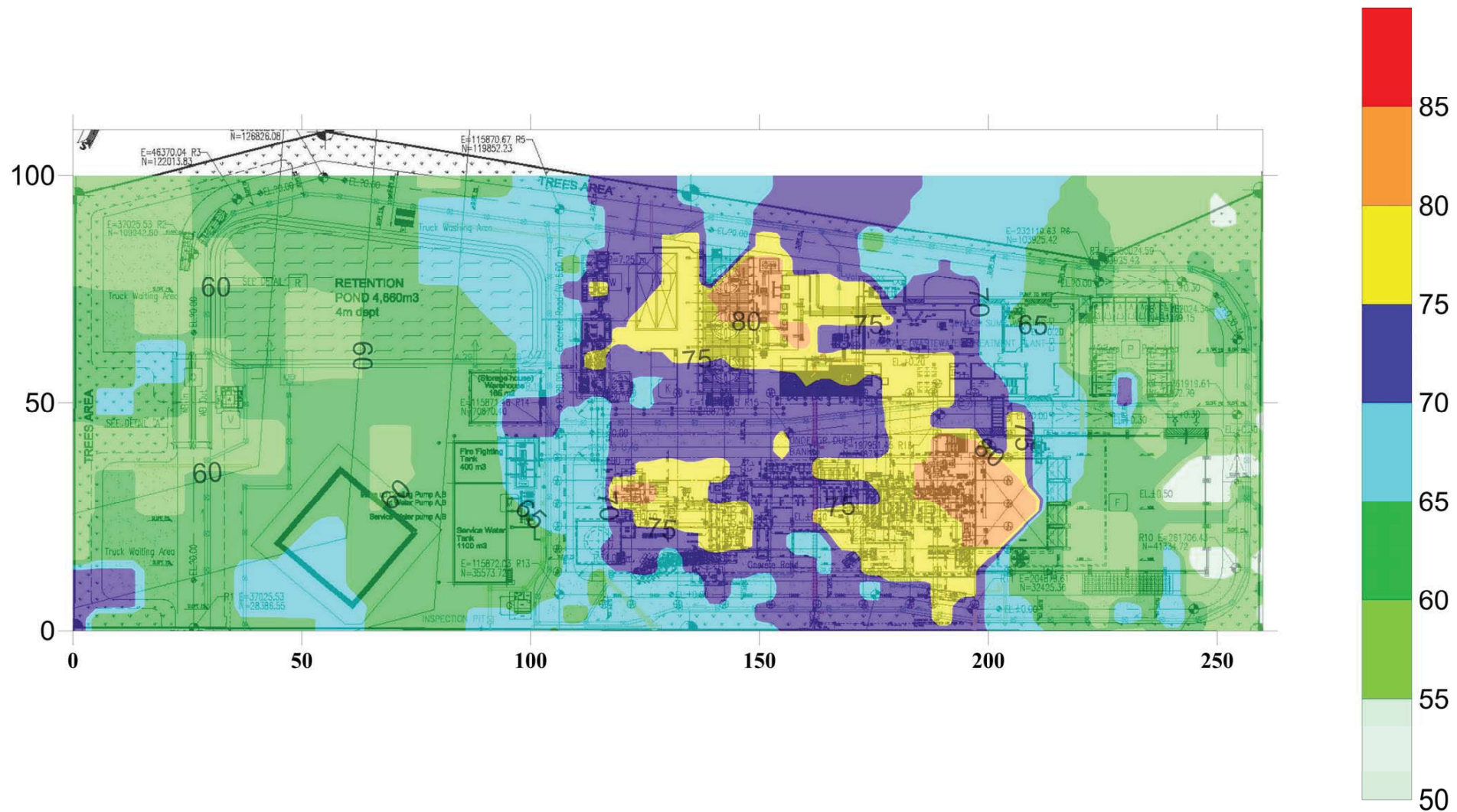


ภาคผนวก ข.21

Noise Contour Map



รูปที่ 2 แผนผังแสดงระดับเสียง (Noise Contour Map) บริเวณโครงการกำจัดกากอุตสาหกรรมที่ไม่อันตราย โดยแปรรูปเป็นพลังงานไฟฟ้า บริษัท ชลบุรี คลีน เอ็นเนอร์ยี่ จำกัด



ภาคผนวก ข.22

แผนการซ่อมบำรุงรักษาเครื่องจักร/อุปกรณ์ที่เป็นแหล่งกำเนิดเสียง

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ภาคผนวก ข.23

การตรวจสอบแรงสั่นสะเทือน/ตั้งศูนย์เพลาเครื่องจักร และตรวจสอบ
แท่นยึดจับของเครื่องจักร/อุปกรณ์ที่เป็นแหล่งกำเนิดเสียง

SERVICE REPORT MOTOR OF PLUTOTECH COMPANY LIMITED

FOR

Chonburi Clean Energy Co., Ltd.

PM MOTOR SPECTOM



Report to:
K.Pakorn

Prepared and Reported By:



PLUTOTECH COMPANY LIMITED (RAYONG)
18/18 Charoen Pattana Road, Huaypong, Muang
Rayong Rayong 21150

Tel: + 66 38 029 388 - 390
Fax: + 66 38 029 391
email: sales@plutotech.co.th

Electrical Machines Maintenance and Service Expert

Inspection Sheet For Squirrel Cage Motor		PAGE: 1																																																	
<input type="checkbox"/> All Medium Voltage Motor <input type="checkbox"/> Low Voltage Motor <input type="checkbox"/> Special Design of Low Voltage AC Motor		PRY65411103-130																																																	
MOTOR NAMEPLATE Customer: Chonburi Clean Energy Co., Ltd. Attention: K.Pakorn Manufacture: Energy Frame/Model: 112M Type: TE-F Power: 3.70 kW Speed: 1440 1/min. Ser.No.: 1011TB4202001 Voltage: 220/380 V Frequency: 50 Hz Insulation Class: F Design: - Current: 14.3/8.6 A Cos.θ: - Temp.Rise Class: - Duty: CONT DE Bearing: 6205-22 NDE Bearing: 6307-22 IP: 55 SF: 1.15 Date: 12 November 2022 Tag No: HTE10AF001																																																			
General Information: Motor Mounting: <input type="checkbox"/> Flange mounted <input type="checkbox"/> Foot mounted Drive Connection: <input type="checkbox"/> Gear box <input type="checkbox"/> Blower <input type="checkbox"/> V-Belt <input type="checkbox"/> Coupling																																																			
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MOTOR SERVICE REPORT		PAGE: 2
PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS		PRY Job No: PRY65411103-130
CUST-NAME: Chonburi Clean Energy Co., Ltd.	Receiving Date: 12 November 2022	Delivery Date: 12 November 2022
PLANT: -	ATTENTION: K.Pakorn	SALES: Mr. Kittak
CODE No.: -	Tag No.: HTE10AF001	
PHOTO OF SERVICE CONDITIONS 		
ADDITIONAL COMMENTS:		

MOTOR SERVICE REPORT		PAGE: 3
PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS		PRY Job No: PRY65411103-130
CUST-NAME: Chonburi Clean Energy Co., Ltd.	Receiving Date: 12 November 2022	Delivery Date: 12 November 2022
PLANT: -	ATTENTION: K.Pakorn	SALES: Mr. Kittak
CODE No.: -	Tag No.: HTE10AF001	
PHOTO OF SERVICE CONDITIONS 		
ADDITIONAL COMMENTS:		

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">MOTOR SERVICE REPORT</h2> <p style="margin: 0; font-weight: normal;">PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS</p> </div> <div style="text-align: right;"> <p style="margin: 0; font-weight: normal;">PAGE: 4</p> </div> </div>			
CUST-NAME	Chonburi Clean Energy Co., Ltd.	PRY Job No	PRY05411103-130
PLANT	-	Receiving Date	12 November 2022
CODE No.	-	Delivery Date	12 November 2022
Tag No	HTE10AF001	ATTENTION	K.Pakorn
		SALES	Mh-Kittisak

PHOTOS OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:-



INSPECTION SHEET FOR ONSITE

วันที่

Customer Detail : **Chonburi Clean Energy Co., Ltd.**

Before

After

(1). Motor Details Job No. : **PRY65411103-1** Tag: **HTE10AF001**

MFG	Power	3.7	kW.
Type	Volt	380	V.
Frame	Freq.	50	Hz.
ST	Phase	-	-
Ins. Class	Duty	cont	-
S/N	Weight	-	Kgs

Full Load Amp.	-	A.	-
Speed	1440	rpm.	-
Bearings	DE	-	-
Bearings	NDE	-	-
IP	55	-	-
T-Class	-	-	-

Pole ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole ☐ 8 Pole

Class Typ. ☐ Exd ☐ Exe ☐ Exn

Mounting ☐ IMB3 ☐ IMB5 ☐ IMB...

Rotation direct(View From NDE)

☒ CW ☐ CCW


(2). Vibration motor on site / Current

Measuring

Load Current (A)		
Load	%	%
L1	L2	L3
-	-	-

Vibration (mm/sec)					Bearing Condition		Remark
Point	V	H	A	gR	gR		
DE	0.33	0.58	0.72	-	-	0.11	
NDE	0.54	0.56	-	-	-	0.18	

(3). Mechanical Inspection



Rachec before overhaul				Shim Plate		
Measurement	Horizontal	Vertical	Unit	1"	Quantity	mm/1 (mm.)
Offset	-	-	mm	1	-	-
Angular	-	-	mm/100	2	-	-
F1	-	-	mm	3	-	-
F2	-	-	mm	4	-	-

☐ Shim plate not over 4 plates
☐ ใบรองมอเตอร์

Distance Data

S-C = - mm., S-F1 = - mm., ระยะห่าง - mm., ระยะห่าง - mm.

S-H = - mm., S-F2 = - mm., Distance coupling Motor - Load = - mm., ระยะห่าง Motor - Load = - mm.

Coupling Type = - mm.,

Bolt Coupling = - mm.

(4). Mechanical install inspection

Coupling Type :

☐ Direct Coupling

☐ Rubber Coupling

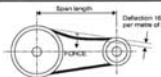
☐ Other _____

Transmission belt type :

☐ Flat belt

☐ V-shape belt

☐ Timer belt



Span length : _____ mm.

Tension belt : _____ N. / kgf.

(5). Electrical Inspection Difference Connect cable

U1 = Red		
V1 = Yellow		
W1 = Blue		

☐ Lead good condition

☐ Cable grand

☐ Reconnection same disor

Remark :

Checked By : **Mr.Winai C.**

Date : **20/12/2022**

Customer : **K.Pakorn**

Date : **20/12/2022**

ไฟล์ชื่อ : 01/11/17 v14 : FR-ANG-69 Rev 01 Inspection Sheet For On-Site

	Inspection Sheet For Squirrel Cage Motor	PAGE : 1 PRY56411103-230
<input type="checkbox"/> All Medium Voltage Motor <input checked="" type="checkbox"/> Low Voltage Motor <input type="checkbox"/> Special Design of Low Voltage AC Motor		
MOTOR NAME/PLATE	Customer : Choshuri Clean Energy Co., Ltd./Attention :	K. Fakora
Manufacture : Energy	Frame Model : 132S	Type : TE-F
Power : 5.50 - kW	Speed : 1440 L/min.	Set No. : 1011784203001.00
Voltage : 220/380 V.	Frequency : 50 Hz.	Insulation Class : F Design : -
Current : 203/11.8 A.	Cu0 -	Temp Rise Class : D Duty : CONT
DE Bearing : 6206-2Z	NDE Bearing : 6309-2Z	IP : 55 SF : 1.14
Date : 12 November 2022	Tag No. : BHT10AF902	

1. General check.

- 2.1 Body Frame Corrosive ☒ Normal ☐ Abnormal ☐ N/A
- 2.2 Cable Entry Condition ☒ Normal ☐ Abnormal ☐ N/A
- 2.3 Earthing Connection Status ☒ Normal ☐ Abnormal ☐ N/A
- 2.4 Terminal Box Sealing & Outer Gasket ☒ Normal ☐ Abnormal ☐ N/A
- 2.5 Inside of Terminal Box, Dust/Water is Clear ☒ Normal ☐ Abnormal ☐ N/A
- 2.6 All Cable Connection, Tightening. ☒ Normal ☐ Abnormal ☐ N/A
- 2.7 Inside of Terminal Box Temperature and Humidity ☒ Normal ☐ Abnormal ☐ N/A
- 2.8 Cover and Cooling Fan ☒ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminal	Resistance (mOhm)	Resistance (Ohm)	Results	Remark
U-U'	38.70 U1-U2 14.80	1.70 U1-U2 1.10	N	Wdg Temp 42°C Amb.Temp 34°C
U-W	33.00 V1-V2 17.90	1.60 V1-V2 1.00		Instrument By
V-W	37.20 W1-W2 14.60	1.70 W1-W2 1.10		MotorOn Motor & Dial Display LCD Motor

Result : ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Insulation Test

Test-Volt	Marking	15 Sec.		60 Sec.		10 min.		PI	Amb. Temp
		C	ABC	C	ABC	C	ABC		
500	U/U'	-	-	-	-	-	-	31	
	U/W	-	-	-	-	-	-		
	V/W	-	-	-	-	-	-		
	(U+V+W)-EARTH	5.16GΩ	9.13	GΩ	-	GΩ	1.80		

Min. Insulation Recommended = 0.1GΩ

Polarization Index Recommended : 2~5

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

Insulation Test (500V)

Mark	60 Sec	Insulation Test (500V)
D-E	-	NA
V-E	-	
W-E	-	
W-E	-	

3. Temperature Sensor And Heat

TEMPERATURE SENSOR (STATOR)

Element Type	1	2	3	4	5	Temp DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Calibrating Method	T01	T02	T03	T04	T05	001	002	H1-H2	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result : ☐ Normal ☐ Abnormal








4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT	Description	DESCRIPTION	TESTED AND INSPECTED BY
N	■ N - Normal	Company Name	PLUTOTECH COMPANY LIMITED
	■ W - Warning	Name-Surname	Mr/Wsamil
	■ R - Discard	Date	13 November 2022

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">MOTOR SERVICE REPORT</h2> <p style="margin: 0;">PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS</p> </div> <div style="text-align: right;"> <p style="margin: 0;">PAGE : 2</p> </div> </div>			
CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY05411103-2/30
PLANT :	-	Receiving Date :	12 November 2022
CODE No. :	-	Delivery-Date :	12 November 2022
Tag No :	HTE10AF002	ATTENTION :	K Pakom
		SALES :	Mr Kittisak

PHOTO OF SERVICE CONDITIONS	
	
	
	
	
	

ADDITIONAL COMMENTS:


<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">MOTOR SERVICE REPORT</h2> <p style="margin: 0;">PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS</p> </div> <div style="text-align: right;"> <p style="margin: 0; font-size: small;">NAVY055</p> </div> </div>			
CUST-NAME:	Chordari Clean Energy Co., Ltd.	PRY Job No :	PRY65411103-2/30
PLANT :	-	Receiving Date :	12 November 2022
CODE No. :	-	Delivery-Date :	12 November 2022
Tag No :	HTE10AF002	ATTENTION :	K.Pakorn
		SALES :	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS	

ADDITIONAL COMMENTS:-

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CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No.:	PRY65411103-2030
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery-Date:	12 November 2022
Tag No:	HTE10AF002	ATTENTION:	K.Pakorn
		SALES:	M.Kittisak

PHOTO OF SERVICE CONDITIONS	



INSPECTION SHEET FOR ONSITE

លេខ/ No. :

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before After

(1). Motor Details Job No: **PRY65411103-2** Tag: **HTE10A/F001**

MFG	-	Power	5.5 KW.	Full Load Amp.	- A.
Type	TEF	Volt	220/380 V.	Speed	1440 rpm
Frame	132S	Freq.	50 Hz.	Bearings	DE -
SF	1.14	Phase	-	Bearings	NP -
Ins. Class	F	Duty	cont	ID	S5
S.N.	101174283001	Weight	- Kgs	T-Class	-

Pole ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole ☐ 8 Pole

Class Typ. ☐ Exd ☐ Exe ☐ Exn

Mounting ☐ IMB3 ☐ IMB5 ☐ IMB

Rotation direct (View From NDE)

☒ CW ☐ CCW

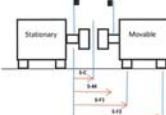
(2). Vibration motor on site / Current

Measuring

Load Current (A)		
Load	%	
L1	L2	L3
-	-	-

Vibration (mm/sec)						Bearing Condition		Remark
Point	V	H	A	gR				
DE	0.56	0.32	0.24	-	-	0.09		
NDE	0.96	0.59	-	-	-	0.08		

(3). Mechanical inspection



Distance Data

S-C = mm, S-F1 = mm, mm, mm, mm, mm.

S-M = mm, S-F2 = mm, mm.

Coupling Type mm.

Bot Coupling mm.

Recheck before overhaul					Shim Plate		
Measurement	Horizontal	Vertical	Unit	mm	mm	Quantity	mm (mm.)
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

☒ Shim plate not over 4 plates
☐ ឥតស្រោច

(4). Mechanical install inspection

Coupling Type :

☐ Direct Coupling

☐ Rubber Coupling

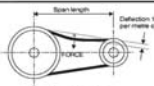
☐ Other _____

Transmission belt type :

☐ Flat belt

☐ V-shape belt

☐ Timer belt



Span length : _____ N. / kgf.

(5). Electrical inspection Difference Connect cable

U1 = Red
V1 = Yellow
W1 = Blue

☐ Lead good condition

☐ Cable grand

☐ Reconnection same discor


Remark : _____

Checked By : **Mr. Wimal C.**

Date : **20/12/2022**

Customer : **K.Pakorn**

Date : **20/12/2022**



Inspection Sheet For Squirrel Cage Motor

PRY65411103-330

☐ All Medium Voltage Motor

☐ Low Voltage Motor

☐ Special Design of Low Voltage AC Motor

MOTOR NAME/PLATE
 Manufacturer : IN DUCTION
 Power : 0.75 kW
 Voltage : 380 V
 Current : 2.1 A
 DE Bearing : 6204-2Z
 Date : 12 November 2022

Customer : Chuanhai Clean Energy Co., Ltd
 Frame /Model : 3155
 Speed : 3385 1/min
 Frequency : 120 Hz
 Cus Ø :
 Tag. No : 62H31AF001


K. Pakorn
 Type :
 Ser.No : 148072347.00
 Insulation Class :
 Temp. Rise Class :
 IP : 55
 SF :

General Information.
Motor Mounting
☒ Flange mounted
☐ Foot mounted
Driven Connection
☐ Gear box
☐ V - Belt
☐ Coupling

1. General check.
 2.1 Body Frame Corrosive
 2.2 Cable Entry Condition
 2.3 Earthing Connection Status
 2.4 Terminal Box Sealing & Other Gasket
 2.5 Inside of Terminal Box, Dust/Water is Clear
 2.6 All Cable Connections, Tightening.
 2.7 Inside of Terminal Box, Temperature and Humidity
 2.8 Cover and Cooling Fan

☐ Normal
☐ Normal
☐ Normal
☐ Normal
☒ Normal
☐ Normal
☐ Normal
☐ Normal

☐ Abnormal
☐ Abnormal
☐ Abnormal
☐ Abnormal
☐ Abnormal
☐ Abnormal
☐ Abnormal
☐ Abnormal



2. Measure insulation resistance and polarizing index
Measure winding data

Terminals	Insistance (mili-Henry)	Resistance (Ohm)	Results	Remark
U-V	125.90 U1-U2	- 11.20 U1-U2	N	Wdg Temp 42°C Amb Temp 34°C Instrument By : MicroOhm Meter & Data Display LCR Meter
U-W	118.10 V1-V2	- 11.20 V1-V2		
V-W	106.90 W1-W2	- 11.10 W1-W2		

Result :
☐ Normal
 ☐ Abnormal
 ☐ Include Cable
 ☐ Exclude Cable

*** Standard of Insulation Resistance(RI) Reference by IEEE Standard 43-2000**

Insulation Test

Test-Volt	Marking	15 Sec.		60 Sec.		10 min.		PI	Amb. Temp
		C	4BC	C	4BC	C	4BC		
500	U-V	-	-	-	-	-	-	31	
	U-W	-	-	-	-	-	-		
	V-W	-	-	-	-	-	-		
	(U + V + W) ÷ EARTH	739GΩ	18.56 GΩ	-	GΩ	2.53			

Insulation Test (500V.)
 Mark 60 Sec
 U-V : -
 U-W : -
 V-W : -
 (U + V + W) ÷ EARTH : 1852

Insulation Test (500V.)
 Wdg Temp Power Cable
 15 Sec GΩ
 U-W : -
 U-W : -
 V-W : -
 U-E : -
 V-E : -
 W-E : -

Result :
☐ Normal
 ☐ Abnormal
 ☐ Include Cable
 ☐ Exclude Cable

*** Standard of Resistance(RI) Reference by IEEE Standard 113**

3. Temperature Sensor And Heater
TEMPERATURE SENSOR (STATIST)

Element Item	1	2	3	4	5	Wdg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Sheath No.	T01	T02	T03	T04	T05	861	862	81-402	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result :
☐ Normal
 ☐ Abnormal

*** Standard of Resistance(RI) Reference by IEEE Standard 113**

4. Conclusion and recommendation.
Conclusion :
Recommendation :

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	Normal	Company Name	PLATOTECH COMPANY LIMITED
W	Warning	Name-Surname	Mr Wimsai
D	Disaster	Date	12 November 2022

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-3/30
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AF001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์ที่แนบมา : ไฟล์ PR-W340 Rev 00 Page 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-3/30
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AF001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์ที่แนบมา : ไฟล์ PR-W340 Rev 00 Page 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PAGE : 1

Customer Detail : Chonburi Clean Energy Co., Ltd.

