay from 2008.05.20 to 2008.05.21
SAMPLED	Throughout loading operations in compliance With ISO Standard Procedure.

ANALYSIS OF THE ASH

	Dry Basis
Total Silica as SiO ₂ , %	48.20
Aluminium as Al ₂ O ₃ , %	27.40
Total Iron as Fe ₂ O ₃ , %	2.28
Titanium as TiO ₂ , %	2.23
Phosphorus as P ₂ O ₅ , %	1.57
Calcium as CaO, %	7.69
Magnesium as MgO, %	1.70
Sodium as Na ₂ O, %	0.29
Potassium as K ₂ O, %	0.51
Sulphur as SO ₃ , %	5.52
Manganese as MnO, %	0.05

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

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(Signature)

SABS

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No.: 200805-079A

Date: 02/06/2008

A cargo of approximately 62982 metric tons of coal described by the Exporter as
SOUTH AFRICAN STEAM COAL IN BULK
 was loaded at the Richards Bay Coal Terminal between 29/05/2008 and 30/05/2008 on board the
M.V. LORD BYRON
 This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2; 2001,
 prepared in accordance with ISO 13909-4; 2001 and tested by the SABS in accordance with the relevant
 standard methods, with the following results:

ASTM Analysis

				As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)		ASTM D5865-04		25.88	27.21	28.28
Gross Calorific Value (kcal/kg)		ASTM D5865-04		6180	6500	6750
Net Calorific Value (kcal/kg) constant volume		ASTM D5865-04		5950	6280	6550
Total Moisture	%	ASTM D2961-01		8.5		
Moisture in Analysis Sample	%	ASTM D3173-03			3.8	
Ash	%	ASTM D3174-04		13.4	14.1	14.7
Volatile Matter	%	ASTM D3175-02		27.2	28.6	29.7
Fixed Carbon	%	ASTM D3172-89(02)		50.9	53.5	55.6
				100.0	100.0	100.0
Sulphur (Total)	%	ASTM D4239-04a		0.67	0.70	0.73
Chlorine in coal	%	ASTM D4208-02		0.004	0.004	0.004
Fluorine in coal	%	ASTM D3761-96(02)		0.014	0.015	0.016
Fluorine in coal	ppm	ASTM D3761-96(02)		143	150	156
Chlorine in coal	ppm	ASTM D4208-02		38	40	42
Hardgrove Grindability Index	-	ASTM D409-02			49	
HGI Yield	%	ASTM D409-02				59
Ash Fusion Temp. °C (Reducing)	Deformation	°C	ASTM D1857-04			1320
	Softening	°C	ASTM D1857-04			1330
	Hemispherical	°C	ASTM D1857-04			1350
	Flow	°C	ASTM D1857-04			1370
Ash Fusion Temp. °C (Oxidising)	Deformation	°C	ASTM D1857-04			1350
	Softening	°C	ASTM D1857-04			1370
	Hemispherical	°C	ASTM D1857-04			1400
	Flow	°C	ASTM D1857-04			1430

Issued at loadport by: _____

Technical Signatory

South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
 Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

The sampling and testing were performed by SABS Commercial (Pty) Ltd. While every endeavour has been made to ensure that a sample is representative and that the results quoted above are accurate, the SABS or its officers shall in no way be liable for any error or omission occurring therein nor for any damage or loss whatsoever that may arise from the issue of this certificate. Copyright of this certificate is owned by SABS.



SABS

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 2/3

Certificate No.:

200805-079A

Date:

02/06/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	48.65
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	28.40
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	4.18
Calcium Oxide (CaO)	%	ASTM D3682-01	7.60
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.88
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.59
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.46
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.25
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	2.57
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	2.42
Phosphorus in coal (A.D.)	%	BS 1016:Part 14:1963	0.149

Ultimate Analysis (Dry)			
Carbon	%	ASTM D5373 - 02	72.12
Hydrogen	%	ASTM D5373 - 02	4.11
Nitrogen	%	ASTM D5373 - 02	1.77
Sulphur	%	ASTM D4239-04a	0.73
Ash	%	ASTM D3174-04	14.66
Chlorine	%	ASTM D4208-02	0.004
Oxygen (By Difference)	%	ASTM D3176-89(02)	6.61

Issued at loadport by: _____

Technical Signatory

S A N A S

ACCREDITED
LABORATORY
T0246

South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa

Tel: (035) 797-7209, int. code +27 35, Fax: (035) 797-7214.

