



PT. SURVEYOR CARBON CONSULTING INDONESIA (SCCI)  
INDEPENDENT ASSURANCE SERVICES

AA 0112460A

Job No. : SMD 19199 QQ

## CERTIFICATE OF SAMPLING AND ANALYSIS

Name of Vessel : MV. SUNNY PUTNEY  
Quantity : 74,250 MT  
Description of Goods : INDONESIA STEAM COAL (ABN 56 RS)  
Shipper : PT. ADIMITRA BARATAMA NUSANTARA  
WISMA BAKRIE 2 BUILDING, 11TH FLOOR,  
JL.H.R. RASUNA SAID KAV B-2,  
JAKARTA 12920, INDONESIA  
Consignee : TO THE ORDER OF TNB FUEL SERVICES SDN. BHD.  
Notify Party : TNB FUEL SERVICES SDN. BHD.,  
LEVEL 11, MENARA GLOMAC, GLOMAC DAMANSARA,  
JALAN DAMANSARA, 60000 KUALA LUMPUR, MALAYSIA  
Port of Loading : SAMARINDA PORT, INDONESIA  
Port of Discharge : JIMAH EAST POWER, PORT DICKSON, MALAYSIA  
Attending Date : MAY 01 UP TO 07, 2019

SAMPLING : SAMPLES ON A LOT BASIS WERE DRAWN FROM THE CONVEYOR SYSTEM IN ACCORDANCE WITH ISO STANDARDS AS THE CONSIGNMENT OF COAL WAS LOADED ONTO THE VESSEL

SIZING : SIZE TESTS CARRIED OUT IN ACCORDANCE WITH ISO STANDARDS "HIGHER RANK COAL-SIZE ANALYSIS" SHOWED THAT 59.65 % WERE BETWEEN 3 MM AND 50 MM, 8.84 % WERE ABOVE 50 MM, AND 31.51 % WERE BELOW 3 MM

ANALYSIS : RESULTS OF THE ANALYSIS OF THE SAMPLES WITHDRAWN AS ABOVE AND ANALYSED IN ACCORDANCE WITH ISO STANDARDS EXCEPT FOR HGI WHICH WAS ANALYSED IN ACCORDANCE WITH ASTM STANDARDS AND INHERENT MOISTURE WHICH WAS ANALYSED TO AS STANDARDS

PROPERTY ( AS RECEIVED BASIS )	UNITS	BASIS	VALUE
CALORIFIC VALUE	KCAL/KG	AR	: 5502
TOTAL MOISTURE	%	AR	: 19.75
ASH	%	AR	: 6.02
VOLATILE MATTER	%	AR	: 35.16
TOTAL SULPHUR	%	AR	: 1.45
PHOSPHOROUS	%	AR	: 0.030
CHLORINE	%	AR	: 0.002
SODIUM IN ASH	%	AR	: 0.03
FUEL RATIO	%	AR	: 1.11

### PROXIMATE ANALYSIS ( AIR DRIED BASIS )

CALORIFIC VALUE	KCAL/KG	ADB	: 5876
MOISTURE	%	ADB	: 14.29
ASH	%	ADB	: 6.43
VOLATILE MATTER	%	ADB	: 37.55
FIXED CARBON	%	ADB	: 41.73
TOTAL SULPHUR	%	ADB	: 1.55

Jakarta, May 09, 2019

For and on behalf of

PT. SURVEYOR CARBON CONSULTING INDONESIA

  
Welly Atkings  
Operation Manager



This certificate reflects our finding at time and place of inspection and does not refer to any other matter. This certificate is issued without prejudice and on the understanding that it does not release parties from their contractual obligations. All inspection covered in this report have been carried out to the best of our knowledge and ability and in accordance with practice and standard generally accepted in trade. Our responsibility is limited to the exercise of reasonable care and due diligence.







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ULTIMATE ANALYSIS ( DRY ASH FREE )		UNITS	VALUE
CARBON	%	:	76.75
HYDROGEN	%	:	5.25
NITROGEN	%	:	0.59
SULPHUR	%	:	1.96
OXYGEN	%	:	15.45
<b>ASH FUSION TEMPERATURE ( REDUCING ATMOSPHERE )</b>			
INITIAL DEFORMATION	°C	:	1270
HEMISPHERICAL DEFORMATION	°C	:	1290
FLOW	°C	:	1300
<b>ASH FUSION TEMPERATURE ( OXIDIZING ATMOSPHERE )</b>			
INITIAL DEFORMATION	°C	:	1340
HEMISPHERICAL DEFORMATION	°C	:	1380
FLOW	°C	:	1400
<b>PHYSICAL PROPERTIES</b>			
HARDGROVE GRINDABILITY INDEX		:	45
ABRASIVE INDEX	MG METAL/KG COAL	:	20
<b>SIZE DISTRIBUTION</b>			
0 X 50 MM	%	:	91.16
0 X 3 MM	%	:	31.51
0 X 2 MM	%	:	21.86
0 X 0.5 MM	%	:	5.13
<b>ASH ANALYSIS ( DRY BASIS )</b>			
PROPERTY	UNITS	BASIS	
SiO <sub>2</sub>	%	DB	: 51.02
Al <sub>2</sub> O <sub>3</sub>	%	DB	: 20.35
Fe <sub>2</sub> O <sub>3</sub>	%	DB	: 16.48
CaO	%	DB	: 2.75
MgO	%	DB	: 1.49
Na <sub>2</sub> O	%	DB	: 0.03
K <sub>2</sub> O	%	DB	: 1.44
TiO <sub>2</sub>	%	DB	: 1.06
SO <sub>3</sub>	%	DB	: 3.65
P <sub>2</sub> O <sub>5</sub>	%	DB	: 1.12
BaO	%	DB	: 0.21
Mn <sub>3</sub> O <sub>4</sub>	%	DB	: 0.21
Undetermined	%	DB	: 0.19

For and on behalf of

PT. SURVEYOR CARBON CONSULTING INDONESIA

Welly Atikno  
Operation Manager

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E-05-P004-2012-0000





PT. SURVEYOR CARBON CONSULTING INDONESIA (SCCI)  
INDEPENDENT ASSURANCE SERVICES

AA 0112458A

Job No. : SMD 19199 QQ

## CERTIFICATE OF REJECTION LIMIT ANALYSIS

Name of Vessel : MV. SUNNY PUTNEY  
Quantity : 74,250 MT  
Description of Goods : INDONESIA STEAM COAL (ABN 56 RS)  
Shipper : PT. ADIMITRA BARATAMA NUSANTARA  
WISMA BAKRIE 2 BUILDING, 11TH FLOOR,  
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Attending Date : MAY 01 UP TO 07, 2019

Properties	Value as per certificate of sampling analysis	
Gross Calorific Value (Gross) (As received basis)	5502	Kcal/kg
Total Moisture (As Received Basis)	19.75	%
Ash Content (As Received Basis)	6.02	%
Sulphur Content (As Received Basis)	1.45	%
Volatile Matter (As Received Basis)	35.16	%
Fuel Ratio (As Received Basis)	1.11	
Hardgrove Grindability Index	45	
Ash Fusion Temperature (Reducing Atmosphere-IDT)	1270	°C
% of coal size more than 50 mm of total size distribution	8.84	%
% of coal size less than 3 mm of total size distribution	31.51	%
% of coal size less than 2 mm of total size distribution	21.86	%

Jakarta, May 09, 2019

For and on behalf of

PT. SURVEYOR CARBON CONSULTING INDONESIA

Welly Atikno  
Operation Manager

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F-01-PSM-OPR-SCCI-04

