RESUME



Personal Data

Name	:	Mr.Sakon Kamma
Address	:	167 M.10 T.Phimai A.Prangkhu Srisakhet
I.D. Card No.	:	5-3307-00017-89-3
Date Of Birth	:	September 26, 1979
Age	:	46 Years Old.
Hight/ Weight	:	171 Cm. /90 Kgs.
Nationality	:	Thai
Race	:	Thai
Religion	:	Buddhism
Gender	:	Male
Tel No	:	083-3799-400 , 092-9272067
Email	:	sakonkamma26@gmail.com
Passport No.	:	AD0216356
Dare of Issue	:	27 Oct 2022
Dare of Expiry	:	26 Oct 2027

Work Experience

March 31, 2025

Company	:	PIPELINE CORSSING ENGINEERING (THAILAND) CO.,LTD
Project	:	Pipeline construction northern bafs pipeline transportation phase ii (Angthong-Saraburi) Project
Position	:	Welder 6G All
Process	:	GTAW+SAMW

December 27, 2023

Company	:	CPP2
Project	:	GSP7 Gas Separation Plant Project
Position	:	Welder 6G All
Process	:	GTAW / GTAW+SAMW

October 11, 2023

Company	:	QUALITECH PUBLIC COMPANY LIMITED
Project	:	Sakura Project
Position	:	Welder 6G All
Process	:	GTAW , GTAW+SAMW

July 10, 2023

Company	:	IRPC CO.,LTD
Project	:	New Hydrogen Manufacturing Unit (HMU-2) Project
Position	:	Welder 6G
Process	:	GTAW , GTAW+SAMW

Work Experience

August 3, 2022

Company : **RAYONG MAINTENCHCE & CONSTRUCTON CO.,LTD**
Project : **NBL Phase 2 Project**
Position : **Welder 6G**
Process : **GTAW**

July 27, 2022

Company : **RAYONG MAINTENCHCE & CONSTRUCTON CO.,LTD**
Project : **NBL Phase 2 Project**
Position : **Welder 6G**
Process : **GTAW , GTAW+SAMW**

18 January 2021

Company : **BJC HEAVY INDUSTRIES PUBLIC COMPANY LIMITED CO., LTD**
Project : **CRISP Project**
Position : **Welder3G,4G**
Process : **FCAW**

8 October 2021

Company : **UNION CONSTRUCTION & SUPPLY CO.,LTD**
Project : **DES-15 Unit MTP Project**
Position : **Welder All**
Process : **GTAW,GTAW+SMAW P1+1 ,P8+8**

19 August 2021

Company : **GS E&C**
Project : **HMC PP-4 Project**
Position : **Welder All**
Process : **GTAW,GTAW+SMAW**

17 May 2021

Company : **BEST TECH ENGINEERING CO.,LTD**
Project : **Roy Hill Iron Ore Project PKG-1 Project**
Position : **Welder All**
Process : **FCAW-gs (136)**

25 February 2021.

Company : **PAE TECHNICAL SERVICES**
Project : **ITAKIN THAI DEVELOPMENT PUBLIC CO.,Ltd Project**
Position : **Welder 6G**
Process : **GTAW, GTAW+SMAW**

10 September 2020 – 29 September 2020

Company : **TTCL PUBLIC COMPANA LIMITED**
Project : **MOCD2 Project C.A.P.K ENGINEERING**
Position : **Welder 6G**
Process : **GTAW, GTAW+SMAW**

Work Experience

20 February 2020.

Company	:	**BJC HEAVY INDUSTRIES PUBLIC COMPANY LIMITED CO., LTD**
Project	:	**SANTOS CLNG**
Position	:	**Welder 6G**
Process	:	**GTAW, GTAW+SMAW**

18 January 2020

Company	:	**BJC HEAVY INDUSTRIES PUBLIC COMPANY LIMITED CO., LTD**
Project	:	**Geraldton Port Berth 7 Project**
Position	:	**Welder3G,4G**
Process	:	**FCAW**

20 November 2019

Company	:	**DAE ENGINEEIRNG CO.,LTD**
Project	:	**Power Plant Project**
Position	:	**Welder 3G,4G**
Process	:	**FCAW AWS D1.1 (2015)**

26 July 2019

Company	:	**CLOUGH**
Project	:	**PNG LNG Plant Project**
Position	:	**Welder 1G,2G,3G,4G**
Process	:	**FCAW AWS D1.1 (2010)**

September 30, 2015 to November 28, 2017

Company	:	**MURRAY & ROBERTS POWER & ENERGY**
Project	:	**SOUTH AFRICA**
Position	:	**WELDER 6G**
Process	:	**GTAW, GTAW+SMAW**

October 13, 2015

Company	:	**VATANA PHAISAL ENGINEERING**
Project	:	**UHV PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW, GTAW+SMAW**

March 30, 2015

Company	:	**THAI JURONG ENGINEERING LIMITED**
Project	:	**SIAM PURE RICE 120 MW SPP PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW+SMAW**

September 16, 2014 to November 15, 2014

Company	:	**RAYONG MAINTENANCE & CONTRACTING CO.,LTD.**
Project	:	**THAIOIL INSPECTION**
Position	:	**WELDER 6G**
Process	:	**GTAW+SMAW**

September 08, 2014

Company	:	**TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED**
Project	:	**LATKRABANG SPP POWER PLANT PROJECT** **BANGPOO SPP POWER PLANT PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

July 22, 2014

Company	:	**QTEC**
Project	:	**PTT PHENOL**
Position	:	**WELDER 6G**
Process	:	**GTAW**

February 05, 2014

Company	:	**ENSORE ENGINEERING CO.,LTD.**
Project	:	**NEW INSTRUMENT AIR COMPRESSOR FOR ESP&GSP6**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

November 18, 2013

Company	:	**RAYONG ENGINEERING & PLANT SERVICE CO.,LTD.**
Project	:	**MOC PROPANE FEED FLEXIBILITY [M3T]**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

June 21, 2013

Company	:	**CHEVRON BANGLADESH BLOCK TWELVE LIMITED**
Project	:	**BIBIYANA EXPANSION PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

October 10, 2012

Company	:	**SINO-THAI**
Project	:	**PNG LNG PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

September 27, 2012

Company	:	**THAI WOOREE ENGINEERING CO.,LTD.**
Project	:	**JURONG AROMATICS COMPLEX PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

May 30, 2012

Company	:	**VATANA PHAISAL ENGINEERING**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

March 24, 2012

Company	:	**UTOC**
Project	:	**T5PP PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

February 01, 2012

Company	:	**TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED**
Project	:	**WINDMILL-CHAIYAPREUK PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

February 08, 2011

Company	:	**RAYONG INTANIA CO.,LTD.**
Project	:	**14" N2 PIPELINE FOR MIGP PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

August 13, 2010

Company	:	**TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED**
Project	:	**1,6 HDL AND 2 CT PROJECT**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

January 13, 2010

Company	:	**THAI ROTARY ENGINEERING PUBLIC COMPANY LTD.**
Project	:	**PTT AROMATICS & REFINING PUBLIC COMPANY LTD.**
Position	:	**WELDER 6G**
Process	:	**GTAW , GTAW+SMAW**

Passport No.
AD0216356

OFFICIAL OBSERVATIONS

The holder of this passport has previously travelled on Passport No. AC3966383 issued by the Ministry of Foreign Affairs in Bangkok on 06 SEP 2022.

Passport Division, Bangkok.

PASSPORT
หนังสือเดินทาง

KINGDOM OF THAILAND
ราชอาณาจักรไทย

Type / รหัส: P
Country Code / ประเทศ: THA
Passport No. / หนังสือเดินทางเลขที่: AD0216356

Surname / นามสกุล: KAMMA

Title / Name / คำนำหน้าชื่อ / ชื่อ: MR. SAKON

Name in Thai / ชื่อภาษาไทย: นาย สกนธ์ คำมา



Nationality / สัญชาติ: THAI
Date of Birth / วันเกิด: 26 SEP 1979
Identification No. / เลขประจำตัวประชาชน: 5330700017893

Sex / เพศ: M
Place of Birth / สถานที่เกิด: SI SA KET

Height / ส่วนสูง: 1.72M



Issuing Authority / ออกให้โดย: MINISTRY OF FOREIGN AFFAIRS

Date of Issue / วันที่ออก: 27 OCT 2022
Date of Expiry / วันที่หมดอายุ: 26 OCT 2027

Holder's Signature / ลายมือชื่อผู้ถือหนังสือเดินทาง

สกนธ์ คำมา

P<THAKAMMA<<SAKON<<<<<<<<<<<<<<<<<<<<<<<<<<<<

AD02163564THA7909261M2710268533070001789 3<24

ข้อแนะนำ

๑. หนังสือคนประจำเรือ (SEAMAN BOOK) และหนังสือคนประจำเรือประมง (SEAMAN BOOK FOR FISHING VESSEL) จะใช้แทนกันไม่ได้

๒. กรณีที่เมื่อมีการแต่งตอน และเรียกคืนหนังสือคนประจำเรือ ให้ปฏิบัติ ในวงเล็บว่า

(๑) ผู้ถือหนังสือคนประจำเรือนี้ต้องส่งคืนหนังสือคนประจำเรือประเภทนั้น

(๒) หนังสือคนประจำเรือประเภทใดที่ถูกเรียกคืนจะใช้ได้ต่อเมื่อได้รับคืนประจำเรือ

(๓) หนังสือคนประจำเรือฉบับนี้ถูกเรียกคืนเพราะเหตุที่ไม่ถูกต้องตามที่กำหนดไว้ในข้อ ๑ หรือเป็นการใช้โดยบุคคลอื่นนอกจากผู้ถือ

(๔) กรณีมีความจำเป็นตามที่อธิบดีกรมเจ้าท่าประกาศกำหนด

NOTICE

1. Seaman Book and Seaman Book for Fishing Vessel are not substitutive or replaceable.

2. The Marine Department shall revoke the Seaman Books which shall be returned to the officials for the reasons as follows:

(1) The bearer of such Seaman Book is disqualified.