(1) Motor Details

Job No: PRY65411103-3 Tag: HTJ11AF001

MFG: Power 0.75 kW, Full load Amp. - A, Pole 2 Pole 4 Pole 6 Pole

Type: Volt 380 V, Speed 3385 rpm, Class Typ. Exd Exe Exn

Frame: Freq. 120 Hz, Bearings DE, Mounting IMB3 IMB5 IMB

SF: Phase - , Rotation direct(View From NDE) CW CCW

Ins. Class - , IP 55, T-Class -

S/N: 148072247 Weight - Kgs

(2) Vibration motor on site / Current

Measuring Load - %

Point	V	H	A	gR	Remark
DE	0.03	0.04	0.05	-	0.017
NDE	0.11	0.13	-	-	0.028

(3) Mechanical Inspection

Stationary: L1, L2, L3

Distance Data: S-C = mm, S-F1 = mm, S-F2 = mm

Coupling Type: mm

Bolt Coupling: mm

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	mm	mm/100	mm	mm
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

Shim Plate: Shim plate not over 4 plates

(4) Mechanical install inspection

Coupling Type: Transmission belt type: Flat belt, V-shape belt, Timer belt

Span length: mm, Tension belt: N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red, V1 = Yellow, W1 = Blue

Lead good condition, Cable grand, Reconnection same discor

Remark :

ไฟล์ที่แนบมา : ไฟล์ PR-W340 Rev 00 Page 01 Inspection Sheet For On-Site

Inspection Sheet for Squirrel Cage Motor

PAGE : 1

Customer : Chonburi Clean Energy Co., Ltd. Attention : K.Pakorn

MOTOR NAMEPLATE

Manufacture: IN DUCTION, Frame Model: - Type: - Ser.No.: 148072247.00

Power: 0.75 kW, Speed: 3385 1/min, Voltage: 380 V, Frequency: 120 Hz, Insulation Class: - Design: -

Current: 2.1 A, Cos θ: - Temp Rise Class: - Duty: -

DE Bearing: 6204-2Z, NDE Bearing: 6204-2Z, IP: 55, SF: -

Date: 12 November 2022 Tag No: HTJ11AF001

General Information

Motor Mounting: I- Flange mounted, Foot mounted, Gear box, V- Belt, Coupling

1. General check

2.1 Body Frame Corrosive: Normal, Abnormal, N/A

2.2 Cable Entry Condition: Normal, Abnormal, N/A

2.3 Earthing Connection Status: Normal, Abnormal, N/A

2.4 Terminal Box Sealing & Other Gasket: Normal, Abnormal, N/A

2.5 Inside of Terminal Box, Dust/Water is Clear: Normal, Abnormal, N/A

2.6 All Cable Connection, Tightening: Normal, Abnormal, N/A

2.7 Inside of Terminal Box Temperature and Heaters: Normal, Abnormal, N/A

2.8 Cover and Cooling Fan: Normal, Abnormal, N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark
U-V	112.40	U1-U2	11.10	Wdg Temp 42 °C Amb Temp 34 °C
U-W	130.50	V1-V2	11.10	Insulation By
V-W	108.60	W1-W2	11.10	Measure Motor & Dual Display LCR Meter

Result: Normal, Abnormal, Include Cable, Exclude Cable

Insulation Test

Test-Volt	Marking	15 Sec	60 Sec	10 min	PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V)	Insulation Test (500V)
500	U-V	-	-	-	-	31	U-E	-	-	-
	U-W	-	-	-	-		V-E	-	-	-
	V-W	-	-	-	-		W-E	-	-	-
	(U+V+W)-EARTH	19.60G	34.20	G0	-		G0	1.00	-	-

Min. Insulation Recommended: > 0.1G0 Polarization Index Recommended: > 2.5

Result: Normal, Abnormal, Include Cable, Exclude Cable

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

Element Item	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5	B01	B02	H01	H02	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: Normal, Abnormal

4. Conclusion and recommendation.

Conclusion: N

Recommendation: N











RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N - Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	W - Warning	Name-Surname	Mr.Winai
D	D - Danger	Date	12 November 2022











MOTOR SERVICE REPORT
 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2
 PRY65411103-430

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-430
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AF001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:











12/11/22 09:54:14 - 12/11/22 09:54:14 Rev 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS











MOTOR SERVICE REPORT
 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3
 PRY65411103-430

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-430
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AF001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

12/11/22 09:54:14 - 12/11/22 09:54:14 Rev 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PAGE : 1
 PRY65411103-430

Customer Detail : Chonburi Clean Energy Co., Ltd.		Before	After
---	--	--------	-------


(1) Motor Details

MFG : -	Power : 0.75 kW	Full load Amp. : - A	Pole : <input type="checkbox"/> 2 Pole <input type="checkbox"/> 4 Pole <input type="checkbox"/> 6 Pole
Type : -	Volt : 380 V	Speed : 3385 rpm	Class Typ. : <input type="checkbox"/> Exd <input type="checkbox"/> Exe <input type="checkbox"/> Exn
Frame : -	Freq. : 50 Hz	Bearings : DE	Mounting : <input type="checkbox"/> IMB3 <input type="checkbox"/> IMB5 <input type="checkbox"/> IMB
SP : -	Phase : -	NDE : -	Rotation direct(View From NDE) : <input type="checkbox"/> CW <input type="checkbox"/> CCW
Ins. Class : -	Duty : -	IP : S5	
S/N : 14807248	Weight : - Kgs	T-Class : -	

(2) Vibration motor on site / Current

Measuring	Load Current (A)	Vibration (mm/sec)	Bearing Condition
Load : -	%	Point V H A gR	Remark
L1	L2	L3	
-	-	-	

(3) Mechanical Inspection

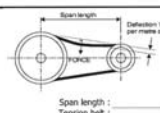


Recheck before overhaul		Shim Plate	
Measurement	Horizontal	Vertical	Unit
Offset	-	-	mm
Angular	-	-	mm/100
P1	-	-	mm
P2	-	-	mm

(4) Mechanical install inspection

Coupling Type : ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type : ☐ Flat belt ☐ V-shape belt ☐ Timer belt



(5) Electrical inspection Difference Connect cable

U1 = Red	V1 = Yellow	W1 = Blue	

Remark :

12/11/22 09:54:14 - 12/11/22 09:54:14 Rev 01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

PAGE : 1
 PRY65411103-430

Customer : Chonburi Clean Energy Co., Ltd.		Before	After
--	--	--------	-------

MOTOR NAMEPLATE

Manufacture : -	Frame / Model : -	Type : -	Ser. No. : -
Power : 1.50 kW	Speed : 1705 1/min	Insulation Class : -	Design : -
Voltage : 380 V	Frequency : 60 Hz	Temp. Rise Class : -	Duty : -
Current : 3.3 A	Cos θ : -	IP : -	SF : -
DE Bearing : 6204-2Z	NDE Bearing : 6204-2Z		
Date : 12 November 2022	Tag No. : HTJ11AF001		

1. General check

2.1 Body Frame Corrosive	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.2 Cable Entry Condition	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.3 Earthing Connection Status	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.4 Terminal Box Sealing & Other Gasket	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.5 Inside of Terminal Box, Dust/Water is Clear	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.6 All Cable Connection, Tightening	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.7 Inside of Terminal Box Temperature and Heaters	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	
2.8 Cover and Cooling Fan	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A	

2. Measure insulation resistance and polarizing index

Terminals	Insulation (MΩ)	Resistance (Ω)	Results	Remark
U-V	12.30	U1-U2	-	Wdg Temp 42 °C Ambient 34°C
U-W	14.30	V1-V2	-	Insulation By
V-W	84.90	W1-W2	-	Micro Ohm Meter & Dual Display LCR Meter

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

3. Temperature Sensor And Heater

Element Item	1	2	3	4	5	Yg DE	Reg NDE	Heat 1	Heat 2	TYPE	Remark
Cable Marking No.	TH1	TH2	TH3	TH4	TH5						
RESISTANCE (Ω)	-	-	-	-	-						

Result : ☐ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

4. Conclusion and recommendation

Conclusion :

Recommendation :

RESULT	Definition
N	N = Normal
W	W = Warning
D	D = Danger

DESCRIPTION	TESTED AND INSPECTED BY
Company Name	PLUTOTECH COMPANY LIMITED
Name-Surname	Mr.Winai
Date	12 November 2022

Fig. 5. 14.06.54; 100°E-WS-01 Box 30 Page 15. PHOTOGRAPHS OF FOUND & AFTER SERVICE CONDITIONS

In 6/15/14 14:54 - 10/14/14 14:54 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITION

Surveys: 01/11/ 57 via : FR-W5-49 Rev.01 Inspection Sheet for On-Site

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-6/30
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AN002	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY65411103-6/30
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AN002	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

INSPECTION SHEET FOR ONSITE

PAGE : 1

Customer Detail : Chonburi Clean Energy Co., Ltd.		Before	After
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(1) Motor Details

MFG	Job No: PRY65411103-6	Tag: HTJ11AN002	
Type	Power 22 kW	Full load Amp.	A
Frame	Volts 380 V	Speed	1475 rpm
SF	Freq. 50 Hz	Bearings	DE
Ins. Class	Phase	Duty	IP
SN	Weight	T-Class	

(2) Vibration motor on site / Current

Measuring	Load Current (A)	Vibration (mm/sec)	Bearing Condition
	Load	Point	
	L1 L2 L3	V H A gR	
		DE 2.21 2.24 1.95 31 34 0.38	
		NDE 3.87 4.02 - - 33 0.37	

(3) Mechanical Inspection

Recheck before overhaul				Shim Plate	
Measurement	Horizontal	Vertical	Unit	Y/R	W/U (mm.)
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Distance Data

S-C = mm, S-F1 = mm, S-F2 = mm, Distance coupling Motor - Load = mm

Coupling Type

Both Coupling

(4) Mechanical install inspection

Coupling Type

Transmission belt type

Direct Coupling

Rubber Coupling

Other

Flat belt

V-shape belt

Timer belt

Span length : mm, Tension belt : N / kgf.

(5) Electrical Inspection Difference Connect cable

U1 = Red	V1 = Yellow	W1 = Blue
----------	-------------	-----------

Lead good condition

Cable grand

Reconnection same discor

Remark :

Checked By : Mr.Winal C. Customer : K.Pakorn

Date : 20/12/2022 Date : 20/12/2022

Inspection Sheet for Squirrel Cage Motor

PAGE : 1

Customer : Chonburi Clean Energy Co., Ltd.		Attention : K.Pakorn	
--	--	----------------------	--

MOTOR NAMEPLATE

Manufacturer : HITACHI	Frame / Model : -	Type : TFOA	Set No. : GR212618
Power : 22.00 kW	Speed : 1475 1/min.	Frequency : 50 Hz	Insulation Class : 155 Design : -
Voltage : 380 V	Current : 70 A	Temp-Rise Class : -	Duty : -
DE Bearing : 6313-2Z/C3	NDE Bearing : 6312-2Z/C3	IP : 55	SF : 94.50

General Information

Motor Mounting

Flange mounted

Foot mounted

Drive Connection

Gear box

Belt

Coupling

1. General check

2.1 Body Frame Corrosive

2.2 Cable Entry Condition

2.3 Earthing Connection Status

2.4 Terminal Box Sealing & Other Gasket

2.5 Inside of Terminal Box, Dust/Water is Clear

2.6 All Cable Connection, Tightening

2.7 Inside of Terminal Box Temperature and Hotters

2.8 Cover and Cooling Fan

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark
U-V	9.60	U1-U2	0.30	U1-U2
U-W	8.25	V1-V2	0.40	V1-V2
W-W	9.18	W1-W2	0.30	W1-W2

Insulation Test

Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp.	Mark	60 Sec.
500	U-V	-	-	-	-	32	U-E	-
	U-W	-	-	-	-		V-E	-
	W-W	-	-	-	-		W-E	-

Insulation Test (500V)

Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp.	Mark	60 Sec.
500	U-V	-	-	-	-	32	U-E	-
	U-W	-	-	-	-		V-E	-
	W-W	-	-	-	-		W-E	-

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATERO)

Element Item	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5						
RESISTANCE (Ω)	-	-	-	-	-						

4. Conclusion and recommendation.

Conclusion

Recommendation

RESULT

N

DESCRIPTION

TESTED AND INSPECTED BY

Company Name

PLUTOTECH COMPANY LIMITED

Name-Surname

Mr. Winal

Date

12 November 2022

7-553a-14 14-5834-142 FR-93-02 Rev. 06 Page 13 PHOTOGRAPHS OF FOUND & AFTER SURVEYED CONDITIONS

DOI: 10.1002/1522-2675(200106)173:6<1035::AID-LG1035>3.0.CO;2-1 PHOTOGRAPHS OF COUNCIL AFTER SERVED CONTINUED

twilfuls: 01/11/ 57 nla : FR-WS-49 Rev.01 Inspection Sheet For On-Site

PAGE : 1

Inspection Sheet For Squirrel Cage Motor

PRYSMA11103-B030

☐ All Medium Voltage Motor

☐ Low Voltage Motor

☐ Special Design of Low Voltage AC Motor

MOTOR NAMEPLATE

Manufacturer : HITACHI
Power : 0.40 kW
Voltage : 330 V
Current : A
DE Bearing :
Date : 12 November 2022

Customer : Chuanhai Chen Energy Co., Ltd.
Frame Model : -
Speed : 1/min.
Frequency : Hz
Cus O :
NDE Bearing :
Tag No : HTJHIAN001

K.Pakorn
TFOA
Ser.No :
Insulation Class : R
Design : -
Temp.Rise Class : Duty :
IP : 55 SF : -

General Information.

Motor Mounting
☐ Flange mounted
☐ Foot mounted
Driven Connection
☐ Gear box
☐ Belt
☐ Coupling

1. General check.

2.1 Body Frame Corrosive
2.2 Cable Entry Condition
2.3 Earthing Connection Status
2.4 Terminal Box Sealing & Other Gasket
2.5 Inside of Terminal Box, Dust-Water is Clear
2.6 All Cable Connection, Tightening.
2.7 Inside of Terminal Box Temperature and Hotters
2.8 Cover and Cooling Fan

<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminal	Inductance (mH)	Resistance (Ω)	Results	Remark
U-V	73.30	U1-U2 -	46.50 U1-U2 -	Wdg.Temp 42°C Amb.Temp 34°C
U-W	64.60	V1-V2 -	46.50 V1-V2 -	Instrument By
V-W	72.40	W1-W2 -	45.50 W1-W2 -	MicroOhm Meter & Dual Display LCR Meter

Result : ☐ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Insulation Resistance(RI) Reference by IEEE Standard 43-2000

Insulation Test						Insulation Test (500V.)		Insulation Test (500V.)	
Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp	Mark	60 Sec	Wdg or Power Cable
		C \geq 40C	C \geq 40C	C \geq 40C	-	-	U-W	-	15 Sec \geq 60
		-	-	-	-	-	V-W	-	U-W - \geq 60
		-	-	-	-	-	W-E	-	V-W - \geq 60
500		-	-	-	-	-	U-E	-	U-E - \geq 60
		-	-	-	-	-	V-E	-	V-E - \geq 60
		-	-	-	-	-	W-E	-	W-E - \geq 60
	(R = V * W) / EARTH	32.300G	50.40 G	-	GRI 1.50	-			
Min. Insulation Recommended > 0.1G						Polarization Index Recommended > 1.5			

Result : ☐ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Resistance(RI) Reference by IEEE Standard 115

3.Temperature Sensor And Heater
TEMPERATURE SENSOR (STATOR)

ELEMENT ITEM	1	2	3	4	5	Op DE	Bog NDE	Heat 1	Heat 2	TYPK	Remark
Cable(Marking No)	TTH	TTO	TTD	TDA	TDS	NA	NA	NA	NA		
RESISTANCE(Ω)	-	-	-	-	-	NA	NA	NA	NA		

Result : ☐ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT

Definition

N = Normal
W = Warning
D = Danger

DESCRIPTION

Company Name PLATOTECH COMPANY LIMITED

Name-Surname Mr Winai

Date 12 November 2022

TESTED AND INSPECTED BY

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY6541103-8/30
PLANT:	-	Receiving Date:	12 November 2022
CODE No.:	-	Delivery Date:	12 November 2022
Tag No.:	HTJ11AA001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittasak

PHOTO OF SERVICE CONDITIONS

PHOTO OF FINDING & AFTER SERVICED CONDITIONS

Additional Comments:

Sufficient : 01/11/22 : 10/11/22 Rev.01 Page 11 PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

PAGE : 2

Customer Detail :		Chonburi Clean Energy Co., Ltd.		Before <input type="checkbox"/> After <input checked="" type="checkbox"/>	
Job No:		PRY6541103-8		Tag: HTJ11AA101	
MFG	Power	0.4 kW	Full load Amp.	-	A
Type	Volt	380 V	Speed	-	rpm
Frame	Freq.	- Hz	Bearings	DE	-
SF	Phase	-	Bearings	NDE	-
Ins. Class	Duty	-	IP	55	-
SN	Weight	- Kgs	T-Glas	-	-

(1) Motor Details

Load Current (A)		
Load	%	
L1	L2	L3
-	-	-

(2) Vibration motor on site / Current

Vibration (mm/sec)		Bearing Condition		Remark	
Point	V H A gE	-	-	-	-
DE	1.08 1.38 0.80 31 32 0.29	-	-	-	-
NDE	0.88 1.31 0.88 - 33 0.31	-	-	-	-

(3) Mechanical Inspection

Rackback before overhaul			Shim Plate		
Measurement	Horizontal	Vertical	Unit	mm	mm
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

(4) Mechanical install inspection

Coupling Type : ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type : ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length : _____ mm / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same door

Remark :

Checked By : Mr.Winal C. Customer : K.Pakorn
Date : 20/12/2022 Date : 20/12/2022

Sufficient : 01/11/22 : 10/11/22 Rev.01 Inspection Sheet For On-Site

Inspection Sheet for Squirrel Cage Motor

PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:		Chonburi Clean Energy Co., Ltd.		PRY Job No:		PRY6541103-8/30	
PLANT:		-		Receiving Date:		13 November 2022	
CODE No.:		-		Delivery Date:		13 November 2022	
Tag No.:		HTJ11AA102		ATTENTION:		K.Pakorn	
				SALES:		Mr.Kittasak	

PHOTO OF SERVICE CONDITIONS

PHOTO OF FINDING & AFTER SERVICED CONDITIONS

Additional Comments:

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:		Chonburi Clean Energy Co., Ltd.		PRY Job No:		PRY6541103-8/30	
PLANT:		-		Receiving Date:		13 November 2022	
CODE No.:		-		Delivery Date:		13 November 2022	
Tag No.:		HTJ11AA102		ATTENTION:		K.Pakorn	
				SALES:		Mr.Kittasak	

PHOTO OF SERVICE CONDITIONS

PHOTO OF FINDING & AFTER SERVICED CONDITIONS

Additional Comments:

Sufficient : 01/11/22 : 10/11/22 Rev.01 PHOTOGRAPHS OF FINDING & AFTER SERVICED CONDITIONS

TABLE 1. MECHANICAL PROPERTIES OF THE POLYMER COMPOSITES

Issued: 01/11/57 via: FR-WS-49 Rev.01 Inspection Sheet For On-Site

Subj: 148634, 100% FRAGS at Rec 80, Para 11. PHOTOGRAPHS OF TROOP & AFTER SERVICE COMMENTS

U.S. GPO: 1980-74-569-880/2-80 P. 11 PHOTOGRAPHY OF SCHOOL AFTER SERVICE CONDITION

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME: Choraburi Clean Energy Co., Ltd.	PRV Job No: PRY65411103-1030	Receiving Date: 13 November 2022
PLANT: -	Delivery Date: 13 November 2022	ATTENTION: K.Pakorn
CODE No.: -	Tag No: HTJ11AJ001	SALES: Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF FOUND & AFTER SERVICED CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์ไฟล์ : 01/11/22 - ไฟล์ PR-WS-49 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PAGE : 2

Customer Detail : Choraburi Clean Energy Co., Ltd.		Before <input type="checkbox"/> After <input checked="" type="checkbox"/>
--	--	---

(1) Motor Details

Job No: PRY65411103-10	Tag: HTJ11AJ001
MFG: -	Power: 5.5 KW
Type: -	Volt: 380 V
Frame: -	Freq: 50 Hz
SF: -	Phase: -
Ins. Class: F	Duty: -
S.N.: -	Weight: - Kgs

Full load Amp: 11.7 A

Speed: 1460 rpm

Bearing: DE

IP: -

T-Class: -

(2) Vibration motor on site / Current

Load Current (A)			Vibration (mm/sec)			Bearing Condition			Remark
Load	%		Point	V	H	A	gR		
L1	L2	L3	DE	0.16	0.14	0.70	30	32	0.27
-	-	-	NDE	0.79	0.44	-	-	32	0.76

(3) Mechanical Inspection

Rackback before overhaul				Shim Plate	
Measurement	Horizontal	Vertical	Unit	g/R	Quantity
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Distance Data

S-C = - mm, S-F1 = - mm, S-F2 = - mm

S-H = - mm, S-F2 = - mm

Coupling Type: - mm

Boat Coupling: - mm

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length: - mm

Tension belt: - N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same disc

Remark :

Checked By: Mr.Winal C.