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Part.Iva 00547290874
REG.SOC.TRIB.CT.N. 9493
G.C.I.A.A. CT.N. 111724

Petroleum Chemical Control

società a responsabilità limitata – capitale sociale € 51.084,00 interamente versato
CARGO INSPECTION-TANK CALIBRATIONS-TIME CONTROL-CHEMICAL ANALYSIS
LOSS CONTROL - DRAFT / OBQ / ROB / BUNKER SURVEY – EDP SERVICES

105223

Date B/L 1 May 2008
Material Steam Coal in Bulk
Name of Vessel MARIA BOTTIGLIERI
Consignee To the order of Bulk Trading
Quantity 58655.739 MT
Port of Loading Yuzhny – Ukraine

CERTIFICATE OF ASSAY

TOTAL MOISTURE AS RECEIVED	:	9.00	%	ISO 589
INHERENT MOISTURE IN AIR DRY	:	3.31	%	ASTM D5142
ASH IN DRY	:	6.93	%	ASTM D3174
ASH IN AIR DRY	:	6.70	%	
ASH AS RECEIVED	:	6.31	%	
VOLATILE MATTER IN DRY	:	33.84	%	ASTM D5142
VOLATILE MATTER IN AIR DRY	:	32.72	%	
VOLATILE MATTER AS RECEIVED	:	30.81	%	
GROSS AND NET CALORIFIC VALUE	:			ASTM D5865
GROSS CALORIFIC VALUE IN DRY	:	7563	kcal/kg	
GROSS CALORIFIC VALUE IN AIR DRY	:	7312	kcal/kg	
GROSS CALORIFIC VALUE AS RECEIVED	:	6885	kcal/kg	
NET CALORIFIC VALUE AS RECEIVED	:	6600	kcal/kg	
SULPHUR IN DRY	:	0.36	%	ASTM D4239
SULPHUR IN AIR DRY	:	0.35	%	
SULPHUR AS RECEIVED	:	0.33	%	
FIXED CARBON IN DRY	:	59.23	%	ASTM D5142
FIXED CARBON IN AIR DRY	:	57.26	%	
FIXED CARBON AS RECEIVED	:	53.91	%	
CHLORINE IN DRY	:	53	ppm	ASTM D2361
CHLORINE IN AIR DRY	:	51	ppm	
CHLORINE AS RECEIVED	:	48	ppm	
FLUORINE IN DRY	:	85	ppm	ASTM D3761
FLUORINE IN AIR DRY	:	82	ppm	
FLUORINE AS RECEIVED	:	77	ppm	
H.G.I.	:	54		ASTM D409

Quality as been performed by ANALISI & CONTROLLI coal laboratory under ISO 17025 accreditation No. 0736

P.C.C. GROUP



Part. Iva 00547290874
REG. SOC. TRIB. CT N. 0403
C.G.I.A.A. CT N. 111724

Petroleum Chemical Control

società a responsabilità limitata - capitale sociale € 51.084,00 interamente versato
CARGO INSPECTION-TANK CALIBRATIONS-TIME CONTROL-CHEMICAL ANALYSIS
LOSS CONTROL - DRAFT / OBQ / ROB / BUNKER SURVEY - EDP SERVICES

105223

Date B/L 1 May 2008
Material Steam Coal in Bulk
Name of Vessel MARIA BOTTIGLIERI
Consignee To the order of Bulk Trading
Quantity 58655.7390 MT
Port of Loading Yuzhny - Ukraine

CERTIFICATE OF ASSAY

ULTIMATE ANALYSIS

CARBON IN DRY	:	76.63	%	ASTM D 5373
CARBON IN AIR DRY	:	74.09	%	
CARBON AS RECEIVED	:	69.76	%	
HYDROGEN IN DRY	:	4.97	%	ASTM D 5373
HYDROGEN IN AIR DRY	:	4.80	%	
HYDROGEN AS RECEIVED	:	4.52	%	
NITROGEN IN DRY	:	2.28	%	ASTM D 5373
NITROGEN IN AIR DRY	:	2.20	%	
NITROGEN AS RECEIVED	:	2.07	%	
OXYGEN IN DRY	:	8.76	%	CALC.
OXYGEN IN AIR DRY	:	11.43	%	
OXYGEN AS RECEIVED	:	15.96	%	