(2) Such Seaman Book is used by a person other than the bearer of a Seaman Book.

(3) Such Seaman Book has been recorded or amended by non-authorized person.

(4) In other cases of necessity as prescribed in the Notification by the Director General of Marine Department.

ลายมือชื่อผู้ถือ Signature of the bearer

(หนังสือนี้จะสมบูรณ์ต่อเมื่อผู้ถือได้ลงลายมือชื่อแล้ว / This Book is not Valid Unless Signed by Bearer)

2

SID

Seafarers' Identity Document No.
หนังสือแสดงตนประจำเรือ
เลขประจำตัวคนประจำเรือไทยเลขที่

TH66001804

THAILAND

หนังสือคนประจำเรือ เลขที่
SEAMAN BOOK No.

J04835

Document Code / รหัส
PK

Country Code / ประเทศ
THA

Surname / นามสกุล
KAMMA

Given name / ชื่อ
SAKON

Name in Thai / ชื่อภาษาไทย
สกนธ์ คำมา

Nationality / สัญชาติ
THAI

Sex / เพศ
M

Identification No. / เลขประจำตัวประชาชน
5330700017893

Date of Birth / วันเกิด
29 SEP 1979

Place of Birth / สถานที่เกิด
SI SA KET

Date of Issue / วันที่ออก
11 MAY 2023

Distinguishing Marks / ตำหนิ
NO MARK

Date of expiry / วันที่หมดอายุ
10 MAY 2028

Issuing Authority / ออกให้โดย
MARINE DEPARTMENT

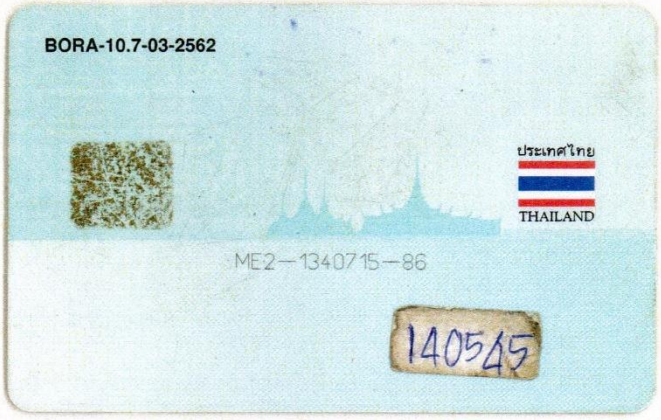
3

PKTHAKAMMA<<SAKON<<<<<<<<<<<<<<<<<<<<<<<<<<<<

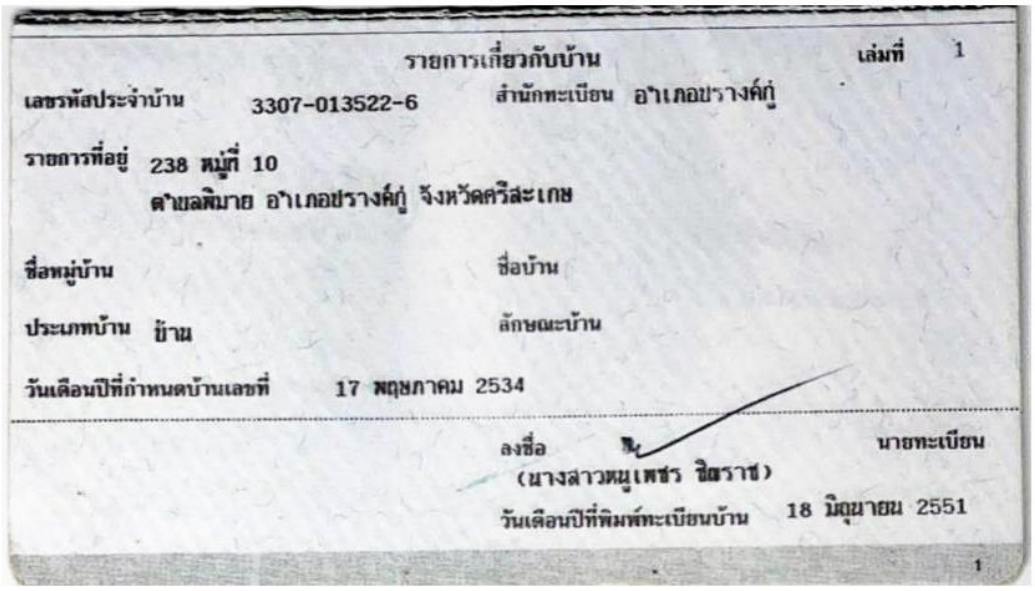
J04835<<<7THA7909294M2805106533070001789 3<20



บัตรประจำตัวประชาชน Thai National ID Card
เลขประจำตัวประชาชน
Identification Number 5 3307 00017 89 3
ชื่อตัวและชื่อสกุล นาย สกนธ์ คำมา
Name Mr. Sakon
Last name Kamma
เกิดวันที่ 26 ก.ย. 2522
Date of Birth 26 Sep. 1979
ศาสนา พุทธ
ที่อยู่ 238 หมู่ที่ 10 ต.พิมาย อ.ปรางค์กู่
จ.ศรีสะเกษ
27 ธ.ค. 2562
วันออกบัตร
27 Dec. 2019
Date of Issue
(นายชนาคม จงจิระ)
เจ้าพนักงานออกบัตร
25 ก.ย. 2571
วันบัตรหมดอายุ
25 Sep. 2028
Date of Expiry
3307-04-12271503



BORA-10.7-03-2562
ประเทศไทย
THAILAND
ME2—1340715—86
140545



รายการเกี่ยวกับบ้าน เล่มที่ 1

เลขรหัสประจำบ้าน 3307-013522-6 สำนักทะเบียน อำเภอปรางค์กู่

รายการที่อยู่ 238 หมู่ที่ 10
ตำบลพิมาย อำเภอปรางค์กู่ จังหวัดศรีสะเกษ

ชื่อหมู่บ้าน ชื่อบ้าน

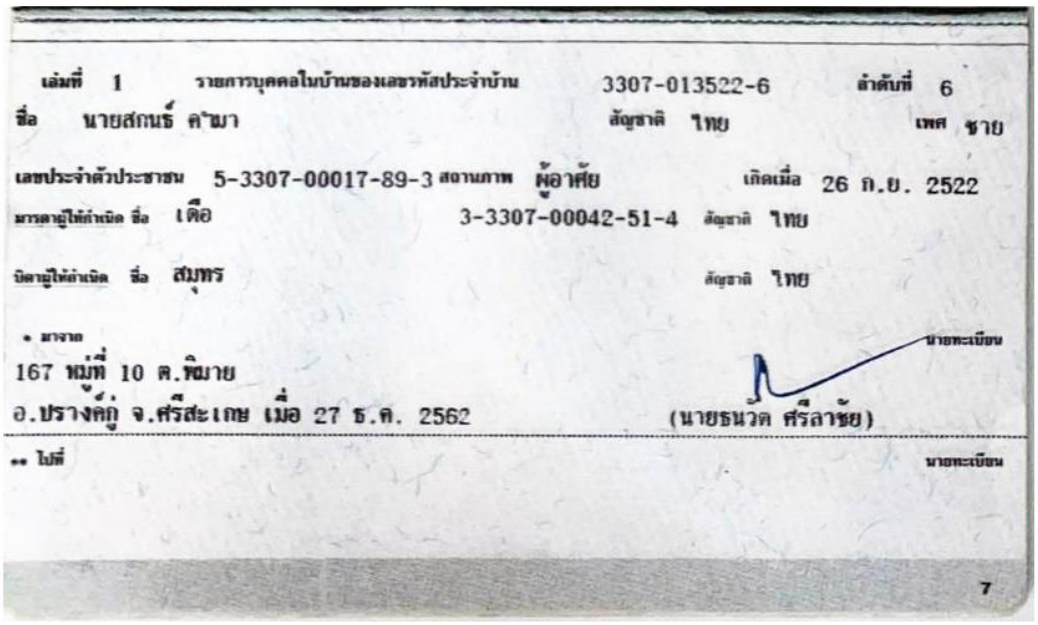
ประเภทบ้าน ข้าม ลักษณะบ้าน

วันเดือนปีที่กำหนดบ้านเลขที่ 17 พฤษภาคม 2534

ลงชื่อ นายทะเบียน
(นางสาวหนูเพชร ชัยราช)

