

Certificate of Calibration

Certificate Number: 178287

Document Number: 126733

Customer Details:

Customer Name: EASTERN ENERGY CO LTD

Instrument Details:

Manufacturer: EXTECH INSTRUMENTS

Calibration Date: October 24, 2017

Description: 12 CHANNEL THERMOCOUPLE DATA

Calibration Due: October 24, 2018

Model Number: TM500

Cal. Interval: 12 MONTHS

Serial Number: Z354984

As Received: NEW

Equip. ID Number: N/A

Environmental Details:

Temperature: 21 Deg. +/- 5 C

Relative Humidity: 40 % +/- 15 %

Procedures Used:

Calibration Procedure: EICMTM500-CP

Certification

Extech Instruments certifies that the instrument listed above meets the specifications of the manufacturer at the completion of its calibration. Standards used are traceable to the National Institute of Standards and Technology (NIST), or have been derived from accepted values, natural physical constants, or through the use of self-calibration techniques. Methods used are in accordance with ISO 10012-1 and ANSI/NCSL Z540-1-1994. This certificate is not to be reproduced other than in full, except with prior written approval of Extech Instruments Corporation.

Technicians Notes:

Technician: DANNI HOUTH

Approved By: 

Certificate of Calibration

Certificate Number: 178287
Document Number: 126733
Model Number: TM500 S/N: Z354984

As Received

Calibration Data

Standard	UUT	Accuracy	High Limit	Low Limit	Error	Status
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Function: Type K - T1

-90.0Deg C	-89.8	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.2	PASS
150.0Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T2

-90.0Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0Deg C	150.2	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.2	PASS
500.0Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0Deg C	850.1	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T3

-90.0Deg C	-89.7	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.3	PASS
150.0Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0Deg C	850.1	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T4

-90.0Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0Deg C	850.0	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.0	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T5

-90.0Deg C	-89.8	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.2	PASS
150.0Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0Deg C	850.0	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.0	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T6

-90.0Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Eastern Energy Co., Ltd.
40/4 Vitoondumri Rd., Banbueng
Banbueng, Chonburi, Thailand

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Certificate Number: 178287

Document Number: 126733

Model Number: TM500

S/N: Z354984

As Received

Calibration Data

Standard	UUT	Accuracy	High Limit	Low Limit	Error	Status
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Function: Type K - T7

-90.0Deg C	-89.9	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.1	PASS
150.0Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T8

-90.0Deg C	-89.7	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.3	PASS
150.0Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T9

-90.0Deg C	-89.9	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.1	PASS
150.0Deg C	150.0	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.0	PASS
500.0Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T10

-90.0Deg C	-90.3	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	-0.3	PASS
150.0Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T11

-90.0Deg C	-90.3	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	-0.3	PASS
150.0Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T12

-90.0Deg C	-90.0	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.0	PASS
150.0Deg C	150.0	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.0	PASS
500.0Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

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Final Reading

Calibration Data

Standard	UUT	Accuracy	High Limit	Low Limit	Error	Status
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Function: Type K - T1

-90.0 Deg C	-89.8	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.2	PASS
150.0 Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0 Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0 Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T2

-90.0 Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0 Deg C	150.2	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.2	PASS
500.0 Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0 Deg C	850.1	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T3

-90.0 Deg C	-89.7	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.3	PASS
150.0 Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0 Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0 Deg C	850.1	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T4

-90.0 Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0 Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0 Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0 Deg C	850.0	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.0	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T5

-90.0 Deg C	-89.8	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.2	PASS
150.0 Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0 Deg C	500.2	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.2	PASS
850.0 Deg C	850.0	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.0	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T6

-90.0 Deg C	-89.6	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.4	PASS
150.0 Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0 Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0 Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

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Final Reading

Calibration Data

Standard	UUT	Accuracy	High Limit	Low Limit	Error	Status
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Function: Type K - T7

-90.0 Deg C	-89.9	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.1	PASS
150.0 Deg C	150.1	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.1	PASS
500.0 Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0 Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T8

-90.0 Deg C	-89.7	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.3	PASS
150.0 Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0 Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0 Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T9

-90.0 Deg C	-89.9	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.1	PASS
150.0 Deg C	150.0	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.0	PASS
500.0 Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0 Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T10

-90.0 Deg C	-90.3	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	-0.3	PASS
150.0 Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0 Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0 Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T11

-90.0 Deg C	-90.3	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	-0.3	PASS
150.0 Deg C	150.3	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.3	PASS
500.0 Deg C	500.3	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.3	PASS
850.0 Deg C	850.2	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	0.2	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

Function: Type K - T12

-90.0 Deg C	-90.0	+/- (0.4%rdg + 1 Deg C)	-88.6	-91.4	0.0	PASS
150.0 Deg C	150.0	+/- (0.4%rdg + 0.5 Deg C)	150.7	149.3	0.0	PASS
500.0 Deg C	500.1	+/- (0.4%rdg + 0.5 Deg C)	502.1	497.9	0.1	PASS
850.0 Deg C	849.9	+/- (0.4%rdg + 0.5 Deg C)	853.5	846.5	-0.1	PASS
1200 Deg C	1200	+/- (0.4%rdg + 1 Deg C)	1206	1194	0	PASS

UUT-Unit Under Test

Eastern Energy Co., Ltd.
40/4 Vitoondumri Rd., Banbueng
Banbueng, Chonburi, Thailand

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Standards Used

Manufacturer	Model #	Serial #	Description	Cal. Due Date
FLUKE	525A	7949025	TEMP/PRESSURE CALIBRATOR	May 31, 2018

Eastern Energy Co., Ltd.
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Banbueng, Chonburi, Thailand

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