Date: 20/12/2022

Customer: K.Pakorn

Date: 20/12/2022

ไฟล์ไฟล์ : 01/11/22 - ไฟล์ PR-WS-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

PAGE : 1

CUST-NAME: Choraburi Clean Energy Co., Ltd.		PRV Job No: PRY65411103-1030	
PLANT: -		Receiving Date: 13 November 2022	
CODE No.: -		Delivery Date: 13 November 2022	
Tag No: HTJ11AJ001		ATTENTION: K.Pakorn	
		SALES: Mr.Kittisak	

MOTOR NAMEPLATE

Manufacturer: TOSHIBA	Frame Model: 180M	Type: -
Power: 22.00 KW	Speed: 2955 1/min	Ser No: -
Voltage: 380 V	Frequency: 50 Hz	Insulation Class: F
Current: 41.8 A	Temp Rise Class: -	Duty: -
DE Bearing: -	NDE Bearing: -	IP: 55
SF: -		

General Information

Motor Mounting: ☐ Foot mounted ☐ V-Belt ☐ Coupling

Drive Connection: ☐ Gear box ☐ Blower ☐ V-Belt ☐ Coupling

1. General check

2.1 Body Frame Corrosive	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.2 Cable Entry Condition	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.3 Earthing Connection Status	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.4 Terminal Box Sealing & Other Gasket	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.5 Inside of Terminal Box, Dust/Water is Clear	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.6 All Cable Connection, Tightening	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.7 Inside of Terminal Box Temperature and Heaters	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.8 Cover and Cooling Fan	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (mOhm-Ohm)	Results	Remark
U-V	9.95	151.00	U1-U2	Wdg Temp 42°C Amb Temp 34°C
U-W	11.19	150.00	V1-V2	Insulation By
V-W	11.84	151.00	W1-W2	Motor On Site & Dual Display LCR Meter

Result: ☒ Normal ☐ Abnormal ☐ N/A

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Test-Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V)	Insulation Test (500V)
		15 Sec	60 Sec	10 min						
500	U-V	-	-	-	32	32	U-E	60 Sec	N/A	N/A
	U-W	-	-	-						
	V-W	-	-	-						
	(U+V+W)-EARTH	17.90G	45.00	G0						

Min. Insulation Recommended: > 0.1G0

Polarization Index Recommended: > 2.5

Result: ☒ Normal ☐ Abnormal ☐ N/A

* Standard of Resistance (R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

Element Item	1	2	3	4	5	Yr DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Resistance (Ohm)	TD1	TD2	TD3	TD4	TD5	N/A	BD1	BD2	BD3	-	-

Result: ☒ Normal ☐ Abnormal ☐ N/A

4. Conclusion and recommendation.

Conclusion: -

Recommendation: -

RESULT

N

DEFINITION

N - Normal

W - Warning

D - Danger

DESCRIPTION

TESTED AND INSPECTED BY

Company Name: PLUTOTECH COMPANY LIMITED

Name-Surname: Mr.Winal

Date: 13 November 2022

ไฟล์ไฟล์ : 01/11/22 - ไฟล์ PR-WS-49 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME: Choraburi Clean Energy Co., Ltd.	PRV Job No: PRY65411103-1030	Receiving Date: 13 November 2022
PLANT: -	Delivery Date: 13 November 2022	ATTENTION: K.Pakorn
CODE No.: -	Tag No: HTJ11AJ001	SALES: Mr.Kittisak

PHOTO OF SERVICE CONDITIONS

PHOTO OF FOUND & AFTER SERVICED CONDITIONS

ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRV Job No:	PRV65411103-11/30
PLANT:	-	Receiving Date:	13 November 2022
CODE No.:	-	Delivery Date:	13 November 2022
Tag No.:	HTJ11AJ001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittisak

PHOTO OF SERVICED CONDITIONS

ADDITIONAL COMMENTS:

Subfile: 145634 - 155 FR-W5-49 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PAGE : 2

Customer Detail:		Chonburi Clean Energy Co., Ltd.		Before	After
------------------	--	---------------------------------	--	--------	-------

(1) Motor Details

Job No:	PRV65411103-11	Tag:	HTJ11AJ001
MFG	-	Power	22 kW
Type	-	Volt	380 V
Frame	180M	Freq	50 Hz
SF	-	Phase	-
Ins. Class	F	Duty	-
S/N	-	Weight	Kgs

Full load Amp.	41.8 A	Pole	<input type="checkbox"/> 2 Pole <input type="checkbox"/> 4 Pole <input type="checkbox"/> 6 Pole
Speed	1460 rpm	Class Typ.	<input type="checkbox"/> Ext <input type="checkbox"/> Exe <input type="checkbox"/> Exn
Bearings	NDE	Mounting	<input type="checkbox"/> IMB3 <input type="checkbox"/> IMB5 <input type="checkbox"/> IMB
IP	55	Rotation direction (View From NDE)	<input type="checkbox"/> CW <input type="checkbox"/> CCW
T-Class	-		

(2) Vibration motor on site / Current

Load Current (A)				Vibration (mm/sec)				Bearing Condition		Remark
Point	V	H	A	gE	-	-	-	-		
L1	-	-	-	-	-	-	-	-	-	
L2	-	-	-	-	-	-	-	-	-	
L3	-	-	-	-	-	-	-	-	-	

(3) Mechanical inspection

Recheck before overhaul				Shim Plate	
Measurement	Horizontal	Vertical	Unit	S/R	Quantity
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Distance Data

S-C = mm, S-F1 = mm, inw/in = mm, inw/out = mm, Shim plate not over 4 plates

S-H = mm, S-F2 = mm, Distance coupling Motor - Load = mm, Shim plate Motor = mm

Coupling Type = mm

Bot Coupling = mm

(4) Mechanical install inspection

Coupling Type:

Transmission belt type:

Direct Coupling ☐ Flat belt ☐

Rubber Coupling ☐ V-shape belt ☐

Other ☐ Timer belt ☐

Span length: N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn

Date: 20/12/2022 Date: 20/12/2022

Subfile: 145634 - 155 FR-W5-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

PAGE : 1

CUST-NAME:		Chonburi Clean Energy Co., Ltd.		PRV Job No:	PRV65411103-12/30
PLANT:	-	Receiving Date:	13 November 2022	Delivery Date:	13 November 2022
CODE No.:	-	ATTENTION:	K.Pakorn	SALES:	Mr.Kittisak
Tag No.:	HTJ11AJ002				

MOTOR NAME/PLATE

Manufacturer: TOSHIBA

Power: 5.50 kW

Voltage: 380 V

Current: 11.7 A

DE Bearing: -

Date: 13 November 2022

Customer: Chonburi Clean Energy Co., Ltd.

Frame / Model: -

Speed: 1400 1/min

Frequency: 50 Hz

Insulation Class: -

Design: -

Temp. Rise Class: -

Duty: -

IP: -

SF: -

General Information

Motor Mounting

Flange mounted ☐

Foot mounted ☐

Driven Connection

Gear box ☐ Blower ☐

V-Belt ☐

Coupling ☐

1. General check

2.1 Body/Frame Corrosive

2.2 Cable Entry Condition

2.3 Earthing Connection Status

2.4 Terminal Box Sealing & Other Gasket

2.5 Inside of Terminal Box, Dust/Water is Clear

2.6 All Cable Connection, Tightening

2.7 Inside of Terminal Box Temperature and Heaters

2.8 Cover and Cooling Fan

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mili-Henry)	Resistance (Ohm)	Results	Remark
U-V	31.20	U1-U2	-	1.20
U-W	39.10	V1-V2	-	1.10
V-W	33.20	W1-W2	-	1.10

Result: ☐ Normal ☐ Abnormal

Insulation Test (500V)

Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Asch. Temp	Mark	60 Sec	500V Power Cable
500	U-V	-	-	-	-	31	U-E	-	-
	U-W	-	-	-	-		V-E	-	-
	V-W	-	-	-	-		W-E	-	-
	(U+V+W)-EARTH	520G	41.10	G0	-		G0	7.83	-

Min. Insulation Recommended: > 0.1G0

Polarization Index Recommended: > 2-5

Result: ☐ Normal ☐ Abnormal

3. Temperature Sensor and Heater

TEMPERATURE SENSOR (STATERO)

ELEMENT ITEM	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5	-	-	-	-	-	-
RESISTANCE (G)	-	-	-	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	Warning	Name-Surname	Mr. Winal
D	Danger	Date	13 November 2022

Subfile: 145634 - 155 FR-W5-49 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

Customer Detail : Chonburi Clean Energy Co., Ltd. Before After

(1) Motor Details Job No: PRY65411103-12 Tag: HTJ11AJ002

MFG: Power 5.5 kW, Full load Amp: 11.7 A, Pole: 2 Pole 4 Pole 6 Pole 8 Pole 10 Pole
 Type: Volt 380 V, Speed 1460 rpm, Class Typ: IMB3 IMB5 IMB7
 Frame: Freq 50 Hz, Bearings DE, Mounting: IMB3 IMB5 IMB7
 SF: Phase, Bearings NDE, Rotation direct(View From NDE): CW CCW
 Ins. Class: Duty, IP, T-Class
 S/N: Weight Kgs

(2) Vibration motor on site / Current

Measuring: Load Current (A) Vibration (mm/sec) Bearing Condition Remark

Load: L1 L2 L3 Point V H A gR

(3) Mechanical Inspection

Stationary Movable

Recheck before overhaul Shim Plate

Measurement Horizontal Vertical Unit Y/R Quantity W/n (mm.)

Offset mm 1 - - -
 Angular mm/100 2 - - -
 F1 mm 3 - - -
 F2 mm 4 - - -

Distance Data S-C = mm, S-F1 = mm, U-W = mm, U-W = mm, U-W = mm, U-W = mm
 S-H = mm, S-F2 = mm, Distance coupling Motor - Load = mm, Shim plate not over 4 plates
 Coupling Type: mm, Shim plate Motor
 Bolt Coupling: mm

(4) Mechanical install inspection

Coupling Type: Transmission belt type: Direct Coupling Flat belt Rubber Coupling V-shape belt Other Timer belt

Span length: Tension belt: N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red V1 = Yellow W1 = Blue

Lead good condition Cable grand Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn
 Date: 20/12/2022 Date: 20/12/2022

FileNo: 01/11/57 v1a : FR-W5-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

Customer: Chonburi Clean Energy Co., Ltd. K.Pakorn

MOTOR NAMEPLATE: TOSHIBA Frame Model: 110M Type: K.Pakorn

Power: 22.00 kW Speed: 2955 1/min. Ser No.:
 Voltage: 380 V Freq: 50 Hz Insulation Class: Design:
 Current: 41.8 A Cos θ: Temp Rise Class: Duty: IP: SF:
 DE Bearing: NDE Bearing: IP: SF:
 Date: 13 November 2022 Tag No: HTJ11AJ002

1. General check

2.1 Body Frame Corrosive Normal Abnormal N/A
 2.2 Cable Entry Condition Normal Abnormal N/A
 2.3 Earthing Connection Status Normal Abnormal N/A
 2.4 Terminal Box Sealing & Other Gasket Normal Abnormal N/A
 2.5 Inside of Terminal Box, Dust/Water is Clear Normal Abnormal N/A
 2.6 All Cable Connection, Tightening Normal Abnormal N/A
 2.7 Inside of Terminal Box Temperature and Heaters Normal Abnormal N/A
 2.8 Cover and Cooling Fan Normal Abnormal N/A

3. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (mΩ-Ohm)	Results	Remark
U-V	13.93	U1-U2	152.70	U1-U2
U-W	14.11	V1-V2	149.50	V1-V2
V-W	14.09	W1-W2	150.60	W1-W2

Result: Normal Abnormal Include Cable Exclude Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 41-2000

Insulation Test (500V)

Test Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp.	Mark	60 Sec	Insulation Test (500V)
U-V									
U-W									
V-W									

Result: Normal Abnormal Include Cable Exclude Cable

* Standard of Resistance (R) Reference by IEEE Standard 41-2000

3. Temperature Sensor And Motor TEMPERATURE SENSOR (STATIST)

Element Item	1	2	3	4	5	Vg DE	Brg NDR	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TEN	TEN	TEN	TEN	TEN						
Resistance (Ω)											

Result: Normal Abnormal Include Cable Exclude Cable

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT: N

Definition: N = Normal W = Warning D = Danger

DESCRIPTION: TESTED AND INSPECTED BY

Company Name: PLUTOTECH COMPANY LIMITED

Name-Surname: Mr.Winal

Date: 13 November 2022

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PRY Job No: PRY65411103-1300

Receiving Date: 13 November 2022

Delivery Date: 13 November 2022

ATTENTION: K.Pakorn

SALES: Mr.Kittak

Tag No: HTJ11AJ002

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

FileNo: 01/11/57 v1a : FR-W5-49 Rev.01 Inspection Sheet For On-Site

INSPECTION SHEET FOR ONSITE

Customer Detail : Chonburi Clean Energy Co., Ltd. Before After

(1) Motor Details Job No: PRY65411103-13 Tag: HTJ11AJ002

MFG: Power 22 kW, Full load Amp: 41.8 A, Pole: 2 Pole 4 Pole 6 Pole 8 Pole 10 Pole
 Type: Volt 380 V, Speed 2955 rpm, Class Typ: IMB3 IMB5 IMB7
 Frame: 110M Freq 50 Hz, Bearings DE, Mounting: IMB3 IMB5 IMB7
 SF: Phase, Bearings NDE, Rotation direct(View From NDE): CW CCW
 Ins. Class: Duty, IP 55, T-Class
 S/N: Weight Kgs

(2) Vibration motor on site / Current

Measuring: Load Current (A) Vibration (mm/sec) Bearing Condition Remark

Load: L1 L2 L3 Point V H A gR

(3) Mechanical Inspection

Stationary Movable

Recheck before overhaul Shim Plate

Measurement Horizontal Vertical Unit Y/R Quantity W/n (mm.)

Offset mm 1 - - -
 Angular mm/100 2 - - -
 F1 mm 3 - - -
 F2 mm 4 - - -

Distance Data S-C = mm, S-F1 = mm, U-W = mm, U-W = mm, U-W = mm, U-W = mm
 S-H = mm, S-F2 = mm, Distance coupling Motor - Load = mm, Shim plate not over 4 plates
 Coupling Type: mm, Shim plate Motor
 Bolt Coupling: mm

(4) Mechanical install inspection

Coupling Type: Transmission belt type: Direct Coupling Flat belt Rubber Coupling V-shape belt Other Timer belt

Span length: Tension belt: N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red V1 = Yellow W1 = Blue

Lead good condition Cable grand Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn
 Date: 20/12/2022 Date: 20/12/2022

FileNo: 01/11/57 v1a : FR-W5-49 Rev.01 Inspection Sheet For On-Site

PAGE : 1

Inspection Sheet For Squirrel Cage Motor

PRY6541103-15/30

<input type="checkbox"/> All Medium Voltage Motor <input type="checkbox"/> Low Voltage Motor <input type="checkbox"/> Special Design of Low Voltage AC Motor	
MOTOR NAME/PLATE Manufacturer : Chonburi Clean Energy Co., Ltd. Power : 3.70 kW Voltage : 380 V Current : 7.8 A DE Bearing : 6306-2Z/C3 Date : 13 November 2022	Customer : Chonburi Clean Energy Co., Ltd. Frame (Model) : - Speed : 1460 1/min. Frequency : 50 Hz. Con. 0 : - Tag No : HTJ12AN001

General Information Motor Mounting : <input type="checkbox"/> Flange mounted <input type="checkbox"/> Foot mounted Driven Connection : <input type="checkbox"/> Gear box <input type="checkbox"/> Blower <input type="checkbox"/> V-Belt <input type="checkbox"/> Coupling	General Information Ser. No. : D7630318 Insulation Class : - Design : - Temp. Rise Class : - Duty : - IP : 55 SF : -
--	--

1. General check.

2.1 Body/Frame Corrosive : ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition : ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status : ☐ Normal ☐ Abnormal ☐ N/A


2.4 Terminal Box Sealing & Other Gasket : ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water in Clear : ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening : ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters : ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan : ☐ Normal ☐ Abnormal ☐ N/A



2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark
U-V	54.20	U1-U2	2.20	Wdg Temp 42 °C Amb Temp 34°C
U-W	49.60	V1-V2	2.20	Instrument By
V-W	50.00	W1-W2	2.20	Micro Ohm Meter & Dual Display LCR Meter

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Test-Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	40 Sec	Insulation Test (500V)	Insulation Test (500V)	
		15 Sec	60 Sec	10 min.							
500	U-V	-	-	-	-	33	U-E	-	-	15 Sec	
	U-W	-	-	-	-						-
	V-W	-	-	-	-						-
	W-E	-	-	-	-						-
IR = V x W / EARTH		34.50	32.70	60	-	60	1.85				

Min. Insulation Recommended : > 1.0 GΩ Polarization Index Recommended : > 2.0

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Resistance (RI) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATERS)

ELEMENT ITEM	1	2	3	4	5	Tag DE	Big NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5	-	-	-	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result : ☒ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion : _____

Recommendation : _____

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N = Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	W = Warning	Name-Surname	Mr. Winal
D	D = Danger	Date	13 November 2022











PAGE : 2

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

CUST-NAME : Chonburi Clean Energy Co., Ltd.	PRY Job No : PRY6541103-15/30
PLANT : -	Receiving Date : 13 November 2022
CODE No. : -	Delivery Date : 13 November 2022
Tag No : HTJ12AN001	ATTENTION : K.Pakorn
	SALES : Mr. Kittisak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

รูปถ่ายก่อน-หลังการซ่อมบำรุง : รูปถ่ายของ FINDING หลังจากการซ่อมบำรุง











PAGE : 3

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

CUST-NAME : Chonburi Clean Energy Co., Ltd.	PRY Job No : PRY6541103-15/30
PLANT : -	Receiving Date : 13 November 2022
CODE No. : -	Delivery Date : 13 November 2022
Tag No : HTJ12AN001	ATTENTION : K.Pakorn
	SALES : Mr. Kittisak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

รูปถ่ายก่อน-หลังการซ่อมบำรุง : รูปถ่ายของ FINDING หลังจากการซ่อมบำรุง

หน้า 1

INSPECTION SHEET FOR ONSITE

หน้า 2

Customer Detail : Chonburi Clean Energy Co., Ltd.		Before	After
---	--	--------	-------

(1) Motor Details

Job No : PRY6541103-15	Tag : HTJ12AF001
MFG : -	Power : 2.2 kW
Type : -	Full Load Amp. : 7.8 A
Frame : -	Speed : 1460 rpm
SF : -	Bearings : DE
Ins. Class : -	Bearings : NDE
S.N. : D7630318	Duty : IP 55
Weight : - Kgs	T-Class : -

Pole : ☐ 2 Pole ☐ 4 Pole ☐ Pole

Class Typ. : ☐ Exd ☐ Exe ☐ Exn

Mounting : ☐ IMB3 ☐ IMB5 ☐ IMB...