วันเดือนปีที่พิมพ์ทะเบียนบ้าน 18 มิถุนายน 2551

1



เล่มที่ 1 รายการบุคคลในบ้านของเลขรหัสประจำบ้าน 3307-013522-6 ลำดับที่ 6

ชื่อ นายสกนธ์ คำมา สัญชาติ ไทย เพศ ชาย

เลขประจำตัวประชาชน 5-3307-00017-89-3 สถานภาพ ผู้อาศัย เกิดเมื่อ 26 ก.ย. 2522

มารดาผู้ให้กำเนิด ชื่อ เดือ 3-3307-00042-51-4 สัญชาติ ไทย

บิดาผู้ให้กำเนิด ชื่อ สมุทร สัญชาติ ไทย

* มาจาก
167 หมู่ที่ 10 ต.พิมาย
อ.ปรางค์กู่ จ.ศรีสะเกษ เมื่อ 27 ธ.ค. 2562

นายทะเบียน
(นายธนวัต ศรีลาชัย)

** ไปที่

นายทะเบียน

7

OPITO

This is to certify that

Sakon Kamma

RECEIVED
DATE/BY_____

attended a course at Pattaya International Safety Training Center Co. Ltd

and has been assessed against, and met the outcomes of, the following OPITO-approved standard:

Basic Offshore Safety Induction and Emergency Training (BOSIET) with Emergency Breathing System (EBS)

5700

Awarded on 21st June 2023

Expiry Date 20th June 2027
Unique Certificate No OPITOKNTMXezXAo
OPITO Learner No L01825604

John McDonald
Chief Executive Officer

ได้การรับรองมาตรฐาน ISO9001 ISO14001 ISO45001

บริษัท ล็อกไทย - ไฮแล็ค เอ็นจิเนียริ่ง จำกัด

Logthai – Hai Leck Engineering Co.,Ltd

ได้รับใบอนุญาตจากกรมสวัสดิการและคุ้มครองแรงงาน
เป็นผู้ให้บริการฝึกอบรมความปลอดภัยในการทำงานในที่อับอากาศ เลขใบอนุญาตที่ 0501-03-2564-0002

ขอรับรองว่า

นายสกนธ์ คำมา

ผ่านการฝึกอบรมหลักสูตรความปลอดภัยในการทำงานในที่อับอากาศ
สำหรับผู้ปฏิบัติงาน

กฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย
และสภาพแวดล้อมในการทำงานเกี่ยวกับที่อับอากาศ พ.ศ. 2562

เมื่อวันที่ 24 – 25 มิถุนายน พ.ศ. 2568 จำนวน 12 ชั่วโมง

สถานที่ฝึกอบรมภาคทฤษฎี และภาคปฏิบัติ บริษัท ล็อกไทย - ไฮแล็ค เอ็นจิเนียริ่ง จำกัด

ให้ไว้ ณ วันที่ 25 มิถุนายน พ.ศ. 2568

(นายฮานนท์ วิทย์วรากุล)
กรรมการผู้จัดการ

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)	Samples welded on	12-Jun-25
WELDER NAME	Mr.Sakon Kamma	Welder No.	RMC-W-006
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-001

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without + With	With/Without + With
THICKNESS (mm)		
Groove	10.97 mm.	5 mm. - 21.94 mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW) + 7.97 mm. (SMAW)	6.00 mm.(GTAW) + 15.94 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	OD 6"	OD 2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G(GTAW) + E7016 (SMAW)	ER70S-G(GTAW) + E7016 (SMAW)
S.F.A	5.18(GTAW) + 5.1(SMAW)	5.18(GTAW) + 5.1(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current polarity	DC	DC
	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST

Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST

Dete : 12-Jun-25 Report No. RT-WQT-013

Result : Acceptable

FILLET WELD TEST

Fracture N/A Macro N/A

Concavity N/A Convexity N/A Result N/A

Fillet size N/A

Orter test

Welding test conducted by QUALITECH / THAI OIL / INSPECTOR Radiographic tests conducted by QUALITECH

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

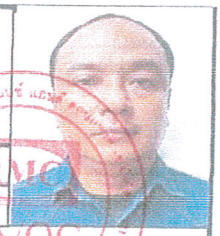
	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN	Siripong S.	Pichai	
DATE	13 Jun 25	25/06/69	25/6/69
	RMC.QA/QC	Thaioil, Welding Inspector	THAIOIL ENTS

RMC QA/QC

THAIOIL INSPECTION

THAIOIL

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)	Samples welded on	12-Jun-25
WELDER NAME	Mr.Sakon Kamma	Welder No.	RMC-W-006
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-002

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW	GTAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without	With/Without
THICKNESS (mm)		
Groove	4.78 mm.	1.5 mm. - 9.56 mm. (MAX)
Weld metal for each welding process	4.78 mm.	9.56 mm. (Max)
Fillet	N/A	All
DIAMETER(mm)		
Groove	OD 0.5"	OD 0.5" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G	ER70S-G
S.F.A	5.18	5.18
F No.	6	6
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current	DC	DC
polarity	DCEN	DCEN
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Dete :	12-Jun-25	Report No.	RT-WQT-014
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A		Macro	N/A			
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by QUALITECH / THAI OIL / INSPECTOR Radiographic tests conducted by QUALITECH

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN	Siripong S	Nitcha P.	
DATE	13 Jun 25	26/06/25	25/6/25
	RMC QA/QC	Thaioil, Welding Inspector	THAIOIL, ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)	**Samples welded on**	28-Jun-25
WELDER NAME	Mr.Sakon Kamma	**Welder No.**	RMC-W-006
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	**WPS.**	RMC-WPS-018

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	A312TP 316L	A312TP 316L
ASME P No.	P No. 8	P No. 6,7,8,10,11
Backing	Without + With	With/Without + With
THICKNESS (mm)		
Groove	7.11 mm.	1.5 mm. - 14.22 mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW) + 4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	OD 6"	OD $2\frac{7}{8}$" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER316L(GTAW) + E316-16 (SMAW)	ER316L(GTAW) + E316-16 (SMAW)
S.F.A	5.9(GTAW) + 5.4(SMAW)	5.9(GTAW) + 5.4(SMAW)
F No.	6 (GTAW)+ 5(SMAW)	6 (GTAW)+ 5(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	Argon	Argon
Current polarity	DC	DC
	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Date :	28-Jun-25	Report No.	RT-WQT-125
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A	Macro	N/A				
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by Qualitech / THAI OIL / INSPECTOR

Radiographic tests conducted by QUALITECH

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	28 Jun 25	02/07/25	7/7/25
	RMC,QA/QC	Thaioil, Welding Inspector	THAIOIL, ENTS

THAIOIL

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)	**Samples welded on**	28-Jun-25
WELDER NAME	Mr.Sakon Kamma	**Welder No.**	RMC-W-006
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	**WPS.**	RMC-WPS-006

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW	GTAW
Type	Manual	Manual
Base metal	A312 TP316L	A312TP316L
ASME P No.	P No. 8	P No. 6,7,8,10,11
Backing	Without	With/Without
THICKNESS (mm)		
Groove	3.73 mm.	1.5 mm. - 7.46 mm. (MAX)
Weld metal for each welding process	3.73 mm.	7.46 mm. (Max)
Fillet	N/A	All
DIAMETER(mm)		
Groove	OD 0.5"	OD 0.5" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER316L	ER316L
S.F.A	5.9	5.9
F No.	6	6
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	Argon	Argon
Current polarity	DC	DC
	DCEN	DCEN
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST			
Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST

Dete : 28-Jun-25 Report No. RT-WQT-126

Result : Acceptable

FILLET WELD TEST

Fracture N/A Macro N/A

Concavity N/A Convexity N/A Result N/A

Fillet size N/A

Orter test

Welding test conducted by QUALITECH / THAI OIL / INSPECTOR Radiographic tests conducted by QUALITECH

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	30 Jun 25	06/07/25	7/7/25
	RMC,QA/QC	Thaioil, Welding Inspector	THAIOIL, ENTS

CLOUGH

WELDER OR WELDING OPERATOR QUALIFICATION TEST RECORD

Rev. 0

CERTIFICATE NO:	SW-CTL-822

Type of Welder	:	Semi - Automatic
Welder Name	:	Mr.Sakon Kamma
Identification No.	:	CTL-SW-1136
Welding Procedure Specification No.	:	C12598-WPS-S-0005



Variable	Record Actual Values Used In Qualification	Qualification Ranges
Process/Type [Table 4.12 , Item (1)]	FCAW	
Electrode (single or multiple) [Table 4.12, Item (7)]	Single	Single
Current/Polarity	DCEP	
Position [Table 4.12 , Item (4)]	3G, 4G	1G , 2G , 3G, 4G
Weld Progression [Table 4.12 , Item (5)]	Vertical (Uphill)	Vertical (Uphill)
Backing (YES or NO) [Table 4.12 , Item (6)]	NO	Back gouging
Material/Spec.	S355 J0+AR Equivalent to AWS D1.1 Group II	
Base Metal		
Thickness: (Plate)		
Groove	25 mm	3 mm – Unlimited
Fillet	N/A	3 mm – Unlimited
Thickness: (Pipe/tube)		
Groove	N/A	3 mm – Unlimited
Fillet	N/A	3 mm – Unlimited
Diameter: (Pipe)		
Groove	N/A	24" and Over
Fillet	N/A	24" and Over
Filler Metal [Table 4.12]		
Spec. No	A 5.20	
Class	E 71T-1	
F. No [Table 4.12 , Item (2)]	F. No 6	F. No 6
Gas/Flux Type [Table 4.12]	CO_2	
Other	N/A	N/A

VISUAL INSPECTION (4.9.1)

Acceptance YES or No YES

Guided Bend Test Result (4.31.5)

Type	Result	Type	Result
N/A	N/A	N/A	N/A

Fillet Test Results

Appearance	N/A	Fillet Size	N/A
Fracture Test Root Penetration	N/A	Macroetch	N/A

(Describe the location, nature, and size of any crack or tearing of the specification.)