TRACES ELEMENTS IN THE COAL IN DRY mg/kg

SELENIUM	:	L 1		ASTM D 4606
BORON	:	32		ICP/AES

ASH FUSION TEMPERATURES IN REDUCING ATMOSPHERE

 ASTM D 1857

INITIAL DEFORMATION	:	1286	°C
SOFTENING	:	1312	°C
HEMISPHERICAL	:	1353	°C
FLUID	:	1378	°C

ASH FUSION TEMPERATURES IN OXIDIZING ATMOSPHERE

 ASTM D 1857

INITIAL DEFORMATION	:	1323	°C
SOFTENING	:	1340	°C
HEMISPHERICAL	:	1386	°C
FLUID	:	1409	°C



Part. Iva 00547290874
REG.SOC. TRIB. CT N. 9493
C.C.I.A.A. CT N. 111724

Petroleum Chemical Control

società a responsabilità limitata - capitale sociale € 51.084,00 interamente versato
CARGO INSPECTION-TANK CALIBRATIONS-TIME CONTROL-CHEMICAL ANALYSIS
LOSS CONTROL - DRAFT / OBQ / ROB / BUNKER SURVEY - EDP SERVICES

Page 2

ASH MINERAL ANALYSIS

ASTM D 6349

SILICON DIOXIDE	SiO ₂	:	45.89	%
ALUMINIUM OXIDE	Al ₂ O ₃	:	20.78	%
IRON OXIDE	Fe ₂ O ₃	:	9.91	%
CALCIUM OXIDE	CaO	:	7.40	%
MAGNESIUM OXIDE	MgO	:	3.40	%
TITANIUM DIOXIDE	TiO ₂	:	0.74	%
POTASSIUM OXIDE	K ₂ O	:	2.68	%
SODIUM OXIDE	Na ₂ O	:	1.54	%
PHOSPHORUS PENTOXIDE	P ₂ O ₅	:	0.58	%
MANGANESE DIOXIDE	MnO	:	0.09	%
SULPHUR TRIOXIDE	SO ₃	:	5.33	%
INDETERMINATED		:	1.29	%

Quality as been performed by ANALISI & CONTROLLI coal laboratory under ISO 17025
accreditation No. 0736

P.C.C. GROUP

Member of the International Organization for Standardization (ISO)

CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Page 1/3

Certificate No. : 200804-044A	Date: 21/04/2008
-------------------------------	------------------

A cargo of approximately 61995 metric tons of coal described by the Exporter as SOUTH AFRICAN STEAM COAL IN BULK was loaded at the Richards Bay Coal Terminal between 17/04/2008 and 17/04/2008 on board the M.V. PEQUOT

This is to certify that the coal was mechanically sampled in accordance with ISO 13909-2 : 2001, prepared in accordance with ISO 13909-4 : 2001 and tested by the SABS in accordance with the relevant standard methods, with the following results:

ASTM Analysis

			As Received	Air Dry	Dry
Gross Calorific Value (MJ/kg)		ASTM D5865-04	26.05	27.58	28.37
Gross Calorific Value (kcal/kg)		ASTM D5865-04	6220	6590	6780
Gross Calorific Value (Btu/lb)		ASTM D5865-04	11200	11860	12200
Net Calorific Value (kcal/kg) constant volume		ASTM D5865-04	6010	6390	6590
Total Moisture	%	ASTM D2961-01	8.2		
Moisture in Analysis Sample	%	ASTM D3173-03		2.8	
Ash	%	ASTM D3174-04	14.1	14.9	15.3
Volatile Matter	%	ASTM D3175-02	23.2	24.6	25.3
Fixed Carbon	%	ASTM D3172-89(02)	54.5	57.7	59.4
			100.0	100.0	100.0
Sulphur (Total)	%	ASTM D4239-04a	0.52	0.55	0.57
Hydrogen in coal	%	ASTM D5373 - 02		3.62	
Nitrogen in coal	%	ASTM D5373 - 02		1.62	
Chlorine in coal	%	ASTM D4208-02		0.005	
Fluorine in coal	%	ASTM D3761-96(02)		0.010	
Fluorine in coal	ppm	ASTM D3761-96(02)	94	100	103
Chlorine in coal	ppm	ASTM D4208-02	47	50	51
Hardgrove Grindability Index	-	ASTM D409-02		55	
HGI Yield	%	ASTM D409-02			59
Ash Fusion Temp. °C (Reducing)	Deformation	°C	ASTM D1857-04		1450
	Softening	°C	ASTM D1857-04		1470
	Hemispherical	°C	ASTM D1857-04		1480
	Flow	°C	ASTM D1857-04		+1500
Ash Fusion Temp. °C (Oxidising)	Deformation	°C	ASTM D1857-04		+1500
	Softening	°C	ASTM D1857-04		+1500
	Hemispherical	°C	ASTM D1857-04		+1500
	Flow	°C	ASTM D1857-04		+1500

