



# CCIC SINGAPORE PTE LTD

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Job No. : SG.01.0717.4.002

Date : August 12, 2017

## CERTIFICATE OF ANALYSIS

VESSEL : MV. GLOVIS  
 QUANTITY :  
 DESCRIPTION OF FOODS : COKING COAL IN BULK  
 SHIPPER :  
 CONSIGNEE : MADE OUT TO ORDER  
 NOTIFY ADDRESS : CHINA NATIONAL GEOLOGICAL AND MINING CORPORATION  
 7F, ZHEJIANG, BLDG ANZHENXILI, CHAOYANG  
 DISTRICT BEIJING 100029, CHINA  
 PORT OF LOADING : TABONEO  
 PORT OF DISCHARGE : RIZHAO PORT, CHINA  
 DATE OF SHIPMENT / BL DATE : AUGUST 7, 2017

Gross samples were drawn by our Indonesia's representative loading to the vessel. The samples were prepared and analysed according to ISO Standard Specifications and shown the following results :

Parameter	Unit	Basis				Standard Method
		ARB	ADB	DB	DAF	
1. Total Moisture	%	6.6				ISO 589:2008
2. Inherent Moisture	%		1.27			ISO 11722:1999
3. Ash Content	%	8.47	8.95	9.07		ISO 1171:2010
4. Volatile Matter	%	7.01	8.67	9.06	12.16	ISO 562:2010
5. Fixed Carbon	%	77.92	81.11	81.87	87.84	By Difference
6. Total Sulphur	%	0.56	0.68	0.70	0.75	ISO 351:1996
7. Gross Calorific Value	kcal/kg	7233	7646	7744	8516	ISO 1928:2009
8. Grindability(HGI)	index		105			ISO 5074:1994
9. Size	%	0-50mm		99		ISO 1953:1994
10. Initial Softening	°C		386			ISO 10329:2009
11. Maximum Fluidity	°C		448			ISO 10329:2009
12. Maximum Fluidity	ddpm		2207			ISO 10329:2009
13. Maximum Fluidity	log 10		3.34			ISO 10329:2009
14. Final Fluidity	°C		481			ISO 10329:2009
15. Solidification	°C		483			ISO 10329:2009
16. Plastic Range	°C		97			ISO 10329:2009
17. Crucible Swelling Number			8			ISO 10329:2009

Note : ARB=as received basis;ADB=air dried basis; DB=dry basis; DAF=dry ash free;NA=no analysis

For and on behalf  
 of  
 CCIC Singapore Pte. Ltd.



ISO 9001:2009  
 FS 517575



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