Inspected by	: Mr. Kitsanayut Ch.	Test Number	: CTL-SW-1136
Organization	: Welding Inspector	Date	: 8 August 2019

RADIOGRAPHIC TEST RESULT (4.31.3.2)

Film Identification Number.	Results	Remarks
Mr. Sakai Pungpakdee	Acceptable	N/A

Interpreted by	: Mr. Sutham Ch.	Test Number	: RT-WQT-036
Organization	: Thai NDT Public Co. Ltd.	Date	: 8 August 2019

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of Section 4 of AWS D1.1/D1M , 2010 Structure Welding Code -Steel

Prepared By	Reviewed By	Approved By :
Signature :	Signature :	Signature :
Date : 8 August 2019	Date :	Date :

Record of Utilization			Record of Utilization		
Month / Year	Type of Inspection	Initials	Month / Year	Type of Inspection	Initials
July / 2019	RT				17/8/19

RNC RENEWCOILS ENGINEERING & SUPPLY CO.,LTD

WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)



Welder's Name: Mr.Sakon K. Identification no.: W-021

Project Name: NPP Naphtha Pygas Project

Test Description

Identificayion of WPS followed: RNC-WPS-047 ■ Test coupon ☐ Production weld Date welded: 28-Sep-18

Specification and type/grade or UNS Number of base matal(s): SA106Gr.B Thickness: 5.54 mm.

Testing Variables and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process (es)	GTAW	GTAW
Type (i.e.,manual,semi-autonatic) used	Manual	Manual
Backing (with/without)	Without Backing	With or Without Backing
☐ Plate ■ Pipe (enter diameter if pipe or tube)	NPS 2"	OD 1" to Unlimited
Base metal P-Number to P-Number	P-No.1 To P-No.1	P-No.1 Through P-No. 15F, P-No.34, and P-No.41 Through P-No.49
Filler metal or electrode specification (s) (SFA) (info.only)	5.18	
Filler metal or electrode classification(s) (info. Only)	ER705-6	
Filler metal F-Number (s)	F-No.6	F-No.6
Consumable insert (GTAW or PAW)	N/A	N/A
Filler Metal Product Form (solid/metal or flux cored/powder)(GTAW or PAW)	Solid	Solid
Deposit thickness for each process		
Process 1 GTAW 3 layers minimum ☐ Yes ■ No.	5.54 mm.	Maximum 11.08 mm.
Process 2 ____ 3 layers minimum ☐ Yes ☐ No.	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW,PAW,GMAW)	Without Backing	With or Without Backing
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC,DCEP,DCEN)	DCEN	DCEN

RESULTS

Visual examination of completed weld (QW-302.4): Acceptable

☐ Transverse face and root bends (QW-462.3(a)) ☐ Longitudinal bends (QW-462.3(b)) ☐ Side bends (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant weld metal overlay (QW-462.5(c))

☐ Plate bend specimen, corrosion-resistant weld metal overlay (QW-462.5(d))

☐ Pipe specimen, macro test for fusion(QW-462.5(b)) ☐ Plate specimen,macro test for fusion (QW-462.5(e))

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative Volumetric Examination Results (QW-191): Report No. WQT-S-006 RT ■ or UT ☐ (check one)

Fillet weld-fracture test (QW-181.2): - Length and percent of defects: -

☐ Fillet welds in plate (QW-462.4(b)) ☐ Fillet welds in pipe (QW-462.4(c))

Macro examination (QW-184): - Fillet size (in): - Concavity/convexity (in): -

Other: -

Film or specimens avaluated by: Mr.Samart Ch. Company: PAE Technical Service Public Company Limited.

Machanacal test conducted by: - Laboratory test no.: -

Welding supervised by: Mr.Cheirdchai N.

We certify that the statements in this record are correct and that the test coupons ware prepared, Welded,and tested in accordance with the requirements of Section IX of the **ASME BOILERAND PRESSURE VESSEL CODE.**

Prepared: 29-9-18 (PCR)
Miss Chavanit L.
(Welding Engineer)

Certified by: 29/09/18 (Apr)
Mr.Kittipong M.
(QA/QC Manager)

Approved by: THAWATCHAI K. 29/09/18
(Owner)

Exhibit 9.3 I

RNC RENEWCOILS ENGINEERING & SUPPLY CO.,LTD

WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)



Welder's Name: Mr.Sakon K. Identification no.: W-021

Project Name: NPP Naphtha Pygas Project

Test Description

Identificayion of WPS followed: RNC-WPS-048 ■ Test coupon ☐ Production weld Date welded: 28-Sep-18

Specification and type/grade or UNS Number of base metal(s): SA106Gr.B Thickness: 7.11 mm.

Testing Variables and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process (es)	GTAW+SMAW	GTAW/SMAW
Type (i.e.,manual,semi-autonatic) used	Manual	Manual
Backing (with/without)	Without Backing	With or Without Backing
☐ Plate ■ Pipe (enter diameter if pipe or tube)	NPS 6"	OD 2-7/8" to Unlimited
Base metal P-Number to P-Number	P-No.1 To P-No.1	P-No.1 Through P-No. 15f, P-No.34, and P-No.41 Through P-No.49
Filler metal or electrode specification (s) (SFA) (info.only)	5.18+5.1	
Filler metal or electrode classification(s) (info. Only)	ER705-6+E7016	
Filler metal F-Number (s)	F-No.6 + 4	F-No.6 + 4/3/2/1
Consumable insert (GTAW or PAW)	N/A	N/A
Filler Metal Product Form (solid/metal or flux cored/powder)(GTAW or PAW)	Solid	Solid
Deposit thickness for each process		
Process 1 GTAW 3 layers minimum ☐ Yes ■ No.	3.00 mm.	Maximum 6.00 mm.
Process 2 SMAW 3 layers minimum ■ Yes ☐ No.	4.11 mm.	Maximum 8.22 mm.
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW,PAW,GMAW)	Without Backing	With or Without Backing
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC,DCEP,DCEN)	DCEN + DCEP	DCEN/DCEP

RESULTS

Visual examination of completed weld (QW-302.4): Acceptable

☐ Transverse face and root bends [QW-462.3(a)] ☐ Longitudinal bends [QW-462.3(b)] ☐ Side bends (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant weld metal overlay [QW-462.5(c)]

☐ Plate bend specimen, corrosion-resistant weld metal overlay [QW-462.5(d)]

☐ Pipe specimen, macro test for fusion[QW-462.5(b)] ☐ Plate specimen,macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative Volumetric Examination Results (QW-191): Report No. WQT-5-003 RT ■ or UT ☐ (check one)

Fillet weld-fracture test (QW-181.2): - Length and percent of defects: -

☐ Fillet welds in plate [QW-462.4(b)] ☐ Fillet welds in pipe [QW-462.4(c)]

Macro examination (QW-184): - Fillet size (in): - Concavity/convexity (in): -

Other: -

Film or specimens avaluated by: Mr.Samart Ch. Company: PAE Technical Service Public Company Limited.

Machanacal test conducted by: - Laboratory test no.: -

Welding supervised by: Mr.Cheirdchai N.

We certify that the statements in this record are correct and that the test coupons ware prepared, Welded,and tested in accordance with the requirements of Section IX of the **ASME BOILERAND PRESSURE VESSEL CODE.**

Prepared: 29-9-18 (PKP)
Miss.Chayanit L.
(Welding Engineer)

Certified by: (for) 29/09/18
Mr.Kittipong M.
(RNC QC Manager)

Approved by: THAWATCHAI K. 29/09/18
(Owner)

GC POLYOLS

WELDER & WELDING OPERATOR QUALIFICATION TEST RECORD

SK E&C

WELDER PERFORMANCE QUALIFICATIONS (WPQ) FOR PIPING



Welder's name: Mr.Sakon Kamma | Identificaton No.: IB-PP-316

Test Description

Identification of WPS followed: SKEC-SS-001 | ■ Test coupon ☐ Production Weld

Specification of base metal(s): SA 312 TP304L | Thickness: 2.77 mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (ie; manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With or Without
☐ Plate ■ Pipe (enter diameter if pipe of tube)	(1/2") OD. 21.3 mm.	(1/2") OD. 21.3 mm. To unlimited
Base metal P-or S-Number to P-or S-Number	P8 to P8	P1 to P15F, P34 and P41 to P49
Filler metal or electrode specification(s) (SFA) (info. Only)	SFA-5.9	
Filler metal or electrode classification(s) (info. Only)	ER308L	
Filler metal F-Number(s)	F-No 6	F-No 6
Consumable insert (GTAW or PAW)	NONE	NONE
Filler type (solid/metal of flux cored/powder) (GTAW or PAW)	SOLID	SOLID
Deposit thickness for each process		
Process 1: GTAW 3 layers minimum ■ Yes ☐ No	2.77 mm.	5.54 mm.
Process 2: N/A 3 layers minimum ☐ Yes ☐ No	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All Position
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW, PAW, GMAW)	With	With
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4): Accepted

☐ Bend test; ☐ Transverse root and face [QW-462.3(a)]; ☐ Longitudinal root and face [QW-462.3(b); ☐ Side (QW-462.2);

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)]; ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)];

☐ Macro test for fusion [QW-462.5(b)]; ☐ Macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative radiographic examination results (QW-191): RT Report No PY-RT-IBQ-WQT-1156

Fillet weld - fracture test (QW-180): N/A | Length and percent of defects: N/A

Macro examination (QW-184): N/A | Fillet size (mm): N/A | Concavity/convexity (mm): N/A

Other tests: N/A

Film or specimens evaluated by: Mr Ekasit Thaopha | Company: IBCI

Mechanical tests conducted by: N/A | Laboratory test no.: N/A

Welding supervised by: Mr Tawin Monphooma

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Secton IX of the ASME Boiler and Pressure Vessel Code.