Rotation direct (View From NDE) : ☐ CW ☐ CCW

(2) Vibration motor on site / Current

Load Current (A)				Vibration (mm/sec)				Bearing Condition		Remark
Line	Load	%		Point	V	H	A	gR		
L1	-	-	-	DE	1.8	2.02	0.16	-	-	0.78
L2	-	-	-	NDE	2.04	1.78	-	-	-	1.54

(3) Mechanical Inspection

Rackcheck before overhaul				Shim Plate			
Measurement	Horizontal	Vertical	Unit	mm	mm	mm	mm
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

Shim plate not over 4 plates

Distance Data : S-C = - mm, S-F1 = - mm, เหนือหน้า - mm, เหนือหลัง - mm, ☐ เหนือหน้า

S-H = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, ระยะห่าง Motor - Load = - mm

Coupling Type : - mm

Boat Coupling : - mm

(4) Mechanical install inspection

Coupling Type : ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type : ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length : _____ mm

Tension belt : _____ N / kgf

(5) Electrical Inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same disci

Remark :

Checked By : Mr. Winal C. Customer : K.Pakorn

Date : 20/12/2022 Date : 20/12/2022

รูปถ่ายก่อน-หลังการซ่อมบำรุง : รูปถ่ายของ FINDING หลังจากการซ่อมบำรุง

PAGE: 1

Inspection Sheet For Squirrel Cage Motor

PRY6541103-16/30

☐ All Medium Voltage Motor ☐ Low Voltage Motor ☐ Special Design of Low Voltage AC Motor

MOTOR NAMEPLATE Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn
 Manufacturer: TOSHIBA Frame Model: 250 Type: TIK-FCW-11
 Power: 110.00 kW Speed: 1475 1/min. Ser. No.: 18VENOHM
 Voltage: 380 V. Frequency: 50 Hz. Insulation Class: 155(F) Design: -
 Current: 200 A. Cos. θ : - Temp. Rise Class: - Duty: -
 DE Bearing: 6218C3 NDE Bearing: 6217-2Z-C3 IP: 55 SF: -
 Date: 14 November 2022 Tag No: HLB10AN001

General Information.
 Motor Mounting: ☐ Flange mounted ☐ Foot mounted
 Drive Connection: ☐ Gear box ☐ Blower
☐ V-Belt ☐ Coupling

1. General check.
 2.1 Body Frame Corrosive ☐ Normal ☐ Abnormal ☐ N/A
 2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A
 2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A
 2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A
 2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A
 2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A
 2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A
 2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index
 Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (m Ω -Ohm)	Results	Remark
U-V	2.33	U1-U2	29.40	U1-U2
U-W	2.28	V1-V2	29.40	V1-V2
V-W	1.99	W1-W2	29.40	W1-W2

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

3. Temperature Sensor and Heater
 TEMPERATURE SENSOR (STATIST)

Element Item	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5		BC1	BC2	HI-402	-	-
RESISTANCE (k Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal

4. Conclusion and recommendation.
 Conclusion: _____
 Recommendation: _____

RESULT **DEFINITION**
 N - Normal
 W - Warning
 D - Danger

DESCRIPTION **TESTED AND INSPECTED BY**
 Company Name: PLUTOTECH COMPANY LIMITED
 Name-Surname: Mr. Wimal
 Date: 14 November 2022

PAGE: 2

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd. PRY Job No: PRY6541103-16/30
 Receiving Date: 14 November 2022
 PLANT: - Delivery Date: 14 November 2022
 CODE No.: - ATTENTION: K. Pakorn
 Tag No: HLB10AN001 SALES: Mr. Kittak

PHOTOS OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

Subfiled: 01/11/22 File: WS-49 Rev.03 Page: 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE: 1

INSPECTION SHEET FOR ONSITE

PRY6541103-16/30

Customer Detail: Chonburi Clean Energy Co., Ltd. ☐ Before ☒ After

(1) Motor Details Job No: PRY6541103-16 Tag: HLB10AN001
 MFG: TIK-FCW-11 Power: 110 kW. Full load Amp: 200 A. Pole: ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole
 Type: 250 Volt: 380 V. Speed: 1475 rpm. Class Type: ☐ End ☐ Ext ☐ Etc
 Frame: 250 Freq: 50 Hz. Bearings: DE ☐ MB3 ☐ MB5 ☐ MB6
 SF: - Phase: - Bearings: NP ☐ DE ☐ MB
 Ins. Class: 155(F) Duty: - Rotation direct(View From NDE) ☐ CW ☐ CCW
 S/N: 18VENOHM Weight: - Kgs T-Class: -

(2) Vibration motor on site / Current

Measuring	Load Current (A)	Vibration (mm/sec)	Bearing Condition	Remark
Load	-	Point V H A g/l	-	-
L1	L2	L3	DE 0.42 0.47 0.32 34 38 0.90	-
-	-	-	NDE 0.36 0.45 - 38 39 0.96	-

(3) Mechanical Inspection

Stationary Movable

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	Y/F	Quantity	W/F (mm.)
Offset	-	-	mm	1	-	-
Angular	-	-	mm/100	2	-	-
F1	-	-	mm	3	-	-
F2	-	-	mm	4	-	-

Shim plate not over 4 plates

Distance Data
 S-C = - mm, S-F1 = - mm, เสาถัด - mm, เสาหลัง - mm, ☐ เสาหน้า
 S-M = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, เสาหน้า Motor - mm.
 Coupling Type: - mm.
 Bolt Coupling: - mm.

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Transition belt type: Spin length: - mm, N / kgf.

(5) Electrical Inspection Difference Connect cable

U1 = Red ☐ Lead good condition
 V1 = Yellow ☐ Cable grand
 W1 = Blue ☐ Reconnection same disc

Remark:

Checked By: Mr. Wimal C. Customer: K. Pakorn
 Date: 20/12/2022 Date: 20/12/2022

Subfiled: 01/11/22 File: WS-49 Rev.03 Inspection Sheet For On-Site

PAGE: 1

Inspection Sheet For Squirrel Cage Motor

PRY6541103-17/30

☐ All Medium Voltage Motor ☐ Low Voltage Motor ☐ Special Design of Low Voltage AC Motor

MOTOR NAMEPLATE Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn
 Manufacturer: TMSC Frame Model: 250 Type: -
 Power: 90.00 kW Speed: 1480 1/min. Ser. No.: -
 Voltage: 380 V. Frequency: 50 Hz. Insulation Class: 155(F) Design: -
 Current: 165 A. Cos. θ : 0.88 Temp. Rise Class: - Duty: -
 DE Bearing: 6218C3 NDE Bearing: 6217-2Z-C3 IP: 55 SF: -
 Date: 14 November 2022 Tag No: HLB10AN001

General Information.
 Motor Mounting: ☐ Flange mounted ☐ Foot mounted
 Drive Connection: ☐ Gear box ☐ Blower
☐ V-Belt ☐ Coupling

1. General check.
 2.1 Body Frame Corrosive ☐ Normal ☐ Abnormal ☐ N/A
 2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A
 2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A
 2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A
 2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A
 2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A
 2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A
 2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index
 Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (m Ω -Ohm)	Results	Remark
U-V	2.69	U1-U2	34.00	U1-U2
U-W	2.49	V1-V2	34.00	V1-V2
V-W	2.27	W1-W2	34.10	W1-W2

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

3. Temperature Sensor and Heater
 TEMPERATURE SENSOR (STATIST)

Element Item	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5		BC1	BC2	HI-402	-	-
RESISTANCE (k Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal

4. Conclusion and recommendation.
 Conclusion: _____
 Recommendation: _____

RESULT **DEFINITION**
 N - Normal
 W - Warning
 D - Danger

DESCRIPTION **TESTED AND INSPECTED BY**
 Company Name: PLUTOTECH COMPANY LIMITED
 Name-Surname: Mr. Wimal
 Date: 14 November 2022

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FIND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRV Job No:	PRV65411103-1730
PLANT:	-	Receiving Date:	14 November 2022
CODE No.:	-	Delivery Date:	14 November 2022
Tag No.:	HLB10AN001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittsak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FIND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRV Job No:	PRV65411103-1730
PLANT:	-	Receiving Date:	14 November 2022
CODE No.:	-	Delivery Date:	14 November 2022
Tag No.:	HLB10AN001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittsak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

INSPECTION SHEET FOR ONSITE

ก่อน
 After

Customer Detail : Chonburi Clean Energy Co., Ltd.

(1) Motor Details Job No: PRV65411103-17 Tag: HLB20AN001 MFG: TOSHIBA Power: 30 kW Type: 250 Frame: 250 SF: 150F Ins. Class: 150F SN: 150F Weight: Kgs	Full load Amp: 165 A Speed: 1480 rpm Bearings: DE 6218C3 Bearings: NDE 6217-2ZC3 Duty: IP 55 T-Class:	Pole: <input type="checkbox"/> 2 Pole <input type="checkbox"/> 4 Pole <input type="checkbox"/> 6 Pole Class Typ: <input type="checkbox"/> Exd <input type="checkbox"/> Exe <input type="checkbox"/> Exn Mounting: <input type="checkbox"/> IMB3 <input type="checkbox"/> IMB5 <input type="checkbox"/> IMB7 Rotation direct(View From NDE): <input type="checkbox"/> CW <input type="checkbox"/> CCW
--	--	---

(2) Vibration motor on site / Current

Load Current (A)				Vibration (mm/sec)				Bearing Condition		Remark
Point	V	H	A	Point	V	H	A	Point	V	
L1	0.20	0.25	0.24	35	38	0.85				
L2	0.23	0.37	-	37	36	0.58				

(3) Mechanical Inspection

Recheck before overhaul				Shim Plate			
Measurement	Horizontal	Vertical	Unit	Y/F	Quantity	W/F	W/F (mm.)
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

Distance Data
 S-C = mm, S-F1 = mm, S-F2 = mm
 S-H = mm, S-F2 = mm
 Coupling Type: mm
 Bolt Coupling: mm

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length: N / kgf

(5) Electrical Inspection Difference Connect cable

U1 = Red V1 = Yellow W1 = Blue	<input type="radio"/> Lead good condition <input type="radio"/> Cable grand <input type="radio"/> Reconnection same disco
--------------------------------------	---

Remark :

Checked By : Mr.Winal C. Customer : K.Pakorn
 Date : 20/12/2022 Date : 20/12/2022

Inspection Sheet for Squirrel Cage Motor

ก่อน
 After

Customer : Chonburi Clean Energy Co., Ltd. Tag: HLB20AN001

MOTOR NAME/PLATE Manufacture: TOSHIBA Power: 30 kW Voltage: 380 V Current: 142 A DE Bearing: 6218C3 Date: 14 November 2022	Customer: Chonburi Clean Energy Co., Ltd. Frame Model: 250MD Speed: 1480 1/min Frequency: 50 Hz Insulation Class: 155F3 Temp Rise Class: - Tag No: HNF18AN001	Type: - Ser No: - Design: - Duty: - IP: 55 SF: -
--	---	---

1. General check

2.1 Body/Fram Convective	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.2 Cable Entry Condition	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.3 Earthing Connection Status	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.4 Terminal Box Sealing & Other Gasket	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.5 Inside of Terminal Box, Dust/Water is Clear	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.6 All Cable Connection, Tightening	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.7 Inside of Terminal Box Temperature and Heater	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.8 Cover and Cooling Fan	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (mOhm-Ohm)	Results	Remark
U-V	2.90	U1-U2	67.01	Wdg Temp 42°C Amb Temp 34°C
U-W	2.60	V1-V2	71.01	
V-W	2.40	W1-W2	67.14	

Result: ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATERO)

Element Item	1	2	3	4	5	By DE	By NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No	TD1	TD2	TD3	TD4	TD5	BD1	BD2	BD3	BD4	-	-
RESISTANCE (Ohm)	-	-	-	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	<input checked="" type="checkbox"/> N - Normal <input type="checkbox"/> W - Warning <input type="checkbox"/> D - Danger	Company Name: PLUTOTECH COMPANY LIMITED Name-Surname: Mr.Winal Date: 14 November 2022	

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME: Chonburi Clean Energy Co., Ltd.	PRY Job No: PRY65411103-18/30	Receiving Date: 14 November 2022
PLANT: -	Delivery Date: 14 November 2022	ATTENTION: K.Pakorn
CODE No.: -	SALES: Mr.Kittisak	
Tag No.: HNF10AN001		

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

รูปถ่ายก่อนซ่อม : รูปที่ 18-W-42 Box 00 Page 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME: Chonburi Clean Energy Co., Ltd.	PRY Job No: PRY65411103-18/30	Receiving Date: 14 November 2022
PLANT: -	Delivery Date: 14 November 2022	ATTENTION: K.Pakorn
CODE No.: -	SALES: Mr.Kittisak	
Tag No.: HNF10AN001		

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

รูปถ่ายก่อนซ่อม : รูปที่ 18-W-42 Box 00 Page 01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

ก่อน
 หลัง

Customer Detail : Chonburi Clean Energy Co., Ltd.

(1) Motor Details Job No: PRY65411103-18 Tag: HNF10AN001

MFG: -	Power: 75 kW	Full load Amp: 142 A
Type: -	Volt: 380 V	Speed: 1480 rpm
Frame: 250MD	Freq: 50 Hz	Bearings DE: 6218C3
SF: -	Phase: -	Bearings NDE: 6217-22C3
Ins. Class: 155(F)	Duty: -	IP: 55
S/N: -	Weight: - Kgs	T-Class: -

Pole: ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole

Class Typ: ☐ End ☐ Ext ☐ Ext

Mounting: ☐ IMB3 ☐ IMB5 ☐ IMB

Rotation direct(View From NDE): ☐ CW ☐ CCW

(2) Vibration motor on site / Current

Load Current (A)				Vibration (mm/sec)				Bearing Condition		Remark
Load	%	Point	V	H	A	gR				
L1	0.48	0.36	-	-	-	-	-	-	0.1.08	
L2	-	-	-	-	-	-	-	-	-	
L3	-	-	-	-	-	-	-	-	0.1.79	

(3) Mechanical Inspection

Recheck before overhaul				Shim Plate	
Measurement	Horizontal	Vertical	Unit	mm	mm
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Distance Data: S-C = - mm, S-F1 = - mm, S-F2 = - mm, S-M = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, Shim plate not over 4 plates

Coupling Type: - mm, Bolt Coupling: - mm

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ Vshape belt ☐ Timer belt

Span length: - mm, Tension belt: - N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Load good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same discor

Remark :

Checked By : Mr.Winal C.
 Date : 20/12/2022

Customer : K.Pakorn
 Date : 20/12/2022

รูปถ่ายหลังซ่อม : รูปที่ 18-W-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

ก่อน
 หลัง

Customer : Chonburi Clean Energy Co., Ltd. Attention : K.Pakorn

MOTOR NAMEPLATE: TOSHIBA Frame Model: 3550H Type: TDKK-FOKW11

Power: 250.00 kW Speed: 990 1/min. Ser No.: -

Voltage: 380 V Frequency: 50 Hz Insulation Class: 155(F) Design: -

Current: 470 A Cos θ: 0.84 Temp. Rise Class: - Duty: -

DE Bearing: 6224C3 NDE Bearing: 6224C3 IP: 55 SF: -

Date: 14 November 2022 Tag No: HNC18AN001

1. General check

2.1 Body Frame Corrosive ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A

2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

General Information

Motor Mounting: ☐ Flange mounted ☐ Foot mounted ☐ V-Belt ☐ Coupling

Driven Connection: ☐ Gear box ☐ Blower ☐ V-Belt ☐ Coupling

2. Measure insulation resistance and polarizing index

Measure winding data

Winding	Inductance (mH-Henry)	Resistance (milli-Ohm)	Results	Remark
U-V	1.08	U1-U2: -	72.48	Wdg Temp: 42°C Amb Temp: 34°C
U-W	1.08	V1-V2: -	59.90	Instrument By: -
V-W	0.95	W1-W2: -	68.25	Micro Ohm Meter & Dual Display LCR Meter

Result: ☒ Normal ☐ Abnormal ☐ N/A

Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Test Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V)	Insulation Test (500V)
		15 Sec	60 Sec	10 min						
500	U-V	-	-	-	-	29	29	29	29	29
	U-W	-	-	-	-					
	V-W	-	-	-	-					
	(U + V + W) - EARTH	2.90G	26.36	G	0.01					

Min. Insulation Recommended: > 0.1 GΩ Polarization Index Recommended: > 1.5

Result: ☒ Normal ☐ Abnormal ☐ N/A

Standard of Resistance (R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

Element Item	1	2	3	4	5	Yg DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5	-	-	-	-	-	-
Resistance (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☒ Normal ☐ Abnormal ☐ N/A

4. Conclusion and recommendation

Conclusion: -

Recommendation: -

RESULT: **N**

Definition:
☒ N - Normal
☐ W - Warning
☐ D - Danger

DESCRIPTION	TESTED AND INSPECTED BY
Company Name: PLUTOTECH COMPANY LIMITED	Mr. Winal
Name-Surname	Date: 14 November 2022

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PRY064
PAGE : 2

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY06411103-19/30
PLANT:	-	Receiving Date:	14 November 2022
CODE No.:	-	Delivery Date:	14 November 2022
Tag No.:	HNC10AN001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

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PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT
PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PRY064
PAGE : 3

CUST-NAME:	Chonburi Clean Energy Co., Ltd.	PRY Job No:	PRY06411103-19/30
PLANT:	-	Receiving Date:	14 November 2022
CODE No.:	-	Delivery Date:	14 November 2022
Tag No.:	HNC10AN001	ATTENTION:	K.Pakorn
		SALES:	Mr.Kittak

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

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PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

INSPECTION SHEET FOR ONSITE

PRY064
PAGE : 1

Customer Detail : Chonburi Clean Energy Co., Ltd.		Before After	
---	--	--------------	--

(1) Motor Details

MFG	Power	250 kW	Full load Amp.	470 A
Type	Volt	380 V	Speed	900 rpm
Frame	Freq.	50 Hz	Bearings	DE 6224C3
SP	Phase	3	Bearings	6224C3
Ins. Class	Duty	-	IP	55
S/N.	Weight	-	T-Class	-

Pole ☐ 2 Pole ☐ 4 Pole ☐ Pole

Class Typ. ☐ End ☐ Evt ☐ Evt

Mounting ☐ IMB3 ☐ IMB5 ☐ IMB

Rotation direct(View From NDE) ☐ CW ☐ CCW

(2) Vibration motor on site / Current

Measuring		Load Current (A)		Vibration (mm/sec)		Bearing Condition		Remark	
		L1	L2	L3					
DE	0.15	0.48	0.25	34	39	0-1.08			
NDE	0.34	0.49	0.29	35	49	0-1.15			

(3) Mechanical inspection

Recheck before overhaul			Shim Plate		
Measurement	Horizontal	Vertical	Unit	mm	mm
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Shim plate not over 4 plates

Distance Data

S-C = - mm, S-F1 = - mm, S-F2 = - mm, S-M = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, Distance coupling Motor - Load = - mm

Coupling Type : - mm, Bolt Coupling : - mm

(4) Mechanical install inspection

Coupling Type : ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type : ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length : - mm, Tension belt : - N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same discor

Remark :

Checked By : Mr.Winai C.

