Service Rate

For the Welding Equipment with Rating up to 300A

- 3,500 Bath each
- 4 points of welding parameters setup
- 500 Bath for each additional point

Example of Test Certificate

Page 1 of 2

WELLab Our ref. : MTC/..... Certificate No. : MTC/.....

CERTIFICATE OF TESTING

PLACE OF TESTING : KMUTT
SUBJECT TESTED : .....
TEST PROCEDURE : TP-TST-02
CLIENT : .....
CLIENT ADDRESS : .....

INSTRUMENT NAME	: WELDING MACHINE	INSTRUMENT NO.	: .....
MANUFACTURE	:	SERIAL NO.	: .....
MODEL	:	DATE OF TESTING	: .....

LABORATORY ENVIRONMENT

TEMPERATURE	: (30±10) °C	HUMIDITY	: (55±20) %RH

REFERENCE STANDARDS:

Instrument	Serial No.	Model	Cal Date	Certificate
Digital Clamp Meter	151216	NKC F205	May 27, 2016	(NIMT) CIC Cert. No. CE 160083
Panelmeter	355008526	DR-98N-DCV-4N	Mar 27, 2017	(NIMT) GIC Cert. No. CAL00968-17
Panelmeter	355008527	DR-98N-DCV-4N	Mar 10, 2017	(NIMT) GIC Cert. No. CAL00833-17
POWER METER	335077811	DPM-12-5-P-M	Feb 16, 2017	(NIMT) GIC Cert. No. CAL00457-17

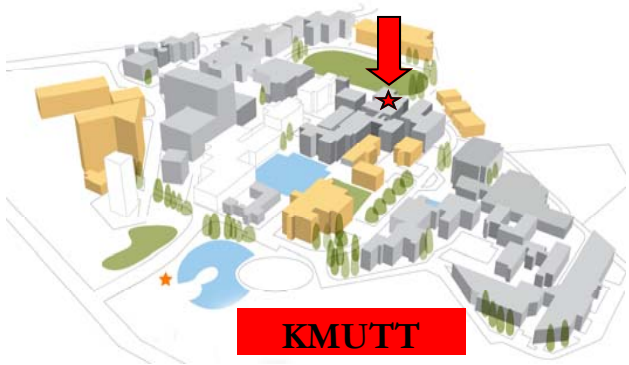
All reference standards are traceable to regonized National Standards which realize the unit of measurement according to the International System of Units (SI). Standard uncertainty multiplied by a coverage factor k=2, Providing a level of confidence of The testing procedure documented is intended to implement the requirements of ISO/IEC 17025

Issue date	Tested by	Certified by
.....	.....	.....
	(Asst.Prof.Chalermklat Jirarungsatien)	(Asst.Prof.Isaratat Phung-on, Ph. D.)

BY SIGNING THIS CERTIFICATE, THE TEST CENTER MAKES NO WARRANTY OF ANY KIND AND NEITHER SHALL BE LIABLE FOR ANY PERSONAL INJURY OR PROPERTY DAMAGE ARISING FROM OR CONNECTED WITH THIS TESTING.

FO-TST-02 Rev:02

NSC-TISI-TIS 17025 TESTING 0488



Maintenance Technology Center (MTC)

Classroom building 1; Room CB1203

126
Pracha-Utid Rd,
Bang Mod,
Thung Kru,
Bangkok 10140

Phone: 02-470-9678
Fax: 02-872-9472
E-mail: mtc.istrs@kmutt.ac.th

KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI

Maintenance Technology Center (MTC)

Welding Machine Testing

126 Pracha Utid Rd, Bang Mod, Thung Kru, Bangkok 10140

Welding Machine Testing

Welding parameters such as welding current and voltage are very important for making a sound weld conforming to standards such as AWS ASME EN AS JIS. Deviation of welding parameters could compromise the quality of a weldment both during fabrication and in service as well as against the standards. However, those parameters are barely in consideration during actual fabrications. In addition, welders could not acknowledge that the welding current they are using is out of specified current defined by Welding Procedure Specification (WPS). They only know what the dial or display on welding machines without knowing that the indicated values are correct and traceable. These is due to the lack in service available for testing of the welding machines.

In order to solve the problem, Maintenance Technology Center (MTC) under the Institute for Scientific and Technological Research and Services (ISTRS) at KMUTT has initiated a testing service for welding machines by WELLab as an operation section. The service has been accredited for ISO/IEC17025:2005 by the National Accreditation Council (NAC) Thailand.