QA/QC IBCI Name: Tawin M. Date: 21 NOV 2019

Test Date: 16-Nov-19

Approved By: QA/QC Dept. Polyols Project

Signature

Date

Authorized By: T. S. Park SKEC

Signature

Date: 21/Nov./2019

Form No QA-PR-0003-03

WELDER & WELDING OPERATOR QUALIFICATION TEST RECORD

WELDER PERFORMANCE QUALIFICATIONS (WPQ) FOR PIPING



Welder's name: Mr.Sakon Kamma | Identificaton No.: IB-PP-316

Test Description

Identification of WPS followed: SKEC-SS-001 | ■ Test coupon ☐ Production Weld

Specification of base metal(s): SA 312 TP304L | Thickness: 6.02 mm.

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (ie; manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With or Without
☐ Plate ■ Pipe (enter diameter if pipe of tube)	(4") OD. 114.3 mm.	(1") OD. 25 mm To unlimited
Base metal P-or S-Number to P-or S-Number	P8 to P8	P1 to P15F, P34 and P41 to P49
Filler metal or electrode specification(s) (SFA) (info Only)	SFA-5.9	
Filler metal or electrode classification(s) (info. Only)	ER308L	
Filler metal F-Number(s)	F-No.6	F-No.6
Consumable insert (GTAW or PAW)	NONE	NONE
Filler type (solid/metal of flux cored/powder) (GTAW or PAW)	SOLID	SOLID
Deposit thickness for each process		
Process 1: GTAW 3 layers minimum ■ Yes ☐ No.	6.02 mm.	12.04 mm.
Process 2: N/A 3 layers minimum ☐ Yes ☐ No.	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All Position
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW, PAW, GMAW)	With	With
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4): Accepted

☐ Bend test; ☐ Transverse root and face [QW-462.3(a)]; ☐ Longitudinal root and face [QW-462.3(b); ☐ Side (QW-462.2);
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)]; ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)];
☐ Macro test for fusion [QW-462.5(b)]; ☐ Macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative radiographic examination results (QW-191): RT Report No. PY-RT-IBQ-WQT-1155

Fillet weld - fracture test (QW-180): N/A | Length and percent of defects: N/A

Macro examination (QW-184): N/A | Fillet size (mm): N/A | Concavity/convexity (mm): N/A

Other tests: N/A

Film or specimens evaluated by: Mr.Ekasit Thaopha | Company: IBCI

Mechanical tests conducted by: N/A | Laboratory test no.: N/A

Welding supervised by: Mr.Tawin Monphooma

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Secton IX of the ASME Boiler and Pressure Vessel Code

Test Date: 16-Nov-19

Approved By: 21 NOV 2019 | QA/QC IBCI Name: Tawin M. Date:

Signature:

Date: QA/QC Dept. Powols Project

Authorized By: T. S. Park SKEC

Signature:

Date: 21. Nov. 2019

Form No QA-PR-0003-03

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD



Welder's name.	Mr. Sakon K.	Identification No.	5-3307-00017-89-3	Welder No.	RMC-P-W006
Identification of WPS followed	RMC-WPS-001	■ Test Coupon	☐ Production Weld		
Specification of base metall (s)	A106 Gr.B	Thickness	10.97 mm.		

Testing Condition and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process (es)	GTAW+SMAW	GTAW+SMAW
Type (ie : manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With/Without
☐ Plate ■ Pipe (enter diameter if pipe or tube)	Ø 6"	Ø 2 7/8" & Above
Base metal P or S-Number to P - or S-number	P No. 1	P No. 1
Filler metal or eletrode specification (s) (SFA) (info only)	5.18(GTAW) + 5.1(SMAW)	5.18(GTAW) + 5.1(SMAW)
Filler metal or eletrode calssification (s) (info only)	ER70S-G(GTAW)+E7016(SMAW)	ER70S-G(GTAW)+E7016(SMAW)
Filler metal F-Number (s)	6(GTAW) + 4(SMAW)	6(GTAW) + 4(SMAW)
Consumable insert (GTAW or PAW)	N/A	N/A
Filler type (solid / metal or flux cored / powder) (GTAW or PAW)	Solid	Solid
Deposit thickness for each process Thickness		
Grove	10.97 mm.	21.94 mm. (Max)
Each Welding Process : GTAW + SMAW	3 mm.(GTAW) + 7.97(SMAW)	6 mm.(GTAW) + 15.94(SMAW)(Max)
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Shielding gas for GTAW	Argon	Argon
Insert gas backing (GTAW, PAW, GMAW)	N/A	N/A
Transfer mode (spray / globular or pulse to short circuit-GMAW)	N/A	N/A
Welding Current type / Polarity (AC,DCEP,DCEN)	DCEN/DCEP	DCEN/DCEP

RESULTS

Visual Examination of Completed Weld (QW-302.4) Acceptable

☐ Bend test ; ☐ Transverse root and face (QW-462.3(a)) ; ☐ Longitudinal root and face (QW-462.3 (b)) ;
☐ Plate bend specimen , corrosion-resistant overlay (QW-462.5 (d)) ; ☐ Macro test for fusion (QW-462.5 (b)) ;
☐ Side (QW-462.2) ; ☐ Pipe bend specimen, corrosion-resistant overlay (QW-462.5(c)) ;
☐ Macro test for fucion (QW-462.5 (e)) ;

Type	Result	Type	Result	Type	Result
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Alternative radiographic examination results(QW-191)	Acceptable	Report No	RT-WQT-S-006		
Fillet weld-frature test (QW-180)	N/A	Length and percent of defects	N/A		
Macro examination (QW-184)	N/A	Fillet size (in.)	X	Concavity/convexity (in.)	N/A
Other tests	N/A				
Film or specimens evaluated by	PAE Co.,Ltd. / Thaioil Inspector	Radiographic Tests Conducted by	PAE Co.,Ltd.		
Mechanical tests conducted by	N/A	Laboratory test no.	N/A		
According to the Requirements of the Code	ASME SECTION IX				

We certify that the statements in this record are correct and that the test coupons ware prepared, welded, and tested in accordance with the requirements of section IX of the ASME code.

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN :			
DATE :	23-5-2019		23-5-19
	QC/QA RMC	3rd PARTY (PAE)	THAIOIL ENTS

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD



Welder's name.	Mr. Sakon K.	Identification No.	5-3307-00017-89-3	Welder No.	RMC-P-W006
Identification of WPS followed	RMC-WPS-002	■ Test Coupon	☐ Production Weld		
Specification of base metall (s)	A106 Gr.B	Thickness	4.78 mm.		

Testing Condition and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process (es)	GTAW	GTAW
Type (ie : manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With/Without
☐ Plate ■ Pipe (enter diameter if pipe or tube)	Ø.1/2"	Ø.1/2" & Above
Base metal P or S-Number to P - or S-number	P No. 1	P No. 1
Filler metal or eletrode specification (s) (SFA) (info only)	5.18	5.18
Filler metal or eletrode calssification (s) (info only)	ER70S-G	ER70S-G
Filler metal F-Number (s)	6	6
Consumable insert (GTAW or PAW)	N/A	N/A
Filler type (solid / metal or flux cored / powder) (GTAW or PAW)	Solid	Solid
Deposit thickness for each process Thickness		
Grove	4.78 mm.	9.56 mm. (Max)
Each Welding Process : GTAW	4.78 mm.	9.56 mm. (Max)
Position qualified (2G, 6G, 3F, etc.)	6G	ALL
Vertical progression (uphill or downhill)	Uphill	Uphill
Shielding gas for GTAW	Argon	Argon
Insert gas backing (GTAW, PAW, GMAW)	N/A	N/A
Transfer mode (spray / globular or pulse to short circuit-GMAW)	N/A	N/A
Welding Current type / Polarity (AC,DCEP,DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4) Acceptable

☐ Bend test ; ☐ Transverse root and face (QW-462.3(a)) ; ☐ Longitudinal root and face (QW-462.3 (b)) ;
☐ Plate bend specimen , corrosion-resistant overlay (QW-462.5 (d)) ; ☐ Macro test for fusion (QW-462.5 (b)) ;
☐ Side (QW-462.2) ; ☐ Pipe bend specimen, corrosion-resistant overlay (QW-462.5(c)) ;
☐ Macro test for fucion (QW-462.5 (e)) ;

Type	Result	Type	Result	Type	Result
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Alternative radiographic examination results(QW-191) Acceptable Report No RT-WQT-S-003

Fillet weld-frature test (QW-180) N/A Length and percent of defects N/A

Macro examination (QW-184) N/A Fillet size (in.) X Concavity/convexity (in.) N/A

Other tests N/A

Film or specimens evaluated by PAE Co.,Ltd. / Thaioil Inspector Radiographic Tests Conducted by PAE Co.,Ltd.