Date : 20/12/2022

Customer : K.Pakorn

Date : 20/12/2022

Inspection Sheet For Squirrel Cage Motor

PRY064
PAGE : 1

Customer : Chonburi Clean Energy Co., Ltd.		PRY Job No : PRY06411103-19/30	
--	--	--------------------------------	--

MOTOR NAMEPLATE

Manufacturer	TOSHIBA	Frame Model	-
Power	15.00 kW	Speed	2933 1/min
Voltage	380 V	Frequency	50 Hz
Current	- A	Insulation Class	155(F)
DE Bearing	6310-2Z/C3	NDE Bearing	6208-2Z/C3
Date	14 November 2022	Tag No.	HCW18AN001

General Information

Motor Mounting ☐ Flange mounted ☐ Foot mounted ☐ Drive Connection ☐ Gear box ☐ Blower ☐ V - Belt ☐ Coupling

1. General check

2.1 Body Frame Corrosion	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.2 Cable Entry Condition	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.3 Earthing Connection Status	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.4 Terminal Box Sealing & Other Gasket	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.5 Inside of Terminal Box, Dust/Water is Clear	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.6 All Cable Connection, Tightening	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.7 Inside of Terminal Box Temperature and Heaters	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A
2.8 Cover and Cooling Fan	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/> N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Hz)	Resistance (mOhm-Ohm)	Results	Remark
U-V	17.10	U1-U2	-	Wdg Temp 42°C Amb Temp 34°C
U-W	20.30	V1-V2	-	Instrument By
V-W	23.20	W1-W2	-	Micro Ohm Meter & Dual Display LCR Meter

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

Insulation Test

Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V)	Insulation Test (500V)
500	U-V	-	-	-	-	28	U-E	-	-	-
	U-W	-	-	-	-		V-E	-	-	-
	V-W	-	-	-	-		W-E	-	-	-
	(U + V + W) - EARTH	76.90G	124.80 G	-	(0.1)	2.38				

Min. Insulation Recommended : > 0.1GΩ Polarization Index Recommended : > 2.5

Result : ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATERO)

ELEMENT ITEM	1	2	3	4	5	Yr DE	Brg NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5		BG1	BG2	H1-H2	-	-
RESISTANCE (Ω)	-	-	-	-	-					-	-

Result : ☐ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion :

Recommendation :

RESULT

N

DEFINITION

■ N = Normal

■ W = Warning

■ D = Danger

DESCRIPTION

Company Name : PLUTOTECH COMPANY LIMITED

Name-Surname : Mr.Winai

Date : 14 November 2022

DAVID W 18 DEC 94 1007 FR/WI-GI Res 30 Page 11 PHOTOGRAPHS OF BEFORE & AFTER SERVICED CONDITIONS

twifald : 01/11/ 57 via : FR-WS-49 Rev.01 Inspection Sheet For On-Site

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">MOTOR SERVICE REPORT</h2> <h3 style="margin: 0;">PHOTOGRAPHS OF FOUND B AFTER SERVICED CONDITIONS</h3> </div> <div style="text-align: right;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <div style="margin-top: 5px;"> <small>Page : 2</small> </div> </div> </div>			
CUST-NAME	Chonburi Clean Energy Co., Ltd.	PRY Job No	PRY65411103-2130
PLANT	-	Receiving Date	14 November 2022
CODE No.	-	Delivery-Date	14 November 2022
Tag No	HDA10AF001	ATTENTION	K.Pakom
		SALES	M.KIRIRAK

PHOTOS OF SERVICE CONDITIONS	

Additional Comments:

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0-655M 1426-24 - 1/2" FRAMES OF 14x20 Pans 11 PHOTOGRAPHS OF HEAD & AFTER SERVICE CONDITION

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 3

CUST-NAME: Chonburi Clean Energy Co., Ltd.	PRY Job No: PRY65411103-23/30	Receiving Date: 14 November 2022
PLANT: -	Delivery Date: 14 November 2022	ATTENTION: K.Pakorn
CODE No.: -	SALES: Mr.Kittak	
Tag No: HDA51AF001		

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ : 01/11/23 - 01/11/23 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

PAGE : 2

Customer Detail : Chonburi Clean Energy Co., Ltd.		Before	After
---	--	--------	-------

(1) Motor Details

MFG	Power	1.5 kW	Full load Amp.	3.5 A
Type	Volt	380 V	Speed	1435 rpm
Frame	Freq	50 Hz	Bearings	DE 6206-2Z
SF	Phase	3	Bearings	NDE 6205-2Z
Ins. Class	Duty	-	IP	55
S/N	Weight	-	T-Class	-

(2) Vibration motor on site / Current

Load Current (A)			Vibration (mm/sec)			Bearing Condition			Remarks
Load	%		Point	V	H	A	gR		
L1	L2	L3	DE	0.69	1.23	0.73	33	35	0>0.81
-	-	-	NDE	1.43	1.38	-	31	36	0>0.63

(3) Mechanical Inspection

Rackback before overhaul				Shim Plate			
Measurement	Horizontal	Vertical	Unit	mm	mm	mm	mm
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

Distance Data

S-C = - mm, S-F1 = - mm, S-F2 = - mm, S-H = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, Shim plate not over 4 plates

Coupling Type: - mm, Coupling Type: - mm, Bolt Coupling: - mm

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length: - mm, Tension belt: - N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red	<input type="radio"/> Lead good condition
V1 = Yellow	<input type="radio"/> Cable grand
W1 = Blue	<input type="radio"/> Reconnection same discor

Remark :

Checked By: Mr.Winai C.

Date: 20/12/2022

Customer: K.Pakorn

Date: 20/12/2022

ไฟล์แนบ : 01/11/23 - 01/11/23 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

PAGE : 1

CUST-NAME: Chonburi Clean Energy Co., Ltd.		PRY Job No: PRY65411103-23/30	
--	--	-------------------------------	--

MOTOR NAMEPLATE

Power: 1.50 kW	Speed: 1435 1/min.	Ser.No.: 83065967
Voltage: 380 V	Frequency: 50 Hz	Insulation Class: F
Current: 3.5 A	Cos Φ: 0.75	Temp.Rise Class: -
DE Bearing: 6206-Z	NDE Bearing: 6205-2Z	IP: 55
Date: 14 November 2022	Tag No: HDA52AF001	SF: 1.60

General Information

Motor Mounting: ☐ Flange mounted ☐ Foot mounted

Driven Connection: ☐ Gear box ☐ Blower ☐ V-Belt ☐ Coupling

1. General check

2.1 Body Frame Corrosive	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.2 Cable Entry Condition	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.3 Earthing Connection Status	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.4 Terminal Box Sealing & Other Gasket	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.5 Inside of Terminal Box, Dust/Water is Clear	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.6 All Cable Connection, Tightening	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.7 Inside of Terminal Box Temperature and Heaters	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A
2.8 Cover and Cooling Fan	<input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	<input type="checkbox"/> N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mili-Henry)	Resistance (Ohm)	Results	Remark
U-V	125.20	U1-U2	5.70	U1-U2
U-W	137.40	V1-V2	5.70	V1-V2
V-W	132.40	W1-W2	5.60	W1-W2

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable

Insulation Test

Test-Volt	Marking	15 Sec.			60 Sec.			PI	Amb. Temp
		C	40C	C	40C	C	40C		
500	U-V	-	-	-	-	-	-	31	N/A
	U-W	-	-	-	-	-	-		
	V-W	-	-	-	-	-	-		
	(U + V + W) - EARTH	28.10	56.30	60	-	60	2.10		

Max. Insulation Resistance: > 6 MΩ Polarization Index Recommended: > 2.5

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

ELEMENT ITEM	1	2	3	4	5	By DE	By NDE	Heat 1	Heat 2	TYPE	Remark
Cable Marking No.	TH1	TH2	TH3	TH4	TH5	-	-	-	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☒ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT

N

DEFINITION

N - Normal

W - Warning

D - Danger

DESCRIPTION

TESTED AND INSPECTED BY

Company Name: PLUTOTECH COMPANY LIMITED

Name-Surname: Mr.Winai

Date: 14 November 2022

ไฟล์แนบ : 01/11/23 - 01/11/23 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 2

CUST-NAME: Chonburi Clean Energy Co., Ltd.	PRY Job No: PRY65411103-23/30	Receiving Date: 14 November 2022
PLANT: -	Delivery Date: 14 November 2022	ATTENTION: K.Pakorn
CODE No.: -	SALES: Mr.Kittak	
Tag No: HDA52AF001		

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ : 01/11/23 - 01/11/23 Rev.01 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

Customer Detail: Chonburi Clean Energy Co., Ltd.

Job No: PRY65411103-23 Tag: HDA52AF001

MFG: Power 1.5 kW, Full load Amp. A, Pole 2 Pole 4 Pole 6 Pole 8 Pole 10 Pole

Type: Volt 380 V, Speed rpm, Class Typ. IMB3 IMB5 IMB7

Frame 90L, Freq. 50 Hz, Bearings DE 6205-2Z, NDE 6205-2Z

SF 1.0, Phase, IP 55

Ins. Class, Duty, Weight Kgs, T-Class

Rotation direct(View From NDE) CW CCW

(2) Vibration motor on site / Current

Measuring: Load Current (A) %

Load L1 L2 L3

Vibration (mm/sec) Bearing Condition Remark

Point V H A gR

DE 0.97 0.62 1.09 36 38 0.87

NDE 1.87 2.10 31 34 0.45

(3) Mechanical Inspection

Stationary Mobile

Recheck before overhaul

Measurement Horizontal Vertical Unit Y/R Quantity W/h (mm.)

Offset - - mm 1 - -

Angular - - mm/100 2 - -

F1 - - mm 3 - -

F2 - - mm 4 - -

Shim Plate

Shim plate not over 4 plates

Distance Data

S-C = mm, S-F1 = mm, S-F2 = mm, Distance coupling Motor - Load = mm, Distance coupling Motor - Motor = mm

Coupling Type mm, Bolt Coupling mm

(4) Mechanical install inspection

Coupling Type: Direct Coupling Rubber Coupling Other

Transmission belt type: Flat belt V-shape belt Timer belt

Span length: N / kgf

(5) Electrical Inspection Difference Connect cable

U1 = Red V1 = Yellow W1 = Blue

Lead good condition Cable grand Reconnection same disc

Remark:

Checked By: Mr. Winal C. Customer: K. Pakorn

Date: 20/12/2022 Date: 20/12/2022

Twiffo Ltd : 01/11/57 v16 : FR-WS-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

PAGE: 1

Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

MOTOR NAMEPLATE: SUMOTOMO Frame / Model: N-100L Type: M0035739

Power: 2.20 kW Speed: 1440 1/min. Ser. No.: M0035739

Voltage: 380 V Frequency: 50 Hz Insulation Class: 155 (F) Design: +

Current: 4.96 A Cos. ϕ : 0.76 Temp. Rise Class: + Duty: +

DE Bearing: NDE Bearing: IP: 55 SF: 38.60

Date: 15 November 2022 Tag. No: HDA52AF001

General Information:

Motor Mounting: 1 Flange mounted 2 Foot mounted 3 Driven Connection 4 Gear box 5 V-Belt 6 Coupling

1. General check:

2.1 Body Frame Corrosive 2.2 Cable Entry Condition 2.3 Earthing Connection Status 2.4 Terminal Box Sealing & Other Gasket 2.5 Inside of Terminal Box, Dust/Water is Clear 2.6 All Cable Connection, Tightening 2.7 Inside of Terminal Box Temperature and Heaters 2.8 Cover and Cooling Fan

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark
U-V	70.40	U1-U2 28.60	3.50	U1-U2 1.90
U-W	81.00	V1-V2 32.70	3.50	V1-V2 1.90
V-W	75.20	W1-W2 30.60	3.50	W1-W2 1.90

Result: Normal Abnormal Include Cable Exclude Cable

Standard of Insulation Resistance (IR) Reference by IEEE Standard 41-2000

Insulation Test (500V)

Test-Val	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp	Mark	60 Sec	15 Sec
U-V	-	-	-	-	-	31	U-E	-	-
U-W	-	-	-	-	-	-	V-E	-	-
V-W	-	-	-	-	-	-	W-E	-	-

Min. Insulation Recommended: > 1.0 GQ Polarization Index Recommended: > 2.5

Result: Normal Abnormal Include Cable Exclude Cable

Standard of Resistance (R) Reference by IEEE Standard 115

3. Temperature Sensor and Heater

TEMPERATURE SENSOR (STATIST)

ELEMENT ITEM	1	2	3	4	5	By DE	By NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	T01	T02	T03	T04	T05	-	-	-	-	-	-
RESISTANCE (Ohm)	-	-	-	-	-	-	-	-	-	-	-

Result: Normal Abnormal

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT: N

Definition: N = Normal W = Warning D = Danger

DESCRIPTION: TESTED AND INSPECTED BY

Company Name: PLUTOTECH COMPANY LIMITED

Name-Surname: Mr. Winal

Date: 15 November 2022

MOTOR SERVICE REPORT

PAGE: 2

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PRY Job No: PRY65411103-24/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

ATTENTION: K. Pakorn

SALES: Mr. Kittsak

Tag. No: HDA52AF001

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

Twiffo Ltd : 01/11/57 v16 : FR-WS-49 Rev.01 Page 11 PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PAGE: 3

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PRY Job No: PRY65411103-24/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

ATTENTION: K. Pakorn


SALES: Mr. Kittsak

Tag. No: HDA52AF001

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

Twiffo Ltd : 01/11/57 v16 : FR-WS-49 Rev.01 Page 11 PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS



INSPECTION SHEET FOR ONSITE

เลขที่ วันที่

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before After

(1). Motor Details Job No: PRY65411103-24 Tag: HDA30AF001

MFG	-	Power	2.2 kW.	Full load Amp.	4.96 A.
Type	TC-FKP	Volt	380 V.	Speed	1440 rpm.
Frame	N-100L	Freq.	50 Hz.	Bearings	DE -
SF	88.6	Phase	-	Bearings	NDE -
Ins. Class	150(J)	Duty	-	IP	55
S.N.	M803739	Weight	Kgs	T-Class	-

Pole ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole ☐ 8 Pole

Class Typ. ☐ Exd ☐ Exe ☐ Exn

Mounting ☐ IMB3 ☐ IMB5 ☐ IMB7

Rotation direct (View From NDE)

☐ CW ☐ CCW

(2). Vibration motor on site / Current

Measuring

Load Current (A)		
Load	-	%
L1	L2	L3
-	-	-

Vibration (mm/sec)					Bearing Condition		Remark
Point	V	H	A	gE			
DE	0.93	0.41	0.31	0.22	-	G 0.22	
NDE	0.63	0.60	-	-	-	G 0.22	

(3). Mechanical Inspection

Inspection Sheet For Squirrel Cage Motor

PAGE: 1

PRY6411103-25/30

☐ All Medium Voltage Motor

☐ Low Voltage Motor

☐ Special Design of Low Voltage AC Motor

MOTOR NAME/PLATE

Customer : **Chashtri Energy Cons. Co.** Ltd. Attention : **K.Pakorn**

Frame Model : **90L**

Type : **S**

Power : **1.50 kW**

Speed : **1435** 1/min.

Set No. : **K3067456**

Voltage : **380 V**

Frequency : **50** Hz.

Insulation Class : **-** Design : **-**

Current : **3.5 A**

Cu Ø : **0.75**

Temp Rise Class : **-** Duty : **-**

DE Bearing : **6204-2Z**

NDE Bearing : **6205-2Z**

IP : **-** SF : **-**

Date : **15 November 2022**

Tag No. : **ID468AF001**

General Information.

Motor Mounting

☐ Flange mounted

☐ Foot mounted

Driven Connection

☐ Gear box

☐ V - Belt

☐ Coupling

1. General check.

2.1 Body From Corrosive

2.2 Cable Entry Condition

2.3 Earthing Connection Status

2.4 Terminal Box Sealing And Outer Gasket

2.5 Inside of Terminal Box, Dust/Water is Clear

2.6 All Cable Connection, Tightening.

2.7 Inside of Terminal Box Temperature and Hsters

2.8 Cover and Cooling Fan

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

☐ Normal

☐ Abnormal

2. Measure insulation resistance and polarizing index

Measure winding data

Terminal	Inductance (mH)	Resistance (Ohm)	Results	Remark
U-V	136.60	U1-U2 -	5.90	U1-U2 -
U-W	126.50	V1-V2 -	5.90	V1-V2 -
V-W	148.50	W1-W2 -	5.90	W1-W2 -

Results

Remark

☐ Normal

☐ Abnormal

☐ Include Cable

☐ Exclude Cable


* Standard of Insulation Resistance(R) Reference by IEEE Standard 41-2000

Insulation Test						Insulation Test (500V.)		Insulation Test (500V.)					
Test-Volt	Marking	15 Sec.		60 Sec.		10 min.	PI	Amb. Temp	Mark	60 Sec	15 Sec	60 Sec	
		C	40C	C	40C	C	40C						
500	U-V	-	-	-	-	-	-	30	U-W	-	60C	-	60C
	U-W	-	-	-	-	-	-		V-W	-	60C	-	60C
	V-W	-	-	-	-	-	-		W-E	-	60C</		

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2 style="margin: 0;">MOTOR SERVICE REPORT</h2> <p style="margin: 0;">PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS</p> </div> <div style="text-align: right;"> <p style="margin: 0;">Pakom Energy Services BAYFORS</p> </div> </div>		
CUST-NAME:	Chorbuti Clean Energy Co., Ltd.	<div style="display: flex; justify-content: space-between;"> <div> PRY Job No: PRY65411103-25/30 Receiving Date: 15 November 2022 Delivery Date: 15 November 2022 ATTENTION: K.Pakorn SALES: Mr Kittisak </div> </div>
PLANT:	+	
CODE No.:	+	
Tag No:	HDA60AF001	

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 30%;"></div> <div style="width: 35%; text-align: center;"> <p style="color: green; margin: 0;">PHOTO OF SERVICE CONDITIONS</p> <div style="border: 1px solid green; height: 400px; margin: 0 auto;"></div> </div> <div style="width: 30%;"></div> </div>		

ADDITIONAL COMMENTS:



PENGHIN

INSPECTION SHEET FOR ONSITE

แผ่นที่

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before

After

(1). Motor Details Job No: **PRY65411103-25** Tag: **HDA60AF001**

MFG	-	Power	1.5 kW.	Full load Amp.	3.5 A.
Type	-	Volt	380 V.	Speed	1435 rpm.
Frame	90L	Freq.	50 Hz.	Bearings	DE 6204-2Z
SF	-	Phase	-	Bearings	NDE 6205-2Z
Ins. Class	-	Duty	-	IP	-
S/N	83067456	Weight	Kgs	T-Class	-

Pole ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole

Class Typ. ☐ Exd ☐ Exe ☐ Exh

Mouting ☐ IMB3 ☐ IMB5 ☐ IMB...

Rotation direct(View From NDE)

☐ CW ☐ CCW

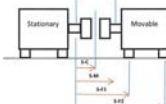
(2). Vibration motor on site / Current

Measuring


Load Current (A)		
Load	%	
L1	L2	L3
-	-	-

Vibration (mm/sec)					Bearing Condition	Remark
Point	V	H	A	gR		
DE	0.19	0.18	0.16	-	-	0.05
NDE	0.24	0.51	-	-	-	0.08

(3). Mechanical inspection



Rereck before overhaul				Shim Plate	
Measurement	Horizontal	Vertical	Unit	mm	Quantity
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

 Shim plate not over 4 plates

☐ ๖๖๖๖๖๖๖๖

(4). Mechanical install inspection

Coupling Type :

☐ Direct Coupling

☐ Rubber Coupling

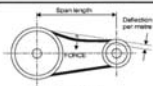
☐ Other

Transmission belt type :

☐ Flat belt

☐ V-shape belt

☐ Timer belt



Span length : _____ N. / kgf.

(5). Electrical inspection Difference Connect cable

U1 = Red

V1 = Yellow

W1 = Blue

☐ Lead good condition

☐ Cable grand

☐ Reconnection same disor

Remark : _____

Checked By : _____

Date : 20/12/2022

Mr.Winai C.

Customer : _____

Date : 20/12/2022

K.Pakorn

Inspection Sheet For Squirrel Cage Motor

Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

Motor Nameplate: - Frame / Model: - Type: -

Power: 0.80 kW Speed: 1385 1/min. Ser. No.: E1192011001

Voltage: 380 V. Frequency: 50 Hz. Insulation Class: - Design: -

Current: 1.1 A Cx Ø: - Temp. Rise Class: - Duty: -

DE Bearing: 6202-2Z-C3 NDE Bearing: 6202-2Z-C3 IP: - SF: -

Date: 15 November 2022 Tag No: HSJ10AP001

PAGE: 1

PRY65411103-26/30

1. General check.

2.1 Body/Frame Corrosive ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A

2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark
U-V	0.37	U1-U2 - 29.60	N	Wdg Temp 42 °C Amb Temp 34 °C
U-W	0.41	V1-V2 - 29.40		
V-W	0.37	W1-W2 - 29.50		

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

* Standard of Insulation Resistance(R) Reference by IEEE Standard 43-2000

Test-Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	Insulation Test (500V.)		Wdg Temp
		15 Sec.	60 Sec.	10 min.				15 Sec.	60 Sec.	
500	U-V	-	-	-	32	32	U-E	-	GD	N/A
	U-W	-	-	-			V-E	-	GD	
	V-W	-	-	-			W-E	-	GD	
	W-E	-	-	-			W-E	-	GD	

Min. Insulation Recommended: >0.3GD Polarization Index Recommended: >2.5

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

* Standard of Resistance(R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

Element Item	1	2	3	4	5	Tag No.	Brq. NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	TD1	TD2	TD3	TD4	TD5	-	B01	B02	H1-H2	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal ☐ Exclude Cable ☐ Include Cable

4. Conclusion and recommendation.

Conclusion: _____

Recommendation: _____

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N = Normal	Company Name	PLUTOTECH COMPANY LIMITED
	W = Warning	Name-Surname	Mr. Winal
	D = Danger	Date	15 November 2022

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

PAGE: 2

PRY65411103-26/30

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PLANT: -

CODE No.: -

Tag No: HSJ10AP001

PRY Job No: PRY65411103-26/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

ATTENTION: K. Pakorn

SALES: Mr. Kittak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ: 01/11/22 - 15/11/22 Rev.03 Page 11 PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

PAGE: 3

PRY65411103-26/30

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PLANT: -

CODE No.: -

Tag No: HSJ10AP001

PRY Job No: PRY65411103-26/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

ATTENTION: K. Pakorn

SALES: Mr. Kittak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ: 01/11/22 - 15/11/22 Rev.03 Page 11 PHOTOGRAPHS OF FINDING AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

หน้า 1

หน้า 2

Customer Detail: Chonburi Clean Energy Co., Ltd.