Emission Factor per European Parliament Directive 2003/87/EN = 97.1 metric tons CO2/TJ

Issued at loadport by: _____

Technical Signatory



South African Bureau of Standards, P O Box 413, RICHARDS BAY, 3900, Republic of South Africa
 Tel: (035) 797-7209, Int. code +27 35, Fax: (035) 797-7214.

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CERTIFICATE OF SAMPLING AND ANALYSIS OF SHIPMENT OF COAL

Certificate No. : 200804-044A

Date: 21/04/2008

Ash Constituents			
Silicon Dioxide (SiO ₂)	%	ASTM D3682-01	49.29
Aluminium Oxide (Al ₂ O ₃)	%	ASTM D3682-01	34.32
Ferrous Oxide (Fe ₂ O ₃)	%	ASTM D3682-01	4.06
Calcium Oxide (CaO)	%	ASTM D3682-01	5.87
Magnesium Oxide (MgO)	%	ASTM D3682-01	1.32
Titanium Dioxide (TiO ₂)	%	ASTM D3682-01	1.84
Potassium Oxide (K ₂ O)	%	ASTM D3682-01	0.56
Sodium Oxide (Na ₂ O)	%	ASTM D3682-01	0.11
Sulphur Trioxide (SO ₃)	%	ASTM D5016-03	1.76
Phosphorus Pentoxide (P ₂ O ₅)	%	BS 1016 PART 14:1963	1.55
Phosphorus in coal (A.D.)	%	BS 1016:Part 14:1963	0.101

Ultimate Analysis (Dry)			
Carbon	%	ASTM D5373 - 02	72.65
Hydrogen	%	ASTM D5373 - 02	3.72
Nitrogen	%	ASTM D5373 - 02	1.67
Sulphur	%	ASTM D4239-04a	0.57
Ash	%	ASTM D3174-04	15.33
Chlorine	%	ASTM D4208-02	0.005
Oxygen (By Difference)	%	ASTM D3176-89(02)	6.06

Emission Factor per European Parliament Directive 2003/87/EN = 97.1 metric tons CO₂/TJ

Issued at loadport by: _____
 Technical Signatory



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GLENCORE / COLOMBIA - BAINDISI



INSPECTORATE COLOMBIA LTDA
 Calle 77ª No. 74-172
 Telf. 3532550 Fax 35531364
 Barranquilla, Colombia

Certificate Nbr : 01-13810
 Our Ref : 6177-1
 Slate :
 Page 1 of 2

VESSEL : TORM MARTA
 SHIPPER : GLENGORE INTERNATIONAL AG
 CONSIGNEE : TO THE ORDER OF: ENEL TRADE SPA
 PRODUCT : "COLOMBIAN STEAM COAL IN BULK"
 LOADING PORT : PUERTO PRODECO, COLOMBIA
 DISCHARGE PORT : ITALIAN PORT (S)
 DATE : APRIL 05th -09th, 2008
 QUANTITY : 61,533.20 M.T.

CERTIFICATE OF SAMPLING AND ANALYSIS

This is to certify that the sampling of this cargo of coal was conducted by INCOLAB SERVICES according to **ASTM D-7256 M-06** standards.