Mechanical tests conducted by N/A Laboratory test no. N/A

According to the Requirements of the Code ASME SECTION IX

We certify that the statements in this record are correct and that the test coupons ware prepared, welded, and tested in accordance with the requirements of section IX of the ASME code.

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN :	Mr. Kumpol J.		
DATE :	25-3-2019		25-3-19
	QC/QA RMC	3rd PARTY (PAE)	THAIOIL,ENTS

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name: Mr. Sakon Kamma | Clock number: - | Stamp no.: SSUT-002
Welding process(es) used: GTAW+SMAW | Type: Manual
Identification of WPS followed by welder during welding of test coupon: P-15E.15E-GS-001
Base material(s) welded: ASTM A106 Gr.B | Thickness: 10.97 mm

Manual or Semiautomatic Variables for Each Process (QW-350)	Actual Values	Range Qualified
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 15E to ASME P-No. 15E (QW-403)	P-No.15E to P-No.15E	P-No.15E through P-No.15E
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 6"	NPS 2.1/2" and over
Filler metal specification (SFA) 5.28 + 5.5 Classification (QW-404)	ER-90S-G+E9016-G	ER-90S-G+E9016-G
Filler metal F-No.	F-No.6+4	F-No.6+4
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3 mm/7.97 mm	6 mm/15.94 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,. fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN/DCEP	DCEN/DCEP

Machine Welding Variables for the Process Used (QW-360)	Actual Values	Range Qualified
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal welded from both sides, flux, etc)	N/A	N/A

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305): Accepted (WQT-090)
(For alternative qualification of groove welds by radiography): Thai NonDestructive testing Public company Limited
Fillet Weld -- Fracture test: N/A | Length and percent of defects: N/A in.
Macro test fusion: N/A | Fillet leg size: N/A in. X N/A in. | Concavity/convexity: N/A in.
Welding test conducted by: Mr. Suriyan S. RT II Thai NonDestructive testing Public company Limited
Mechanical test conducted by: N/A | Laboratory test no.: N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization: Toyo-Thai Corporation Public CO., LTD

Date: 1-Fab-2015

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name: Mr. Sakon Kamma | Clock number: - | Stamp no: SSUT-002
Welding process(es) used: GTAW | Type: Manual
Identification of WPS followed by welder during welding of test coupon: P-15E.15E-G-001
Base material(s) welded: ASTM A106 Gr.B | Thickness: 8.74 mm

Manual or Semiautomatic Variables for Each Process (QW-350)	Actual Values	Range Qualified
	With Out	With Out/With Backing
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)		
ASME P-No. 15E to ASME P-No. 15E (QW-403)	P-No.15E to P-No.15E	P-No.15E through P-No.15E
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.28 Classification (QW-404)	ER90S-G	ER90S-G
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	8.74 mm	17.84 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	Actual Values	Range Qualified
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305): Accepted (WQT-089)
(For alternative qualification of groove welds by radiography): Thai NonDestructive testing Public company Limited
Fillet Weld -- Fracture test: N/A | Length and percent of defects: N/A in.
Macro test fusion: N/A | Fillet leg size: N/A in. X N/A in. | Concavity/convexity: N/A in.
Welding test conducted by: Mr. Suriyan S. RT II | Thai NonDestructive testing Public company Limited
Mechanical test conducted by: N/A | Laboratory test no.: N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code

Organization: Toyo-Thai Corporation Public CO., LTD

Date: 1-Feb-2015 | By: (Title)

This form (E0008) may be obtained from the Order Dept. ASME: 22 Law [illegible], Box 2300, Fairfield, NJ 07007-2300

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-001

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G(GTAW)+E7016 (SMAW)	ER70S-G(GTAW)+E7016 (SMAW)
S.F.A	5.18(GTAW) + 5.1(SMAW)	5.18(GTAW) + 5.1(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current	DC	DC
polarity	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Dete :	13-Jun-14	Report No.	RT-WQT-005
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A		Macro	N/A			
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	16/6/2014	17/6/2014	17/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL, ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-009

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	SA 335 P5	Any Assigned P No. Above
ASME P No.	P No. 5B	P No.3,P No.4,P No.5
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER80S-B6 (GTAW)+E8016-B6 (SMAW)	ER80S-B6 (GTAW)+E8016-B6 (SMAW)
S.F.A	5.28(GTAW) + 5.5(SMAW)	5.28(GTAW) + 5.5(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current	DC	DC
polarity	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Dete :	13-Jun-14	Report No.	RT-WQT-030
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A		Macro	N/A			
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR

Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	19/6/2014	19-6-2014	19/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

SINO-THAI

PNG LNG PROJECT
HIDES GAS CONDITIONING PLANT

CBI / CLOUGH
PNG LNG

WELDING OPERATOR / WELDER CERTIFICATE REPORT

WELDER'S NAME:	MR.SAKON KUMMA	ID NO:	WP225
TEST COUPON NO:	COUPON-005	TEST DATE:	31 January 2013
WPS OR PQR NO:	P1-1-2	PROCESS:	GTAW/SMAW
BASE MATERIAL GRADE:	A106-B	TYPE:	Manual
ACCEPTANCE CRITERIA:	ASME SECTION IX		

ACTUAL VALUES USED IN QUALIFICATION		LIMITS OF QUALIFICATION
Joint Data: Joint Type (butt etc)	BW	Butt ☑ Fillet ☑ Overlay ☐ Build-up ☐
Backing (insert etc)	Without	With ☐ With or Without ☑
Deposit Thickness: Process 1: GTAW	3 mm	Max. 6 mm
Process 2: SMAW	15.26 mm	Max. Unlimited mm
P-No	P1	P1 ☑ P8 ☐ P10H ☐
Type (Plate, Pipe)	Pipe	Plate ☑ Pipe ☑
Diameter	6 " NPS	2 1/2 " NPS and Over

Filler:	Process1	Process2	
Specification	SFA5.18	SFA5.1	(info. Only)
Classification	ER70S-6	E7016	(info. Only)
F-No.	6	4	F-No.6 + F-No.4

Welding Position	6G	All	Flat	Hor	Vert	O/head	N/A
		Butt - plate ☑	☐	☐	☐	☐	☐
		Butt - pipe ☑	☐	☐	☐	☐	☐
		Fillet: ☑	☐	☐	☐	☐	☐
		Overlay: ☐	☐	☐	☐	☐	☑
		Build-up: ☐	☐	☐	☐	☐	☑
Welding Progression	Uphill	Uphill ☑	Downhill ☐				

Gas Type:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Shielding	Argon	N/A		
Insert Backing	Without	Without	With ☐ With or Without ☑	With ☐ With or Without ☑
Electrical:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Transfer Mode	N/A	N/A	N/A	N/A
Current	DC	AC	DC	AC or DC
Polarity	EN	-	EN	EP

VISUAL ACCEPTANCE OF THE TEST SPECIMEN

Mr.Chaiyasit Heebkeaw		31-1-2013
NAME	SIGNATURE	DATE

TEST RESULT SUMMARY

DESCRIPTION	RADIOGRAPHY	BEND TESTS	MACRO	FILLET BREAK
Testing Laboratory	SK NDT	N/A	N/A	N/A
Test Lab Job No.	N/A	N/A	N/A	N/A
Report No.	RT-WQT-457	N/A	N/A	N/A
Test Result	Accept	N/A	N/A	N/A

STATEMENT OF COMPLIANCE:
We certify that the statements in this record are correct and that the conpons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

REMARK:
-

ExxonMobil 03 2 6 2013 W. REANTASO QUALITY ASSURANCE

COMPLETED BY	Prepared by	Review by	Approved by
COMPANY	SINO-THAI QC 026	SINO-THAI QC 023	CBI
SIGNATURE	Sign:	Sign:	CBI REPRESENTATIVE Somyos Phimseni ☐ Review ☐ Witness
NAME	Name: M.Kamoltas	Name: P.Manat	LG STREICHER
DATE	Date: 27-2-13	Date: 27/02/2013	2/3/13

PNG LNG PROJECT
HIDES GAS CONDITIONING PLANT

WELDING OPERATOR / WELDER CERTIFICATE REPORT

WELDER'S NAME:	MR.SAKON KUMMA	ID NO:	WP225
TEST COUPON NO:	COUPON-007	TEST DATE:	10 October 2012
WPS OR PQR NO:	P8-8-3.1	PROCESS:	GTAW/SMAW
BASE MATERIAL GRADE:	A106-B	TYPE:	Manual
ACCEPTANCE CRITERIA:	ASME SECTION IX		