Job No: PRY65411103-26 Tag: HSJ10AP001

MFG: - Power: 0.8 kW. Full load Amp. 1.1 A.

Type: - Volt: 380 V. Speed: 1385 rpm.

Frame: F1 Freq: 50 Hz. Bearings: DE 6202-2Z-C3

SF: 1.8 Phase: - Bearings: NDE 6202-2Z-C3

Ins. Class: - Duty: - IP: -

S.N. E1192011001 Weight: - Kgs T-Class: -

Pole: ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole

Class Typ.: ☐ Exd ☐ Exe ☐ Exm

Mounting: ☐ IMB3 ☐ IMB5 ☐ IMB

Rotation direct (View From NDE): ☐ CW ☐ CCW

(2) Vibration motor on site / Current

Load Current (A)			Vibration (mm/sec)			Bearing Condition			Remark
Load	%		Point	V	H	A	gR		
L1	L2	L3	DE	0.20	0.28	0.11	-	-	0.11
-	-	-	NDE	0.39	0.32	-	-	-	0.16

(3) Mechanical Inspection

Rack before overhaul				Shim Plate			
Measurement	Horizontal	Vertical	Unit	วัด	Quantity	วัด (mm.)	
Offset	-	-	mm	1	-	-	-
Angular	-	-	mm/100	2	-	-	-
F1	-	-	mm	3	-	-	-
F2	-	-	mm	4	-	-	-

Shim plate not over 4 plates

Distance Data

S-C = - mm, S-F1 = - mm, แล่น - mm, แล่น - mm, แล่น - mm

S-H = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, แล่น Motor - mm.

Coupling Type: - mm.

Bolt Coupling: - mm.

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length: _____ N. / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red	V1 = Yellow	W1 = Blue
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Lead good condition

☐ Cable grand

☐ Reconnection same disoc

Remark:

Checked By: Mr. Winal C. Customer: K. Pakorn

Date: 20/12/2022 Date: 20/12/2022

ไฟล์แนบ: 01/11/22 - 15/11/22 Rev.03 Page 11 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

Motor Nameplate: TEMC Frame Model: 280L Type: IIEF-C10CNW11

Power: 185.00 kW Speed: 12970 1/min. Ser.No.: F 1894021M

Voltage: 380 V. Frequency: 50 Hz Insulation Class: 155 (F) Design: -

Current: 320 A Cos φ: 0.91 Temp. Rise Class: - Duty: -

DE Bearing: 6312C3 NDE Bearing: 6312C3 IP: 55 SF: -

Date: 15 November 2022 Tag No: B1LAC10AP002

1. General check.

2.1 Body Frame Corrosive

2.2 Cable Entry Condition

2.3 Earthing Connection Status

2.4 Terminal Box Sealing & Other Gasket

2.5 Inside of Terminal Box, Dust/Water is Clear

2.6 All Cable Connection, Tightening

2.7 Inside of Terminal Box Temperature and Heaters

2.8 Cover and Cooling Fan

3. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH)	Resistance (Ohm)	Results	Remark
U-V	0.94	U1-U2 0.54	0.50	Wdg Temp 42 °C Amb Temp 34°C
U-W	0.90	V1-V2 0.90	0.40	Insulation By
V-W	0.88	W1-W2 0.88	0.40	Micro Ohm Meter & Dual Display LCR Meter

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable

4. Conclusion and recommendation.

Conclusion:

Recommendation:

RESULT: N

Definition: N = Normal, W = Warning, D = Danger

DESCRIPTION: PLUTOTECH COMPANY LIMITED

TESTED AND INSPECTED BY: Mr. Winal

Date: 15 November 2022

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PRY Job No: PRY65411103-28/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

CODE No.: -

ATTENTION: K. Pakorn

Tag No: B1LAC10AP002

SALES: Mr. Kittak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ (แนบไฟล์) : 15/11/2022 Rev. 00 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd.

PRY Job No: PRY65411103-28/30

Receiving Date: 15 November 2022

Delivery Date: 15 November 2022

CODE No.: -

ATTENTION: K. Pakorn

Tag No: B1LAC10AP002

SALES: Mr. Kittak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์แนบ (แนบไฟล์) : 15/11/2022 Rev. 00 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

Customer Detail: Chonburi Clean Energy Co., Ltd.

Before After

(1) Motor Details

Job No: PRY65411103-28 Tag: B1LAC10AP002

MFG: - Power: 185 kW. Full load Amp. 320 A. Pole: ☐ 2 Pole ☐ 4 Pole ☐ 6 Pole

Type: IIEF-C10CNW11 Volt: 380 V. Speed: 12970 rpm. Class Typ. ☐ Exd ☐ Exe ☐ Exn

Frame: 280L Freq: 50 Hz. Bearings: DE 6312C3 IMB3 ☐ IMB5 ☐ IMB

SF: - Phase: - Mounting: ☐ IMB3 ☐ IMB5 ☐ IMB

Ins. Class: 155(F) Duty: - T-Class: -

S/N: E1894021M Weight: - Kgs. IP: 55 Rotation direct(View from NDE): ☐ CW ☒ CCW

(2) Vibration motor on site / Current

Measuring: Load Current (A)

Point	V	H	A	gR	Remark
DE	0.54	1.28	0.65	-	0.15
NDE	0.57	1.72	0.48	-	0.19

(3) Mechanical Inspection

Stationary Mobile

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	Shim	Shim Plate
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Shim plate not over 4 plates

Distance Data

S-C = mm, S-F1 = mm, Warden = mm, Wain1nd = mm

S-M = mm, S-F2 = mm, Distance coupling Motor - Load = mm, Shim plate Motor = mm

Coupling Type: mm

BoR Coupling: mm

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timer belt

Span length: mm

Tension belt: N / kgf

(5) Electrical inspection Difference Connect cable

U1 = Red ☐ Lead good condition

V1 = Yellow ☐ Cable grand

W1 = Blue ☐ Reconnection same disco

Remark:

Checked By: Mr. Winal C. Customer: K. Pakorn

Date: 20/12/2022 Date: 20/12/2022

ไฟล์แนบ (แนบไฟล์) : 01/11/2022 Rev. 00 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 1

Inspection Sheet For Squirrel Cage Motor

PRY65411103-20/30

☐ All Medium Voltage Motor ☐ Low Voltage Motor ☐ Special Design of Low Voltage AC Motor

MOTOR NAME/PLATE Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

Manufacturer: SIEMENS Frame Model: 200L Type: -

Power: 30.00 kW Speed: 2952 1/min. Ser.No.: 65137099

Voltage: 380 V Frequency: 50 Hz Insulation Class: - Design: -

Current: 56 A Cu Ø: - Temp. Rise Class: - Duty: -

DE Bearing: - NDE Bearing: - IP: - SF: -

Date: 15 November 2022 Tag No: TILCA18AP201

General Information.

Motor Mounting
☐ Flange mounted
☐ Foot mounted
☐ Briven Connection
☐ Gear box ☐ Blower
☐ V - Belt
☐ Coupling

1. General check.

2.1 Body/Frime Corrosive ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A

2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mili-Henry)	Resistance (mili-Ohm)	Results	Remark
U-V	9.25	153.78	U1-U2	Wdg Temp 42 °C Amb Temp 34°C
U-W	7.62	160.96	V1-V2	Instrument By
V-W	8.45	158.60	W1-W2	Micro Ohm Meter & Dual Display LCR Meter

Result: ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Test-Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V.)	Insulation Test (500V.)
		15 Sec.	60 Sec.	10 min.						
500	U-V	-	-	-	-	32	-	-	-	-
	U-W	-	-	-	-					
	V-W	-	-	-	-					
	(U + V + W) - EARTH	13.00G	78.90	GD	-					

Min. Insulation Recommended: > 0.1GΩ Polarization Index Recommended: > 2.5

Result: ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Resistance (R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

ELEMENT ITEM	1	2	3	4	5	6	Brq DE	Brq NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	A-B-B	A-B-B	A-B-B	A-B-B	A-B-B	A-B-B	-	-	-	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	307.9	499.3	-	-

Result: ☒ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion: _____

Recommendation: _____

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N = Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	W = Warning	Name-Surname	Mr. Winai
D	D = Danger	Date	15 November 2022

PAGE : 2

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd. PRY Job No: PRY65411103-20/30

PLANT: - Receiving Date: 15 November 2022

CODE No.: - Delivery Date: 15 November 2022

Tag No: TILCA18AP201 ATTENTION: K. Pakorn

SALES: Mr. Kittsak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

Inspection Sheet: 10/15 PRY-WE-Rev 00 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

PAGE : 1

Inspection Sheet For Squirrel Cage Motor

PRY65411103-30/30

☐ All Medium Voltage Motor ☐ Low Voltage Motor ☐ Special Design of Low Voltage AC Motor

MOTOR NAME/PLATE Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

Manufacturer: SIEMENS Frame Model: 200L Type: -

Power: 30.00 kW Speed: 2952 1/min. Ser.No.: -

Voltage: 380 V Frequency: 50 Hz Insulation Class: F/B Design: -

Current: 56 A Cu Ø: 0.88 Temp. Rise Class: - Duty: S1

DE Bearing: - NDE Bearing: - IP: 55 SF: 92.20

Date: 15 November 2022 Tag No: TILCA18AP202

General Information.

Motor Mounting
☐ Flange mounted
☐ Foot mounted
☐ Briven Connection
☐ Gear box ☐ Blower
☐ V - Belt
☐ Coupling

1. General check.

2.1 Body/Frime Corrosive ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A

2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mili-Henry)	Resistance (mili-Ohm)	Results	Remark
U-V	6.51	153.79	U1-U2	Wdg Temp 42 °C Amb Temp 34°C
U-W	7.23	158.41	V1-V2	Instrument By
V-W	7.91	159.03	W1-W2	Micro Ohm Meter & Dual Display LCR Meter

Result: ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 43-2000

Test-Volt	Marking	Insulation Test			PI	Amb. Temp	Mark	60 Sec	Insulation Test (500V.)	Insulation Test (500V.)
		15 Sec.	60 Sec.	10 min.						
500	U-V	-	-	-	-	32	-	-	-	-
	U-W	-	-	-	-					
	V-W	-	-	-	-					
	(U + V + W) - EARTH	19.30G	86.30	GD	-					

Min. Insulation Recommended: > 0.1GΩ Polarization Index Recommended: > 2.5

Result: ☒ Normal ☐ Abnormal ☐ Include Cable ☐ Exclude Cable

* Standard of Resistance (R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

ELEMENT ITEM	1	2	3	4	5	6	Brq DE	Brq NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	A-B-B	A-B-B	A-B-B	A-B-B	A-B-B	A-B-B	-	-	-	-	-	-
RESISTANCE (Ω)	-	-	-	-	-	-	-	-	307.9	499.3	-	-

Result: ☒ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion: _____

Recommendation: _____

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N = Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	W = Warning	Name-Surname	Mr. Winai
D	D = Danger	Date	15 November 2022

PAGE : 2

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd. PRY Job No: PRY65411103-30/30

PLANT: - Receiving Date: 15 November 2022

CODE No.: - Delivery Date: 15 November 2022

Tag No: TILCA18AP202 ATTENTION: K. Pakorn

SALES: Mr. Kittsak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

Inspection Sheet: 10/15 PRY-WE-Rev 00 Page 11 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

INSPECTION SHEET FOR ONSITE

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before After

(1) Motor Details Job No: PRY65411103-29 Tag: TILCA10AP201

MFG: Power 30 kW Full load Amp. 56 A Pole 2 Pole 4 Pole 6 Pole
Type: Volt 380 V Speed 2952 rpm Class Typ. IMB3 IMB5 IMB
Frame 200L Freq. 50 Hz Bearings DE Mounting
SF: Phase S1 IP 55 Rotation direct(View From NDE)
Ins. Class: Duty S1 T-Class
SN: 6317099 Weight Kgs

(2) Vibration motor on site / Current

Measuring Load %
L1 L2 L3

Vibration (mm/sec) Bearing Condition
Point V H A gR
DE 2.01 0.93 0.72 - - G 6.84
NDE 2.75 1.27 - - - G 6.49

(3) Mechanical Inspection

Stationary Mobile

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	Shim	Quantity	Wt (mm.)
Offset	-	-	mm	1	-	-
Angular	-	-	mm/100	2	-	-
F1	-	-	mm	3	-	-
F2	-	-	mm	4	-	-

Shim plate not over 4 plates

Distance Data
S-C = mm, S-F1 = mm, แว่นก้าน mm, แว่นท้าย mm, ฐานขา Motor mm
S-H = mm, S-F2 = mm, Distance coupling Motor + Load = mm, ฐานขา Motor mm
Coupling Type mm
Bolt Coupling mm

(4) Mechanical install inspection

Coupling Type: Transition belt type:
Direct Coupling Flat belt
Rubber Coupling Y-shape belt
Other Timer belt

Span length: Deflection 10mm per mm of span
Span length: Tension belt: N. / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red
V1 = Yellow
W1 = Blue

Lead good condition
Cable grand
Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn
Date: 20/12/2022 Date: 20/12/2022

ไฟล์ชื่อ : 01/11/57 v1a : PR-WS-49 Rev.01 Inspection Sheet For On-Site

Inspection Sheet For Squirrel Cage Motor

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before After

(1) Motor Details Job No: PRY65411103-30 Tag: TILCA10AP202

MFG: Power 30 kW Full load Amp. 56 A Pole 2 Pole 4 Pole 6 Pole
Type: Volt 380 V Speed 2952 rpm Class Typ. IMB3 IMB5 IMB
Frame 200L Freq. 50 Hz Bearings DE Mounting
SF: Phase S1 IP 55 Rotation direct(View From NDE)
Ins. Class: Duty S1 T-Class
SN: 6317099 Weight Kgs

(2) Vibration motor on site / Current

Measuring Load %
L1 L2 L3

Vibration (mm/sec) Bearing Condition
Point V H A gR
DE 6.11 7.48 1.49 - - G 6.46
NDE 7.81 13.45 - - - G 6.74

(3) Mechanical Inspection

Stationary Mobile

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	Shim	Quantity	Wt (mm.)
Offset	-	-	mm	1	-	-
Angular	-	-	mm/100	2	-	-
F1	-	-	mm	3	-	-
F2	-	-	mm	4	-	-

Shim plate not over 4 plates

Distance Data
S-C = mm, S-F1 = mm, แว่นก้าน mm, แว่นท้าย mm, ฐานขา Motor mm
S-H = mm, S-F2 = mm, Distance coupling Motor + Load = mm, ฐานขา Motor mm
Coupling Type mm
Bolt Coupling mm

(4) Mechanical install inspection

Coupling Type: Transition belt type:
Direct Coupling Flat belt
Rubber Coupling Y-shape belt
Other Timer belt

Span length: Deflection 10mm per mm of span
Span length: Tension belt: N. / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red
V1 = Yellow
W1 = Blue

Lead good condition
Cable grand
Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn
Date: 20/12/2022 Date: 20/12/2022

INSPECTION SHEET FOR ONSITE

Customer Detail : Chonburi Clean Energy Co., Ltd.

Before After

(1) Motor Details Job No: PRY65411103-30 Tag: TILCA10AP202

MFG: Power 30 kW Full load Amp. 56 A Pole 2 Pole 4 Pole 6 Pole
Type: Volt 380 V Speed 2952 rpm Class Typ. IMB3 IMB5 IMB
Frame 200L Freq. 50 Hz Bearings DE Mounting
SF: Phase S1 IP 55 Rotation direct(View From NDE)
Ins. Class: Duty S1 T-Class
SN: 6317099 Weight Kgs

(2) Vibration motor on site / Current

Measuring Load %
L1 L2 L3

Vibration (mm/sec) Bearing Condition
Point V H A gR
DE 6.11 7.48 1.49 - - G 6.46
NDE 7.81 13.45 - - - G 6.74

(3) Mechanical Inspection

Stationary Mobile

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	Shim	Quantity	Wt (mm.)
Offset	-	-	mm	1	-	-
Angular	-	-	mm/100	2	-	-
F1	-	-	mm	3	-	-
F2	-	-	mm	4	-	-

Shim plate not over 4 plates

Distance Data
S-C = mm, S-F1 = mm, แว่นก้าน mm, แว่นท้าย mm, ฐานขา Motor mm
S-H = mm, S-F2 = mm, Distance coupling Motor + Load = mm, ฐานขา Motor mm
Coupling Type mm
Bolt Coupling mm

(4) Mechanical install inspection

Coupling Type: Transition belt type:
Direct Coupling Flat belt
Rubber Coupling Y-shape belt
Other Timer belt

Span length: Deflection 10mm per mm of span
Span length: Tension belt: N. / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red
V1 = Yellow
W1 = Blue

Lead good condition
Cable grand
Reconnection same discor

Remark:

Checked By: Mr.Winal C. Customer: K.Pakorn
Date: 20/12/2022 Date: 20/12/2022

ไฟล์ชื่อ : 01/11/57 v1a : PR-WS-49 Rev.01 Inspection Sheet For On-Site

MOTOR SERVICE REPORT

PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

CUST-NAME: Chonburi Clean Energy Co., Ltd. PRY Job No: PRY65411103-30/30
PLANT: Receiving Date: 15 November 2022
CODE No.: Delivery Date: 15 November 2022
Tag No: TILCA10AP202 ATTENTION: K.Pakorn
SALES: Mr.Kittak

PHOTO OF SERVICE CONDITIONS

ADDITIONAL COMMENTS:

ไฟล์ชื่อ : 01/11/57 v1a : PR-WS-49 Rev.01 PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS

Inspection Sheet For Squirrel Cage Motor

PAGE: 1

PRY65411103-3130

☐ All Medium Voltage Motor ☐ Low Voltage Motor ☐ Special Design of Low Voltage AC Motor

MOTOR NAMEPLATE: Customer: Chonburi Clean Energy Co., Ltd. Attention: K. Pakorn

Manufacturer: TECO Frame Model: - Type: A-FUL VS-PAA

Power: 0.37 kW Speed: 1405 1/min. Ser.No.: E1209078001

Voltage: 380 V. Frequency: 50 Hz. Insulation Class: F Design: -

Current: 1.29 A. Cus. Ø: - Temp. Rise Class: - Duty: -

DE Bearing: 6202-2Z NDE Bearing: 6202-2Z IP: 55 SF: 1.00

Date: 15 November 2022 Tag No: THLCA18A282

General Information:

Motor Mounting: ☐ Flange mounted ☐ Foot mounted

Before Connection: ☐ Gear box ☐ Blower ☐ V-Belt ☐ Coupling

1. General check.

2.1 Body/Fan Corrosive ☐ Normal ☐ Abnormal ☐ N/A

2.2 Cable Entry Condition ☐ Normal ☐ Abnormal ☐ N/A

2.3 Earthing Connection Status ☐ Normal ☐ Abnormal ☐ N/A

2.4 Terminal Box Sealing & Other Gasket ☐ Normal ☐ Abnormal ☐ N/A

2.5 Inside of Terminal Box, Dust/Water is Clear ☐ Normal ☐ Abnormal ☐ N/A

2.6 All Cable Connection, Tightening ☐ Normal ☐ Abnormal ☐ N/A

2.7 Inside of Terminal Box Temperature and Heaters ☐ Normal ☐ Abnormal ☐ N/A

2.8 Cover and Cooling Fan ☐ Normal ☐ Abnormal ☐ N/A

2. Measure insulation resistance and polarizing index

Measure winding data

Terminals	Inductance (mH-Henry)	Resistance (Ohm)	Results	Remark	
U-V	0.28	U1-U2	32.20	U1-U2	Wdg Temp 42 °C Amb Temp 34 °C Instrument By: _____ Macro Ohm Meter & Dual Display LCR Meter
U-W	0.26	V1-V2	32.00	V1-V2	
V-W	0.28	W1-W2	32.00	W1-W2	

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Exclude Cable

* Standard of Insulation Resistance (IR) Reference by IEEE Standard 41-2000

Insulation Test (500V)

Test-Volt	Marking	15 Sec.	60 Sec.	10 min.	PI	Amb. Temp	Mark	60 Sec.	Insulation Test (500V)
U-V	-	-	-	-	-	-	U-E	-	OK
U-W	-	-	-	-	-	-	V-E	-	OK
V-W	-	-	-	-	-	-	W-E	-	OK
U+V+W-EARTH	33.20	68.20	60	2.85	-	-	U-E	-	OK

Min. Insulation Recommended: > 0.1 GΩ Polarization Index Recommended: > 2.5

Result: ☒ Normal ☐ Abnormal ☐ Exclude Cable ☐ Exclude Cable

* Standard of Resistance (R) Reference by IEEE Standard 113

3. Temperature Sensor And Heater

TEMPERATURE SENSOR (STATOR)

Element Item	1	2	3	4	5	Brig DE	Brig NDE	Heat 1	Heat 2	TYPE	Remark
Cable/Marking No.	A-B-B	A-B-B	A-B-B	A-B-B	A-B-B	-	-	-	-	-	-
Resistance (Ω)	-	-	-	-	-	-	-	-	-	-	-

Result: ☒ Normal ☐ Abnormal

4. Conclusion and recommendation.

Conclusion: _____

Recommendation: _____

RESULT	Definition	DESCRIPTION	TESTED AND INSPECTED BY
N	N - Normal	Company Name	PLUTOTECH COMPANY LIMITED
W	W - Warning	Name-Surname	Mr. Winal
D	D - Danger	Date	15 November 2022

INSPECTION SHEET FOR ONSITE

Before After

Customer Detail: Chonburi Clean Energy Co., Ltd.