INSPECTORATE COLOMBIA LTDA., certifies that the following analytical results were established by us, at the Laboratory of Barranquilla, Colombia in accordance with the applicable **ISO** standards:

CALCULATED COMPOSITE	AS RECEIVED	AIR DRIED	DRY BASIS
PROXIMATE ANALYSIS			
Total Moisture, pct. wt. (ISO-589-03)	11.24		
Inherent moisture, pct. wt. (ISO -1018-75)		9.47	
Surface moisture, by diff.		1.77	
Ash, pct. wt. (ISO-1171-97)	7.00	7.28	7.89
Volatile matter, pct. wt (ISO-562-98)	34.38	35.75	38.73
Fixed carbon, pct. wt. (By Difference)	47.38		53.38
Sulphur, pct. wt. (ASTM D-4239-05 method B)	0.65	0.67	0.73
Gross calorific value, Kcal/kg. (ISO-1928 R-95)	6381	6636	7189
Gross calorific value, Btu/lb. (ISO-1928 R-95)	11486	11945	12941
Net calorific value, Kcal/kg (ISO-1928 R-95)	6105		6947
Net calorific value, Btu/lb. (ISO-1928 R-95)	10989		12505

RESULTS BASED ON AVERAGE WEIGHTED COMPOSITE SAMPLE

HARDGROVE GRINDABILITY INDEX (ISO 5074-94)
 HGI= 48 at 5.72 Percent of moisture (%Retained Mesh No.16 x30 = 55)

MINERAL ANALYSIS OF ASH,% wt (ASTM D-3682-01 R-06)	IGNITED BASIS
Silica, SiO2	60.16
Alumina, Al2O3	20.04
Titania, TiO2	1.03
Ferric Oxide, Fe2 O3	8.81
Lime, CaO	2.37
Magnesia, MgO	1.78
Sodium Oxide, Na2O	0.51
Potassium Oxide, K2O	2.43
Phos. Pentoxide, P2 O5 (ASTM D2795-95)	0.23
Sulfur Trioxide, SO3 (ASTM D-5016-03)	1.99
Undetermined	0.65



Quality Management System
 ISO 9000:2000
 Certificate No. 32587



Accreditation of Metals & Minerals Test Laboratory
 Decree 2269/1993
 ISO 17025
 Resolution 2959

Coal and Coke Under ASTM standards: Total moisture, Residual moisture, ash, volatile matter, carbon and hydrogen, phosphorous in ash, sulfur, calorific value, Major and minor elements in ash.

Coal Under ISO standards: Total moisture, Residual moisture, ash, volatile matter, calorific value, carbon, hydrogen and nitrogen (instrumental) chloride in coal (ion selective method), ash fusion.



INSPECTORATE COLOMBIA LTDA
 Calle 77ª No. 74-172
 Telf. 3532550 Fax 35531364
 Barranquilla, Colombia

Certificate Nbr : 01-13810
 Our Ref : 6177-1
 Slate :
 Page 2 of 2

VESSEL : TORM MARTA

AS RECEIVED

ULTIMATE ANALYSIS

Total Moisture, pct. wt. (ISO-589-03)	11.24
Carbon, pct. wt (ISO 12902-01)	66.76
Hydrogen, pct. wt (ISO 12902-01)	4.36
Nitrogen, pct. wt (ISO 12902-01)	1.29
Ash, pct. wt (ISO-1171-97)	7.00
Sulfur, pct. wt (ASTM D4239-05 METHOD. B)	0.65
Chlorine, pct. wt. (ASTM D-4208-02)	0.03
Oxygen, pct. wt (by diff)	8.67

FUSION TEMPERATURE OF ASH (°C) (ASTM D-1857-04) REDUCING OXIDIZING

Initial Temperature,(H=W) ST	1255	1311
Softening Temperature,(H=W) ST	1320	1393
Hemispherical temperature, (H=1/2W),HT	1389	1467
Fluid temperature FT.	1447	1529

TRACE ELEMENTS , ppm (ASTM D-3683-04)

Selenium, (ASTM D-4606-03) Se	<0.1	Fluorine, (ASTM D-3761-96 R-02) F	46
Boron, (B)	24.0		

Barranquilla, Colombia
 April 14th , 2008

For and on behalf of,

INSPECTORATE COLOMBIA LTDA.

Formato "SAC" REV.#3 09/07



Quality Management System
 ISO 9000:2000
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Coal Under ISO standards: Total moisture, Residual moisture, ash, volatile matter, calorific value, carbon, hydrogen and nitrogen (instrumental), chloride in coal (ion selective method), ash fusion.