ACTUAL VALUES USED IN QUALIFICATION		LIMITS OF QUALIFICATION
Joint Data: Joint Type (butt etc)	BW	Butt ☑ Fillet ☑ Overlay ☐ Build-up ☐
Backing (insert etc)	Without	With ☐ With or Without ☑
Deposit Thickness: Process 1: GTAW	3 mm	Max. 6 mm
Process 2: SMAW	15.26 mm	Max. Unlimited mm
P-No	P8	P1 ☐ P8 ☑ P10H ☐
Type (Plate, Pipe)	Pipe	Plate ☑ Pipe ☑
Diameter	6 " NPS	2 1/2 " NPS and Over

Filler:	Process1	Process2	
Specification	SFA5.9	SFA5.4	(info. Only)
Classification	ER316L	E316L-15	(info. Only)
F-No.	6	5	F-No.6 + F-No.5

		All	Flat	Hor	Vert	O/head	N/A
Welding Position	6G						
	Butt - plate	☑	☐	☐	☐	☐	☐
	Butt - pipe	☑	☐	☐	☐	☐	☐
	Fillet:	☑	☐	☐	☐	☐	☐
	Overlay:	☐	☐	☐	☐	☐	☑
	Build-up:	☐	☐	☐	☐	☐	☑
Welding Progression	Uphill	Uphill ☑	Downhill ☐				

Gas Type:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Shielding	Argon	N/A		
Insert Backing	With	Without	With ☑ With or Without ☐	With ☐ With or Without ☑

Electrical:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Transfer Mode	N/A	N/A	N/A	N/A
Current	DC	DC	DC	DC
Polarity	EN	EP	EN	EP

VISUAL ACCEPTANCE OF THE TEST SPECIMEN

Mr.Nopporn Somkumsri		10-10-2012
NAME	SIGNATURE	DATE

TEST RESULT SUMMARY

DESCRIPTION	RADIOGRAPHY	BEND TESTS	MACRO	FILLET BREAK
Testing Laboratory	SK NDT	N/A	N/A	N/A
Test Lab Job No.	N/A	N/A	N/A	N/A
Report No.	RT-WQT-276	N/A	N/A	N/A
Test Result	Accept	N/A	N/A	N/A

STATEMENT OF COMPLIANCE:
We certify that the statements in this record are correct and that the conpons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

REMARK:
-

COMPLETED BY	Prepared by QC 026	Review by QC 023	Approved by
COMPANY	SINO-THAI	SINO-THAI	CBI
SIGNATURE	Sign:	Sign:	
NAME	Name: M.Kamoltas 6-11-2012	Name: P.Manat	J.G. STREICHER
DATE	Date:	Date: 9/11/2012	

Murray & Roberts
Power & Energy
Engineers and Constructors

Douglas Roberts Centre
22 Skeen Boulevard
Bedfordview, 2007
P.O. Box 3040
Bedfordview, 2008
South Africa
Tel: + 27 11 456 1000
Fax: + 27 86 206 6794
Email: info@murrob.com
Web: www.murrob.com

CERTIFICATE OF SERVICE

This is to certify that we employed the person whose details are provided below:

NAME: **Sakon**

SURNAME: **Kamma**

ID NUMBER: **AA5502164**

OCCUPATION: **A class welder**

DATE OF EMPLOYMENT: **30 September 2015**

TERMINATION DATE **: 28 November 2017**

REASON FOR TERMINATION: **End of Contract**

EMPLOYEE NUMBER: **6201075**

RATE: **R 17630.71 PM**

ISSUED AT: **Medupi**

DATE: 04 December 2017

Murray & Roberts
Murray & Roberts Power & Energy
a division of Murray & Roberts Limited
Vat: 4630107995
Co. Reg: 1979 003324 06
P. O. Box 3040
Bedfordview, 2008

For and behalf of Murray & Roberts Power & Energy

Company Stamp

Murray & Roberts Power & Energy
A trading division of Murray & Roberts Limited
Divisional Directors: ST Harrison[1] (Managing Director) AP Plantema

Murray & Roberts Limited Registration No. 1979/003324/06

Directors: HJ Laas (Chairman & Managing Director) PK Bennett[2] AJ Bester O Fenn[1] JN Govender ST Harrison[1] IW Henstock WT Mdluli

Secretary: L Kok

[1]British [2]Australian

WELDER QUALIFICATION TEST RECORD

As per AWS D1.1



Name : Mr.Sakon Kamma ID : 5330700017893

Identification no. : SC-1501

Using WPS No. : WQT-S001

Above Welder is qualified for the following ranges

Welding variables	Actual values	Qualification Range
Welding Process(es)	SMAW	SMAW
Type (ie; manual, semi-automatic) used	Manual	Manual
Backing (material, weld metal, double-welded, etc.)	PIPE	Without backing
Joint type	Single V,Butt weld	
BACKING MATERIAL	None	
Base metal		
Plate / Pipe (enter diameter if pipe or tube)		
Specification	A 106 Gr.B.	
Group (Table 3.1)	I	I through III
Thickness	7.11 mm/14.27 mm Thk.	5mm. to Unlimited
Diameter	6"	100mm. And above
Filler metal		
Trade Name	KOBELCO/LB52-18	
AWS Class	E7018	
SFA-No.	A5.1	
F-No.	4	1 through 4
Position	6 GR	ALL Note 1,2,3
Weld progression	Vertical Uphill	Vertical Uphill
Backing gas	N/A	
Electrical characteristics		
Current type/ polarity (AC , DCEP)	Direct Current (+) / Electrode Pisitive	

Visual Inspection : Acceptable

Method of Testing

Guided bend test	Fracture Test	Macro Test	Radiographic Test
NA	NA	NA	RT-H-TECH-1289/10 3-May-10

Others : NA

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1.1 2006

APPROVED BY:

CIS.Co.,Ltd.
Date :

CUEL Limited
Date : 13 MAY 2010

ABS BANGKOK
Date : 26 MAY 2010

Chevron 8
Chevron
Date : 28 MAY 2010

Notes

1. Not qualified for joints welded from one side without backing, or welded from both sides without backgouging.
2. Not qualifird for welds having groove angles less than 30 (Refer section 4.12.42).
3. Also qualified to make PJP and fillet welds in all thickness and diameter of any size.

ULTIMATE TECHNOLOGY & SERVICE CO.,LTD.

WELDER, WELDING OPERATOR, OR TRACK WELDER QUALIFICATION TEST RECORD



Type of Welder : Manual

Name : Mr. Sakon K. Identification No. : ST-102

Welding Procedure Specification No. : HT-102R Rev. : 0 Date : 27-Nov-04

Variables	Record Actual Values Used in Qualification	Qualification Rango
Process / Type [Table 4.10, Item (1)]	SMAW / Manual	SMAW / Manual
Electrode (single or multiple)[Table 4.10, Item (8)]	E-7016U / E-7016	E-7016U / E-7016
Current / Polarity	DCRP	DCRP
Position [Table 4.10, Item (4)]	6GR	All
Weld Progression [Table 4.10, Item (6)]	Up - Hill	Up - Hill
Backing (YES or NO) [Table 4.10, Item (7)]	No	With and Without
Material Spec.	Gr No. 1 to Gr No. 1	Gr No. 1 to Gr No. 1
Thickness : (Plate)		
Groove	N/A	4.8 mm. to Unlimited
Fillet	N/A	Unlimited
Thickness : (Pipe)		
Groove	13.27 mm.	4.8 mm. to Unlimited
Fillet	All	All
Diameter : (Pipe)	8"	≥ 3" OD to Unlimited
Groove	Yes	Yes
Fillet	N/A	Unlimited
Filler metal [Table 4.10, Item (3)]		
Spec. No.	5.1	5.1 & 5.5
Class		
F-No. [Table 4.10, Item (2)]	F No. 4	F No. 4 and Lower
Gas/Fulx Type [Table 4.10, Item (3)]	N/A	
Other	N/A	

VISUAL INSPECTION (4.8.1)

Acceptable YES or NO (Yes)

Guided Bend Test Result (4.30.5)

Type	Result	Report No.	Type	Result	Report No.
6SB-1	No open defect	BT-002/04	6SB-3	No open defect	BT-002/04
6SB-2	No open defect	BT-002/04	6SB-4	No open defect	BT-002/04

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance : N/A Fillet Size : N/A

Fracture Test Root Penetration : N/A Macroetch : N/A

(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspection by : Mr. Amorn P. Test Number : 006/04

Organization : COTL Date : 27-Nov-04

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification			Film Identification		
Report No.	Results	Remarks	Report No.	Results	Remarks
001	ACC	-	-	N/A	-

Interpreted by : - Test Number : -

Organization : - Date : -

We, the undersigned, certify that the statement in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, [2000 (year)] Structural Welding Code-Steel.

Manufacturer or Contractor : Authorized By :

Formed Date : 27 Nov '04 Date : 2/12/04

Chevron Texaco Chevron Offshore (Thailand) Ltd.