Job No: PRY65411103-31 Tag: -

MFG: Power 0.37 kW Full load Amp. 1.29 A. Pole ☐ 2 Pole ☐ 4 Pole ☐ Pole

Type: AEUL VS-PAA Volt 380 V. Speed 1405 rpm. Class Typ. ☐ Exd ☐ Exe ☐ Exn

Frame: Freq 50 Hz. Bearings DE 6202-2Z Mounting ☐ IMB3 ☐ IMB5 ☐ IMB

SF 1.8 Phase - IP 55 Rotation direct (View From NDE) ☐ CW ☐ CCW

Ins. Class F Duty - Weight - T-Class -

S/N: E1209078001

(2) Vibration motor on site / Current

Measure: Load Current (A)

Load	%
L1	-
L2	-
L3	-

Vibration (mm/sec)

Point	V	H	A	gR	Remark
DE	0.10	0.09	0.02	34	36
NDE	0.28	1.08	-	31	37

(3) Mechanical inspection

Stationary: ☐ Mobile: ☐

Recheck before overhaul

Measurement	Horizontal	Vertical	Unit	mm	Shim Plate
Offset	-	-	mm	1	-
Angular	-	-	mm/100	2	-
F1	-	-	mm	3	-
F2	-	-	mm	4	-

Shim plate not over 4 plates

Distance Data

S-C = - mm, S-F1 = - mm, เว้นด้าน - mm, เว้นหลัง - mm, ☐ เติมน้ำมัน

S-H = - mm, S-F2 = - mm, Distance coupling Motor - Load = - mm, ตรวจสอบ Motor - mm.

Coupling Type: - mm.

Bot Coupling: - mm.

(4) Mechanical install inspection

Coupling Type: ☐ Direct Coupling ☐ Rubber Coupling ☐ Other _____

Transmission belt type: ☐ Flat belt ☐ V-shape belt ☐ Timing belt

Span length: - mm. Tension belt: - N / kgf.

(5) Electrical inspection Difference Connect cable

U1 = Red ☐ Lead good condition

V1 = Yellow ☐ Cable grand

W1 = Blue ☐ Reconnection same disc

Remark: _____

Checked By: Mr. Winal C. Customer: K. Pakorn

Date: 20/12/2022 Date: 20/12/2022

File Path: 01/11/57 vda: FR-WS-02 Rev.01 Inspection Sheet For On-Site

MOTOR SERVICES REPORT

OF PLUTOTECH COMPANY LIMITED (RAYONG)

CUSTOMER: Chonburi Clean Energy Co., Ltd.

PLANT: -

LOCATION: 40/5 Moo 8 WHA Chonburi Industrial Estate 1, Bowin, Siracha, Chonburi 20230

MOTOR CODE: -

DESCRIPTION: AC MOTOR

WORK DESCRIPTION: Overhauled Stator & Other Repaired

Report contents

Item No	Description	Page
1	COVER SHEET	1
2	ELECTRICAL TESTING DATA	2-3
3	MECHANICAL DATA	4
4	MECHANICAL SERVICE DATA ROTOR	5
5	MECHANICAL SERVICE DATA	5
6	ELECTRICAL SERVICE DATA	6
7	PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS	7-9

Logistic Data:

Incoming Date: 19-Dec-22

Delivery Date: 19-Dec-22

Reporting Date: 9-Jan-23

Customer-Order No.: -

Issued Date: 19-Dec-22

Contact Person: K. Pakorn

PRY-Job Order No.: PRY65411103-31/3C

Issued Date: 19-Dec-22

Contact Person: Mr. Kittisak S.

Report prepared by: Ms. Onanon T.

PRY-Approved by: Mr. Theerapong P.

QA-approved by: Mr. Preeda S.

Date: 9-Jan-23

CUSTOMER'S ADDRESS:

Chonburi Clean Energy Co., Ltd.

40/5 Moo 8 WHA Chonburi Industrial Estate 1, Bowin, Siracha, Chonburi 20230

SERVICES REPORT BY:

PLUTOTECH COMPANY LIMITED (RAYONG)

18/18 Chareon Pattana Road, Huaypang, Muang Rayong, Rayong 21150

Tel: +66 38 029 388 - 390

Fax: +66 38 029 391

E-mail: Sales@plutotech.co.th

MOTOR SERVICE REPORT

FOR SQUIRREL CAGE INDUCTION MOTOR

CUST-NAME: Chonburi Clean Energy Co., Ltd. PRY Job No: PRY65411103-31/30

PLANT: -

ATTENTION: K. Pakorn

SALES: Mr. Kittisak S.

Receiving Date: 19 December 2022

Delivery Date: 19 December 2022

Report Date: 9 January 2023

MOTOR NAME: AC MOTOR

CODE No.: -

EQUIPMENT DESCRIPTION

Motor Type: -

Maker: -

Design-Type: -

Design-Model: -

Serial No.: -

Frame: -

Duty: -

Cat No.: -

kw: -

Vol(V): -

Current(A): -

Freq(Hz): -

Speed(rpm): -

Insul-Class: -

Bear-Type: -

DE-No: -

PF: -

EFF: -

Temp Class: -

IP: -

Stat-Weight(ton): -

Rot-Weight(ton): -

Cool-Weight(ton): -

Total-Weight(ton): -

ELECTRICAL TESTING DATA

RESISTANCE & INDUCTANCE (Ref. to STD. IEEE 113)

Resistance	Inductance	Criteria
Incoming(Ohm)	Incoming(mH)	
Final(Ohm)	Final(mH)	

Stator: U-V, U-W, V-W, U1-U2, V1-V2, W1-W2

Result: ☐ Normal ☐ Abnormal ☐ Normal ☐ Abnormal

TEMPERATURE ELEMENTS & HEATERS (Ref. to motor data sheet)

Elements	heat1	heat2	RTD1	RTD2	RTD3	RTD4	RTD5	RTD6	RTD7	RTD8	RTD9	RTD10	RTD11	RTD12	RTD13
Designation	U	V	W	U2	V2	W2	Brig DE	Brig NDE	-	-	-	-	-	-	-
Incom(Ohm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Result	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal
Final(Ohm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Result	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal	<input type="checkbox"/> Abnormal	<input type="checkbox"/> Normal

INSULATION RESISTANCE TEST (Ref. to STD. IEEE 41)

Winding	M-Ohm	Incoming	Test-Volt	Criteria	G-Ohm	Final	Test-Volt	Criteria
U-V	-	-	-	-	-	-	-	-
U-W	-	-	-	-	-	-	-	-
V-W	-	-	-	-	-	-	-	-
U-E	-	-	-	-	-	-	-	-
V-E	-	-	-	-	-	-	-	-
W-E	-	-	-	-	-	-	-	-
U+V+W-E	-	-	-	-	-	-	-	-

Result: ☐ Normal ☐ Abnormal ☐ Normal ☐ Abnormal

POLARIZATION INDEX TEST (Ref. to STD. IEEE 43)

Winding	IR	Incoming	Test-Volt	PI	IR	Final	Test-Volt	PI
U-V	-	-	-	-	-	-	-	-
U-W	-	-	-	-	-	-	-	-
V-W	-	-	-	-	-	-	-	-
U-E	-	-	-	-	-	-	-	-
V-E	-	-	-	-	-	-	-	-
W-E	-	-	-	-	-	-	-	-
U+V+W-E	-	-	-	-	-	-	-	-









Result: ☐ Poor ☐ Okay ☐ Good ☐ Excellent ☐ Poor ☐ Okay ☐ Good ☐ Excellent

Responsible: Electrical tested by: Mechanical tested by: Electrical Engineer: Mechanical Engineer: Final Approval: _____

Name: Sawang Chantorn Chantorn Chantorn Chantorn Chantorn



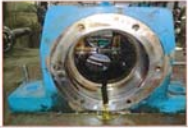





Date: 19 December 2022 19 December 2022 19 December 2022 19 December 2022 19 December 2022

MOTOR SERVICE REPORT		PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS	
CUST-NAME:	Chorbut Clean Energy Co., Ltd.	PRY Job No:	PRY05411103-31/30
PLANT:		Receiving Date:	19 December 2022
MOTOR NAME:	AC MOTOR :	Delivery Date:	19 December 2022
CODE No.:		ATTENTION:	K.Pakorn
		SALES:	Mr Kittisak S.

PHOTO OF BEFORE SERVICE CONDITIONS	PHOTO OF AFTER SERVICE CONDITIONS
	
	
	
	





ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT		PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS	
CUST-NAME:	Chorbut Clean Energy Co., Ltd.	PRY Job No:	PRY05411103-31/30
PLANT:		Receiving Date:	19 December 2022
MOTOR NAME:	AC MOTOR :	Delivery Date:	19 December 2022
CODE No.:		ATTENTION:	K.Pakorn
		SALES:	Mr Kittisak S.

PHOTO OF BEFORE SERVICE CONDITIONS	PHOTO OF AFTER SERVICE CONDITIONS
	
	
	
	

ADDITIONAL COMMENTS:

MOTOR SERVICE REPORT		PHOTOGRAPHS OF FOUND & AFTER SERVICED CONDITIONS	
CUST-NAME:	Chorbut Clean Energy Co., Ltd.	PRY Job No:	PRY05411103-31/30
PLANT:		Receiving Date:	19 December 2022
MOTOR NAME:	AC MOTOR :	Delivery Date:	19 December 2022
CODE No.:		ATTENTION:	K.Pakorn
		SALES:	Mr Kittisak S.

PHOTO OF BEFORE SERVICE CONDITIONS	PHOTO OF AFTER SERVICE CONDITIONS
	
	

ADDITIONAL COMMENTS:

ภาคผนวก ข.24

จดหมายแจ้งกิจกรรมการซ่อมบำรุง ประจำปี พ.ศ.2565 (Outtage)

ข่าวประชาสัมพันธ์

เรื่อง แจ้งการหยุดซ่อมบำรุง (Plan Outage) หม้อต้มไอน้ำ บริษัท ชลบุรี คลีน เอ็นเนอร์ยี่ จำกัด

ตามที่ บริษัท ชลบุรี คลีน เอ็นเนอร์ยี่ จำกัด (บริษัทฯ) ประกอบธุรกิจกำจัดกากอุตสาหกรรมที่ไม่อันตรายโดยแปรรูปเป็นพลังงานไฟฟ้า ตั้งอยู่เลขที่ 40/5 หมู่ 8 นิคมอุตสาหกรรมดับบลิวเอชเอ ชลบุรี 1 ตำบลบ่อวิน อำเภอศรีราชา จังหวัดชลบุรี จะทำการหยุดซ่อมบำรุงหม้อต้มไอน้ำ ตามแผนงานที่กำหนดไว้ ตามรายละเอียดดังนี้

รายละเอียด	บริษัท ชลบุรี คลีน เอ็นเนอร์ยี่ จำกัด	หมายเหตุ
ที่ตั้งโรงงาน	นิคมอุตสาหกรรมดับบลิวเอชเอ ชลบุรี 1	
หน่วยที่หยุดซ่อม	หม้อต้มไอน้ำ	1.อาจเกิดเสียงดังรบกวน เป็นบางเวลาบริเวณโรงงาน 2.พบเห็นกลุ่มไอน้ำสีขาว ลอยขึ้นบริเวณโรงงาน
ทดสอบระบบวาล์วนิรภัย (Safety Valve Test)	7—8 ธันวาคม 2565	
ระยะเวลาหยุดซ่อมบำรุงรักษา	7-21 ธันวาคม 2565	
เริ่มต้นเดินเครื่อง (Start – Up)	21 ธันวาคม 2565	
เดินเครื่องตามปกติ	22 ธันวาคม 2565	

กิจกรรมนี้อาจสร้างความไม่สะดวกและรบกวนต่อหน่วยงาน/โรงงาน/ผู้ที่อยู่อาศัยในบริเวณใกล้เคียงหรือสัญจรไปมาได้ บริษัทฯจึงขออภัยมา ณ โอกาสนี้ อย่างไรก็ตาม บริษัทฯได้ตระหนักถึงความปลอดภัยเป็นสำคัญจึงมีมาตรการควบคุมป้องกันอย่างเคร่งครัด เพื่อให้เกิดผลกระทบต่อชุมชน/หน่วยงาน/ผู้ประกอบการใกล้เคียงและสิ่งแวดล้อมให้น้อยที่สุด

จึงเรียนมาเพื่อโปรดทราบ และขอความอนุเคราะห์ท่านช่วยประชาสัมพันธ์ให้ผู้ที่เกี่ยวข้องในหน่วยงาน/ชุมชนของท่านทราบด้วยจักขอบคุณยิ่ง หากท่านต้องการสอบถามข้อมูลเพิ่มเติมกรุณาติดต่อ น.ส.ศลิษา สุนทรภัก ผู้จัดการแผนกสิ่งแวดล้อม อาชีวอนามัย และความปลอดภัย โทรศัพท์ 081 3566170 หรือ นายวันดี สุสุนทร ผู้จัดการแผนกชุมชนสัมพันธ์ โทรศัพท์ 081-823 6309

ภาคผนวก ข.25

แผนและกิจกรรมมวลชนสัมพันธ์ (CSR)

12. คุณภาพชีวิตและสังคมของชุมชนโดยรอบ

แผนงานด้านความรับผิดชอบต่อสังคมและชุมชนโดยรอบพื้นที่โครงการ

1. ด้านสร้างความสัมพันธ์ที่ยั่งยืน

โครงการ : การสร้างความรู้ความเข้าใจ, การสื่อสารกับชุมชน, การเปิดบ้านเยี่ยมชมโครงการ, การเผยแพร่ข้อมูลผ่านสื่อท้องถิ่น, การสนับสนุนกิจกรรมศาสนา ประเพณี วัฒนธรรม

2. ด้านการศึกษาและเยาวชน

โครงการ : การปรับปรุงสถานศึกษารอบโครงการ, สนับสนุนทุนการศึกษา

3. ด้านคุณภาพชีวิตเพื่อสังคม

โครงการ : การพัฒนาศักยภาพชุมชน, การสร้างห้องน้ำดื่มเพื่อผู้พิการ และคนชรา การส่งเสริมด้านกีฬา และป้องกันยาเสพติด



4. ด้านสุขภาพอนามัย

โครงการ : การส่งเสริมสุขภาพอนามัยชุมชน, หน่วยแพทย์เคลื่อนที่, การป้องกันโรคโควิด-19

5. ด้านการส่งเสริมอาชีพ

โครงการ : การฝึกอบรมอาชีพ พัฒนาทักษะด้านเกษตร ทัดถ์กรรม หรือตามที่เหมาะสม, ส่งเสริมศักยภาพชุมชนด้านอาชีพ

6. ด้านสิ่งแวดล้อมและพัฒนาสาธารณูปโภค

โครงการ : การปรับปรุงพื้นที่สาธารณูปโภค และ การอนุรักษ์สิ่งแวดล้อม 120 CHONBURI



CSR

1 ด้านสร้างความสัมพันธ์ที่ยั่งยืน



การลงพื้นที่พบปะชุมชน



Company website



ป้ายประชาสัมพันธ์ตามชุมชน



การเปิดบ้านเยี่ยมชมโรงงาน



CSR

1 ด้านสร้างความสัมพันธ์ที่ยั่งยืน

สนับสนุนของขวัญให้แก่ผู้สูงอายุเนื่องในเทศกาลสงกรานต์ 2565



สนับสนุนของขวัญให้แก่ผู้สูงอายุเนื่องในเทศกาลสงกรานต์ 2565 (เมษายน 2565)



CSR

1 ด้านสร้างความสัมพันธ์ที่ยั่งยืน

ร่วมโครงการตรวจประเมินธรรมาภิบาลสิ่งแวดล้อมและความปลอดภัย (ธงชาวดาวเขียว)



ดำเนินการต่อเนื่องเป็นปีที่ 2 เมื่อกุมภาพันธ์ 2565



หมายเหตุ : เป็นการเข้าร่วมโครงการปีที่ 2 ของ CCE หากเข้าร่วมโครงการและผ่านการประเมินต่อเนื่องจนครบ 5 ปีจะได้รับรางวัลทอง



CSR

1 ด้านสร้างความสัมพันธ์ที่ยั่งยืน

ร่วมกิจกรรมโครงการ Factory & Partner visit ของกลุ่มนิคมอุตสาหกรรมดับบลิวเอชเอ



ผู้แทนจาก CCE ร่วมกิจกรรม เพื่อนำเสนอความคิดเห็น ข้อเสนอแนะ และแชร์ประสบการณ์ร่วมกับผู้บริหารจากกทอ.และตัวแทนจากบริษัทในกลุ่มนิคมอุตสาหกรรมดับบลิวเอชเอ เมื่อวันที่ 17 มิถุนายน 2565



CSR

1 ด้านสร้างความสัมพันธ์ที่ยั่งยืน

ร่วมงานมุทิตาจิต แก่ผู้นำชุมชน ผู้บริหารหน่วยงานราชการที่เกี่ยวข้อง



ผู้ใหญ่สวัสดิ์ สอสูงเนิน หมู่ 1 บ้านหุบบอน ต.ชะดันทรง



ผอ.จินดา เกษศรี โรงเรียนบ้านเขาหิน (นิราทรราษฎร์บำรุง)



CSR

Update

1 ด้านสร้างสัมพันธ์ที่ยั่งยืน



พบปะหารือกับกลุ่มแม่บ้าน 3 บ้านห้วยปราบ ต.ป่อวิน เพื่อการพัฒนาอาชีพปลูกผักและแปรรูปอาหาร
25 สิงหาคม 2565



ประเด็น: กลุ่มแม่บ้าน 3 บ้านห้วยปราบ ต.ป่อวิน ต้องการฝึกทักษะการสร้างสรรค์อาชีพให้แก่สมาชิกกลุ่ม หลังจากหยุดพัก 3 ปี เนื่องจากสถานการณ์โควิด

ผลการหารือ

1. ปรับปรุงโรงเรียนปลูกผักไฮโดรโปนิกส์ที่ทุ่งโหม เนื่องจากกลุ่มมีความชำนาญปลูกผักและมีกลุ่มลูกค้าอยู่แล้ว
2. สนับสนุนการทำพวงล่อหรือ Coffee break เพื่อสร้างรายได้ให้สมาชิกกลุ่ม เนื่องจากสมาชิกมีความสามารถทำอาหารและมีอุปกรณ์เครื่องครัวพร้อมอยู่แล้ว



CSR

2 ด้านการศึกษา

CCE ร่วมกับ GLOW และ GPSC (กลุ่มปตท.) สนับสนุนโรงเรียนรพท.ไฟฟ้า CCE
เข้าร่วมโครงการ Connect ED และ Restart Thailand
โครงการพัฒนาศูนย์การเรียนรู้ในพื้นที่



พื้นที่	โรงเรียน	จำนวน (คน)
1. ปลวกแดง ระยอง	บ้านมาบตาชิต	4
2. ปลวกแดง ระยอง	บ้านมาบตาชิต	4
3. ปลวกแดง ระยอง	บ้านห้วยปราบ	4
4. ปลวกแดง ระยอง	มาบตาชิตวิทยาคม	4
5. ปอวิน ชลบุรี	บ้านเจดีย์ (นิกรราษฎร์บำรุง)	4
6. ปอวิน ชลบุรี	บ้านปอวิน	4
7. ปอวิน ชลบุรี	บ้านหินลาดนอก	4
8. ปอวิน ชลบุรี	บ้านหินลาดใน	4
	รวม	32

กิจกรรมลงพื้นที่พบปะเยี่ยมดูในโครงการฯ

127 CHONBURI Green Energy

CSR

3 ด้านคุณภาพชีวิตเพื่อสังคม



สนับสนุนข่าวสารเพื่อช่วยเหลือผู้ได้รับผลกระทบจากการแพร่ระบาดของเชื้อโควิด-19
ในเขตต.ป่อวิน และต.เขาคันทรง เมื่อวันที่ 6 พฤษภาคม 2565