Related Standards:

- BS EN 60974 – 1:2012 Arc welding equipment Part 1: Welding power sources
- BS EN 50504:2008 Validation of arc welding equipment

Details of Testing

⇒ Welding Current (Output)
⇒ Welding Voltage (Output)
⇒ Input: Current and Voltage
⇒ Electrical Efficiency*
⇒ Power Factor*

*Non accredited

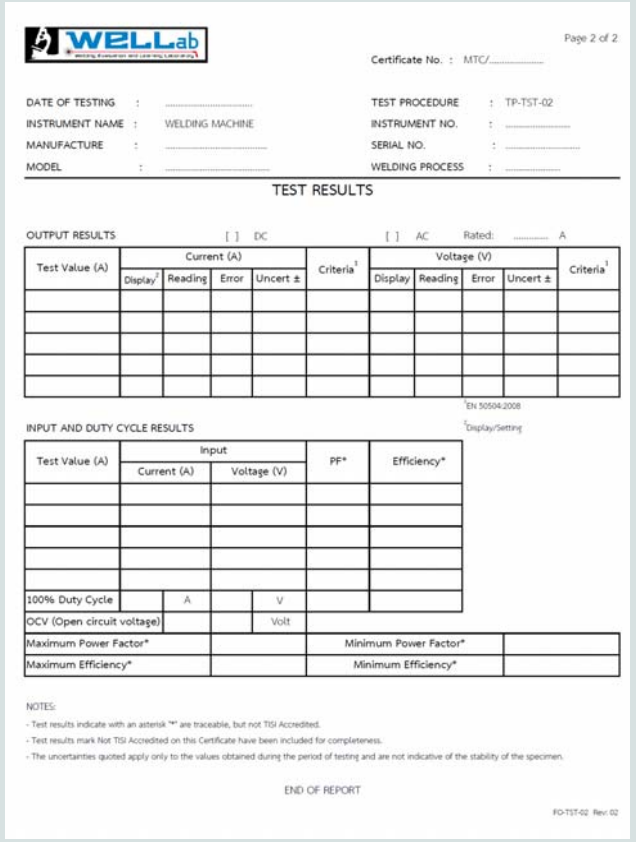
Validation of Welding Power Source (BS EN 50504:2008)

Parameters	Accuracy	
Current and voltage	± 10%	of the true value, between 100 % and 25 % of the maximum setting
	± 2,5%	of the maximum setting, below 25 % of the maximum setting

Service Scopes

⇒ Arc Welding Equipment
  ◊ Shielded Metal Arc Welding (SMAW)
  ◊ Gas Tungsten Arc Welding (GTAW)
  ◊ Gas Metal Arc Welding (GMAW)
⇒ Welding Current up to 300 A
⇒ Welding Current both DC and AC
⇒ Power Source both 1 – phase and 3 – phase

On-site Testing* available



WELLab

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Certificate No. : MTC/.....

DATE OF TESTING : .....
INSTRUMENT NAME : WELDING MACHINE
MANUFACTURE : .....
MODEL : .....

TEST PROCEDURE : TP-TST-02
INSTRUMENT NO. : .....
SERIAL NO. : .....
WELDING PROCESS : .....

TEST RESULTS

OUTPUT RESULTS [ ] DC [ ] AC Rated: ..... A

Test Value (A)	Current (A)				Criteria[1]	Voltage (V)				Criteria[1]
	Display[2]	Reading	Error	Uncert ±		Display	Reading	Error	Uncert ±	

[1] EN 50504:2008
[2] Display/Setting

INPUT AND DUTY CYCLE RESULTS

Test Value (A)	Input		PF*	Efficiency*
	Current (A)	Voltage (V)		
100% Duty Cycle	A	V		
OCV (Open circuit voltage)		Volt		

Maximum Power Factor*		Minimum Power Factor*	
Maximum Efficiency*		Minimum Efficiency*	

NOTES:
- Test results indicate with an asterisk "*" are traceable, but not TISI Accredited.
- Test results mark Not TISI Accredited on this Certificate have been included for completeness.
- The uncertainties quoted apply only to the values obtained during the period of testing and are not indicative of the stability of the specimen.

END OF REPORT

FO-TST-02 Rev: 02