CSR

3 ด้านคุณภาพชีวิตเพื่อสังคม



สนับสนุนกิจกรรมกีฬาเยาวชน อบต.เขาคันทรง
20 พฤศจิกายน 2565



สนับสนุนแป๊ะก๊วยกิจกรรมปลอดภัยกับท้องถนนช่วงวันหยุดยาว
3 จุด ในพื้นที่ต.ป่อวิน และ ต.เขาคันทรง (สนับสนุนด้านงบ.)
22 ธันวาคม 2565



CSR

Update

4 ด้านการส่งเสริมอาชีพ



อบรมการปลูกผักไฮโดรโปนิกส์
ให้แก่กลุ่มแม่บ้านเกษตรกรหมู่ 3 บ้านห้วยปราบ
ต.ป่อวิน อ.ศรีราชา จ.ชลบุรี

1 พฤศจิกายน 2565



CSR

5 ด้านสิ่งแวดล้อมและพัฒนาสาธารณสุขประโยชน์



โครงการปลูกป่าถาวรเพื่ออนุรักษ์ร่วมกับ
กรมป่าไม้ และองค์การบริหารจัดการก๊าซ
เรือนกระจก ณ วนอุทยานบ้านศรีบุญศรี
รายงานผลการปฏิบัติงานปลูกป่าปี 2564 และ 2565



กิจกรรมปลูกซ่อมและบำรุงรักษาป่า วันที่ 3 สิงหาคม 2565
ชนิดพันธุ์ไม้
ยางนา ตะเคียนทอง พญาเสือ กระถินเทพา

131 CHONBURI Green Energy

CSR

5 ด้านสิ่งแวดล้อมและพัฒนาสาธารณะประโยชน์

ทำการสำรวจและประเมินความหลากหลายทางชีวภาพบนบก (พืชและสัตว์)
ณ ป่าชุมชนบ้านศรีอนุสรณ์ โดยคณะศาสตร์ ม.เกษตร



รายการ	ที่สำรวจ
1. ทรัพยากรป่าไม้	พบไม้ป่า จำนวน 17 ชนิด พบสัตว์เลื้อยคลานจำนวน 3 ชนิด พบนก จำนวน 24 ชนิด
2. ทรัพยากรสัตว์ป่า	พบสัตว์เลื้อยคลานจำนวน 3 ชนิด พบสัตว์สะเทินน้ำสะเทินบก จำนวน 6 ชนิด



CSR

5 ด้านสิ่งแวดล้อมและพัฒนาสาธารณะประโยชน์

CCE ร่วมโครงการ "เพิ่มพื้นที่สีเขียวสร้างจิตอาสาอนุรักษ์ป่าและ
สิ่งแวดล้อม ประจำปี 2565" ณ โรงเรียนบ้านเขาหิน
วันที่ 2 มิถุนายน 2565



CSR

5 ด้านสิ่งแวดล้อมและพัฒนาสาธารณะประโยชน์



วันที่ 9 กันยายน 2565

ภาคผนวก ข.26

แผนการใช้น้ำและปริมาณการใช้น้ำของโครงการ
ระหว่างเดือนกรกฎาคม ถึงธันวาคม พ.ศ.2565

ปริมาณการใช้น้ำของโครงการกำจัดกากอุตสาหกรรมที่ไม่อันตรายโดยแปรรูปเป็นพลังงานไฟฟ้า
ของบริษัท ชลบุรี คลีน เอ็นเนอร์ยี่ จำกัด
ระหว่างเดือนกรกฎาคม ถึงธันวาคม พ.ศ.2565

เดือน	ปริมาณการใช้น้ำ (ลูกบาศก์เมตร/เดือน)
กรกฎาคม	27,446.0
สิงหาคม	28,114.6
กันยายน	26,288.8
ตุลาคม	27,760.0
พฤศจิกายน	27,966.2
ธันวาคม	18,767.7
รวม	156,343.3

ภาคผนวก ข.27


บันทึกปริมาณการหมุนเวียนน้ำที่กลับมาใช้ใหม่

บันทึกปริมาณการหมุนเวียนน้ำทิ้งกลับมาใช้ใหม่
ระหว่างเดือนมกราคม ถึง ธันวาคม พ.ศ.2565

การหมุนเวียนน้ำทิ้งกลับมาใช้ใหม่	ปริมาณการหมุนเวียนน้ำทิ้งกลับมาใช้ใหม่ (ลูกบาศก์เมตร)											
	มกราคม	กุมภาพันธ์	มีนาคม	เมษายน	พฤษภาคม	มิถุนายน	กรกฎาคม	สิงหาคม	กันยายน	ตุลาคม	พฤศจิกายน	ธันวาคม
น้ำทิ้งสำหรับล้างล้อรถบรรทุกขนส่งเชื้อเพลิงขยะ	379	863	1032	669	1208	1168	1075	1008	895	860	943	431
น้ำทิ้งสำหรับรดน้ำต้นไม้	291	263	282	282	282	281	241	262	265	274	272	105

ภาคผนวก ข.28

การรณรงค์และส่งเสริมให้พนักงานของโครงการลด
หรือประหยัดการใช้น้ำ

 CHONBURI clean energy	วิธีปฏิบัติงาน	แก้ไขครั้งที่ 00
	เรื่อง	วันที่บังคับใช้ ____/____/____
	โครงการนำน้ำทิ้งกลับมาใช้รดน้ำต้นไม้	หน้า 3 จาก 12

วัตถุประสงค์:

1. เพื่อนำน้ำทิ้งในกระบวนการผลิตมาใช้รดน้ำต้นไม้ในพื้นที่สีเขียว
2. เพื่อลดการรับน้ำปะจากนิคมอุตสาหกรรม
3. เพื่อการใช้งานอย่างถูกต้องและปลอดภัย

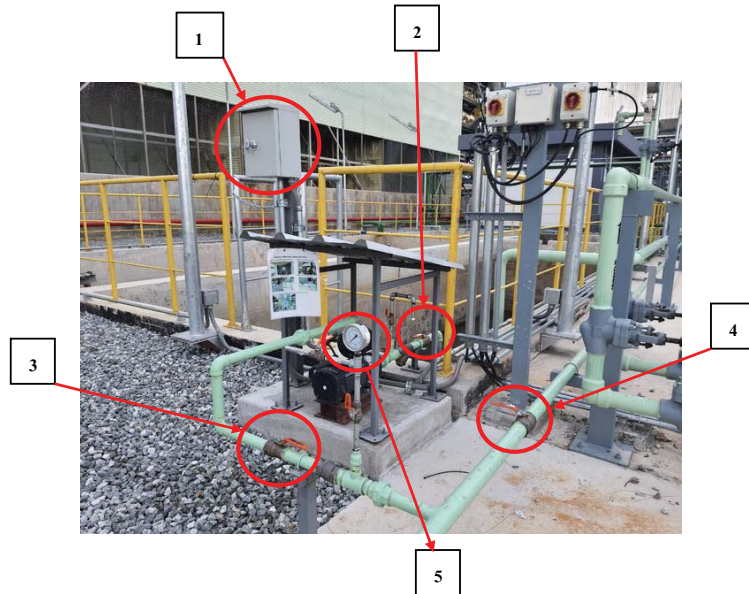
ขอบเขต

1. ใช้สำหรับรดน้ำต้นไม้ในพื้นที่สีเขียวของบริษัท ชลบุรีคลีนเอ็นเนอร์จี จำกัด
2. ปริมาณการใช้น้ำทิ้งเพื่อรดน้ำต้นไม้ในพื้นที่สีเขียว เดือนละ 282 ลูกบาศก์เมตร


คำจำกัดความ

พื้นที่สีเขียว หมายถึง พื้นที่กลางแจ้ง และกึ่งกลางแจ้งที่มีขอบเขตที่ดินทั้งหมดหรือบางส่วนปกคลุมด้วยพรรณพืชบนดินที่ชุ่มน้ำได้ หรืออาจมีสิ่งก่อสร้างอยู่ด้วย

วิธีปฏิบัติงาน



“เอกสารนี้เป็นเอกสารใช้ภายในหน่วยงานของบริษัท ชลบุรี คลีนเอ็นเนอร์จี จำกัด เท่านั้น
หากมีการพิมพ์เอกสารจะถือว่าเอกสารนั้นเป็นเอกสารไม่ควบคุม”

 CHONBURI clean energy	วิธีปฏิบัติงาน	แก้ไขครั้งที่ 00
	เรื่อง	วันที่บังคับใช้ ____/____/____
	โครงการนำน้ำทิ้งกลับมาใช้รดน้ำต้นไม้	หน้า 4 จาก 12

1. Open เบรกเกอร์
2. เปิดวาล์วเข้าปั๊มสูบน้ำ
3. เปิดวาล์วขาออกของปั๊มสูบน้ำ
4. เปิดวาล์ว Emergency (ใช้ในกรณีฉุกเฉิน มาจาก Holding pond 50 คิว)
5. เมื่อเริ่มรดน้ำต้นไม้ แรงดันลดลงถึง 1 บาร์ ปั๊มสูบน้ำจะทำงาน และตัดการทำงานเมื่อแรงดันถึง 5 บาร์

หมายเหตุ กรณีปั๊มน้ำใช้ไม่ได้

วิธีปฏิบัติงาน



1. เปิดวาล์ว Emergency (น้ำมาจาก Holding pond 50 คิว)
2. เปิดวาล์วขาออกของปั๊มน้ำ

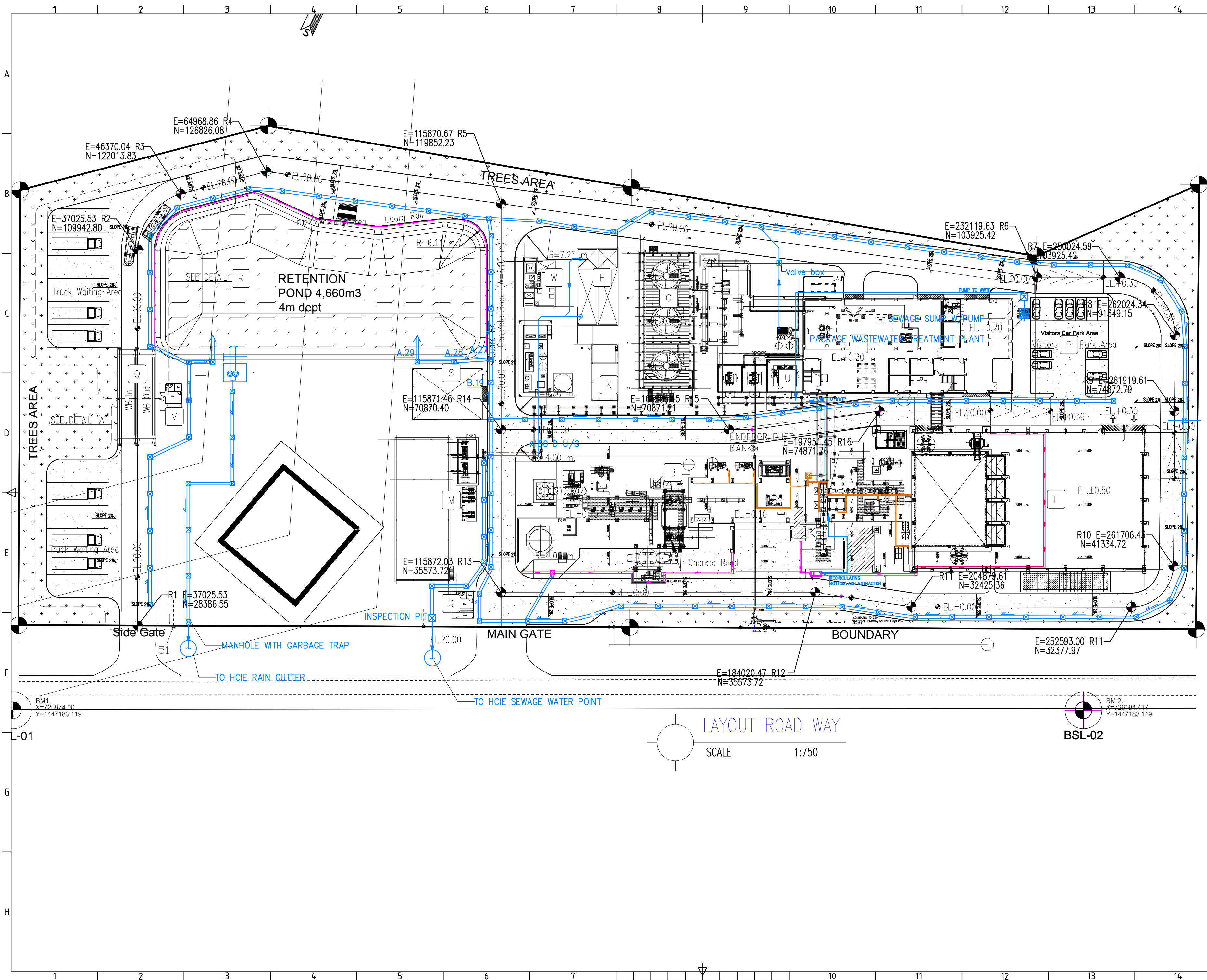
“เอกสารนี้เป็นเอกสารใช้ภายในหน่วยงานของบริษัท ชลบุรี คลีนเอ็นเนอร์จี จำกัด เท่านั้น
หากมีการพิมพ์เอกสารจะถือว่าเอกสารนั้นเป็นเอกสารไม่ควบคุม”



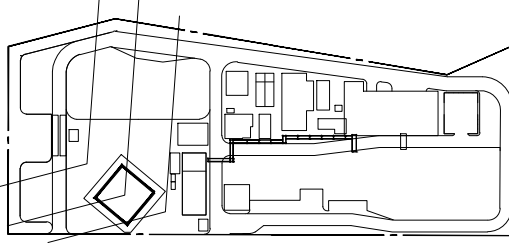

ภาคผนวก ข.29

Layout ปอรับกากอุตสาหกรรม

ภาคผนวก ข.30

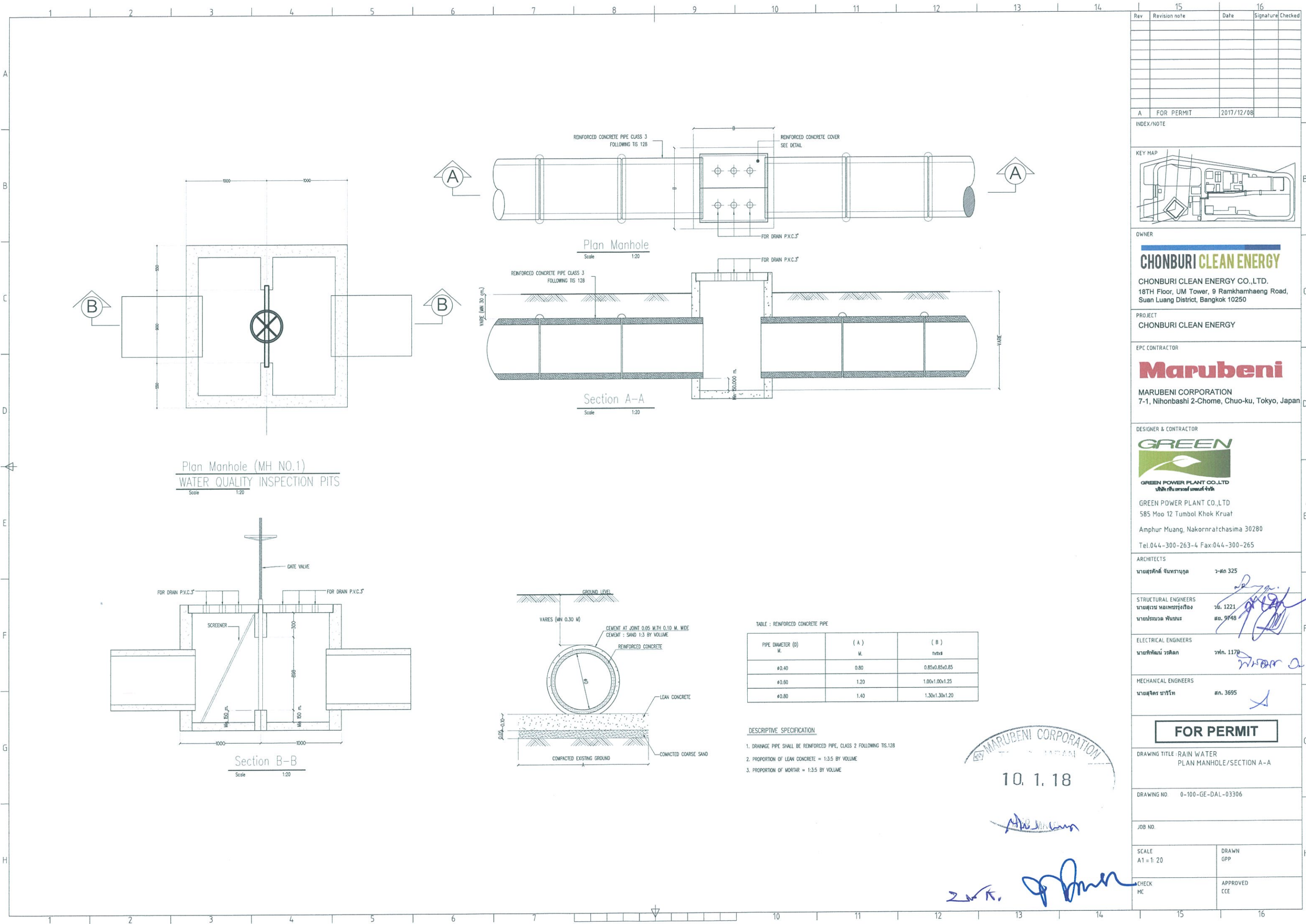
Layout ระบบระบายน้ำฝนไม่ปนเปื้อนและน้ำฝนปนเปื้อน



15		16	
Rev	Revision note	Date	Signature/Checked
INDEX/NOTE			
1. ALL COORDINATES AND ELEVATIONS ARE IN MILLIMETERS.			
2. ALL BUILDING LAYOUTS ARE BASED UPON PLANT			
-REFERENCE POINT COORDINATES N = 1447085			
E = 725974 ELEV.= 125470 mm			
-REFERENCE PLANT ELEVATION EL. -200 mm.			
CORRESPONDS TO EL. 125470 mm. ABOVE MEAN SEA LEVEL			
- CCE PLANT +0.00 = +200 mm of CCE PLANT			
3. REFER TO AREA PLOT PLANS FOR DETAILS			
4. VERTICAL ELEVATION BASED ON CCE DATUM (AMSL)			
5. PLANT COORDINATE N = 1447085, E = 725974 EQUAL BM-1			
6. MATERIAL FOR CONSTRUCTION			
STRUCTURAL CONCRETE : f'c = 280 ksc			
REINFORCING BAR(DB) : 4000 ksc, SD40 of TIS-24-2548			
REINFORCING BAR(RB) : 2400 ksc, SR24 of TIS-20-2543			
7. HOLD CLOUD 			
8. REV. CLOUD 			
KEY MAP			
			
OWNER			
<div><div></div><div>CHONBURI CLEAN ENERGY</div></div>			
CHONBURI CLEAN ENERGY CO.,LTD.			
18TH Floor, UM Tower, 9 Ramkhamhaeng Road, Suan Luang District, Bangkok 10250			
PROJECT			
CHONBURI CLEAN ENERGY			
EPC CONTRACTOR			
<div><div></div><div>Marubeni</div></div>			
MARUBENI CORPORATION			
7-1, Nihonbashi 2-Chome, Chuo-ku, Tokyo, Japan			
DESIGNER & CONTRACTOR			
<div><div></div><div>DONTUM ENTERPRISE CO.,LTD. 108/1 CHAOWENVIENG ALLEY, CHAOWENVIENG ROAD SILOM, BANGKOK, BANGKOK 10500 Tel : +66(0)2 1293830 Fax : +66(0)2 1293834 Email : info@dontumgroup.com</div></div>			
FOR APPROVAL			
DRAWING TITLE :			
COMBINE DRAINAGE SYSTEM			
DRAWING NO.			
0-100-GE-DRS-03004-RA			
JOB NO.			
10335			
SCALE		DRAWN	
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MC		CCE	

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Rev	Revision note	Date	Signature	Checked
A	FOR PERMIT	2017/12/08		
INDEX/NOTE				
KEY MAP				
				
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 GREEN GREEN POWER PLANT CO.,LTD บริษัท กรีน พาวเวอร์ แพลนท์ จำกัด GREEN POWER PLANT CO.,LTD 585 Moo 12 Tumbol Khok Kruat Amphur Muang, Nakhonratchasima 30280 Tel.044-300-263-4 Fax:044-300-265				
ARCHITECTS				
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