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-1.1-G-001**
Base material(s) welded **ASTM A106 Gr.B** Thickness **5.54 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 1 to ASME P-No. 1 (QW-403)	P-No.1 to P-No.1	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.18 Classification (QW-404)	ER-70S-G	ER-70S-G
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	5.54 mm	11.08 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness
Signature
Date 11 Sep'14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-007)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-002

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW	GTAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without	With/Without
THICKNESS (mm)		
Groove	4.78 mm.	1.58mm. - 9.56 mm. (MAX)
Weld metal for each welding process	4.78 mm.	9.56 mm. (Max)
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 0.5"	Ø 0.5" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G	ER70S-G
S.F.A	5.18	5.18
F No.	6	6
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current	DC	DC
polarity	DCEN	DCEN
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Dete :	13-Jun-14	Report No.	RT-WQT-015
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A		Macro	N/A			
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR

Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	14/6/2014	27-6-2014	30/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-007

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	SA 335 P11	Any Assigned P No. Above
ASME P No.	P No. 4	P No.3,P No.4,P No.5
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER80S-G (GTAW)+E8016-B2 (SMAW)	ER80S-G (GTAW)+E8016-B2 (SMAW)
S.F.A	5.28(GTAW) + 5.5(SMAW)	5.28(GTAW) + 5.5(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current	DC	DC
polarity	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST				RADIOGRAPHIC TEST			
Number & Type	Result	Number & Type	Result	Dete :	13-Jun-14	Report No.	RT-WQT-023
N/A	N/A	N/A	N/A	Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A			Macro	N/A		
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR

Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	19/6/2014	23-6-2014	23/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-8.8-G-001**
Base material(s) welded **ASTM A312 TP304** Thickness **3.91 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 8 to ASME P-No. 8 (QW-403)	P-No.8 to P-No.8	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.9 Classification (QW-404)	ER-308L	ER-308L
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3.91 mm	7.82 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	Argon 99.99%	Argon 99.99%
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness
Signature
Date 11 Sep'14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-009)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW+SMAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-1.1-GS-001**
Base material(s) welded **ASTM A106 Gr.B** Thickness **10.97 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 1 to ASME P-No. 1 (QW-403)	P-No.1 to P-No.1	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 6"	NPS 2.1/2" and over
Filler metal specification (SFA) 5.18+5.1 Classification (QW-404)	ER-70S-G+E7016	ER-70S-G+E7016
Filler metal F-No.	F-No.6+4	F-No.6+4
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3 mm/7.97 mm	6 mm/15.94 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN/DCEP	DCEN/DCEP

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness
Signature
Date 11 Sep '14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-008)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

WELDER & WELDING OPERATOR QUALIFICATION TEST RECORD

GC POLYOLS — SK E&C

WELDER PERFORMANCE QUALIFICATIONS (WPQ) FOR PIPING



Welder's name: Mr.Sakon Kamma — Identificaton No.: IB-PP-316

Test Description

Identification of WPS followed: SKEC-SS-001 — ■ Test coupon ☐ Production Weld

Specification of base metal(s): SA 312 TP304L — Thickness: 2.77 mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (ie, manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With or Without
☐ Plate ■ Pipe (enter diameter if pipe of tube)	(1/2") OD. 21.3 mm.	(1/2") OD. 21.3 mm. To unlimited
Base metal P-or S-Number to P-or S-Number	P8 to P8	P1 to P15F, P34 and P41 to P49
Filler metal or electrode specification(s) (SFA) (info. Only)	SFA-5.9	
Filler metal or electrode classification(s) (info. Only)	ER308L	
Filler metal F-Number(s)	F-No 6	F-No 6
Consumable insert (GTAW or PAW)	NONE	NONE
Filler type (solid/metal of flux cored/powder) (GTAW or PAW)	SOLID	SOLID
Deposit thickness for each process		
Process 1: GTAW 3 layers minimum ■ Yes ☐ No	2.77 mm.	5.54 mm.
Process 2: N/A 3 layers minimum ☐ Yes ☐ No	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All Position
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW, PAW, GMAW)	With	With
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4): Accepted

☐ Bend test; ☐ Transverse root and face [QW-462.3(a)]; ☐ Longitudinal root and face [QW-462.3(b); ☐ Side (QW-462.2);
☐ Pipe bend specimen, corrosion-resistant overlay [QW-462.5(c)]; ☐ Plate bend specimen, corrosion-resistant overlay [QW-462.5(d)];
☐ Macro test for fusion [QW-462.5(b)]; ☐ Macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative radiographic examination results (QW-191): RT Report No PY-RT-IBQ-WQT-1156

Fillet weld - fracture test (QW-180): N/A — Length and percent of defects: N/A

Macro examination (QW-184): N/A — Fillet size (mm): N/A — Concavity/convexity (mm): N/A

Other tests: N/A

Film or specimens evaluated by: Mr Ekasit Thaopha — Company: IBCI

Mechanical tests conducted by: N/A — Laboratory test no.: N/A

Welding supervised by: Mr Tawin Monphooma

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Secton IX of the ASME Boiler and Pressure Vessel Code.

QA/QC IBCI — Name: Tawin M. — Date:

Test Date: 16-Nov-19

Approved By: 21 NOV 2019

Signature: QA/QC Dept.

Date: SK Polyols Project

Authorized By: T. S. Park SKEC

Signature:

Date: 21/Nov./2019

Form No QA-PR-0003-03

WELDER & WELDING OPERATOR QUALIFICATION TEST RECORD

WELDER PERFORMANCE QUALIFICATIONS (WPQ) FOR PIPING



Welder's name: Mr.Sakon Kamma | Identificaton No.: IB-PP-316

Test Description

Identification of WPS followed: SKEC-SS-001 | ■ Test coupon ☐ Production Weld

Specification of base metal(s): SA 312 TP304L | Thickness: 6.02 mm.

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (ie; manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With or Without
☐ Plate ■ Pipe (enter diameter if pipe of tube)	(4") OD. 114.3 mm.	(1") OD. 25 mm. To unlimited
Base metal P-or S-Number to P-or S-Number	P8 to P8	P1 to P15F, P34 and P41 to P49
Filler metal or electrode specification(s) (SFA) (info Only)	SFA-5.9	
Filler metal or electrode classification(s) (info. Only)	ER308L	
Filler metal F-Number(s)	F-No.6	F-No.6
Consumable insert (GTAW or PAW)	NONE	NONE
Filler type (solid/metal of flux cored/powder) (GTAW or PAW)	SOLID	SOLID
Deposit thickness for each process		
Process 1: GTAW 3 layers minimum ■ Yes ☐ No.	6.02 mm.	12.04 mm.
Process 2: N/A 3 layers minimum ☐ Yes ☐ No.	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All Position
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW, PAW, GMAW)	With	With
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4): Accepted

☐ Bend test; ☐ Transverse root and face [QW-462.3(a)]; ☐ Longitudinal root and face [QW-462.3(b); ☐ Side (QW-462.2);

☐ Pipe bend specimen, corrosion-resistant overlay [QW-462 5(c)]; ☐ Plate bend specimen, corrosion-resistant overlay [QW-462 5(d)];

☐ Macro test for fusion [QW-462.5(b)]; ☐ Macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative radiographic examination results (QW-191): RT Report No. PY-RT-IBQ-WQT-1155

Fillet weld - fracture test (QW-180): N/A | Length and percent of defects: N/A

Macro examination (QW-184): N/A | Fillet size (mm): N/A | Concavity/convexity (mm): N/A

Other tests: N/A

Film or specimens evaluated by: Mr.Ekasit Thaopha | Company: IBCI

Mechanical tests conducted by: N/A | Laboratory test no.: N/A

Welding supervised by: Mr.Tawin Monphooma

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Secton IX of the ASME Boiler and Pressure Vessel Code

Test Date: 16-Nov-19

Approved By: 21 NOV 2019 | Name: Tawin M. | Date: | Authorized By: T. S. Park SKEC

Signature | Signature

Date: QA/QC Dept. SK Engineering & Construction | Date: 21 Nov. 2019

Form No QA-PR-0003-03

RNC. RENEWCOILS ENGINEERING & SUPPLY CO.,LTD

WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)



Welder's Name: Mr.Sakon K. Identification no.: W-021

Project Name: NPP Naphtha Pygas Project

Test Description

Identification of WPS followed: RNC-WPS-047 ■ Test coupon ☐ Production weld Date welded: 28-Sep-18

Specification and type/grade or UNS Number of base matal(s): SA106Gr.B Thickness: 5.54 mm.

Testing Variables and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process (es)	GTAW	GTAW
Type (i.e.,manual,semi-autonatic) used	Manual	Manual
Backing (with/without)	Without Backing	With or Without Backing
☐ Plate ■ Pipe (enter diameter if pipe or tube)	NPS 2"	OD 1" to Unlimited
Base metal P-Number to P-Number	P-No.1 To P-No.1	P-No.1 Through P-No. 15F, P-No.34 and P-No.41 Through P-No.49
Filler metal or electrode specification (s) (SFA) (info.only)	5.18	
Filler metal or electrode classification(s) (info. Only)	ER70S-6	
Filler metal F-Number (s)	F-No.6	F-No.6
Consumable insert (GTAW or PAW)	N/A	N/A
Filler Metal Product Form (solid/metal or flux cored/powder)(GTAW or PAW)	Solid	Solid
Deposit thickness for each process		
Process 1 GTAW 3 layers minimum ☐ Yes ■ No.	5.54 mm.	Maximum 11.08 mm.
Process 2 ____ 3 layers minimum ☐ Yes ☐ No.	N/A	N/A
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW,PAW,GMAW)	Without Backing	With or Without Backing
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC,DCEP,DCEN)	DCEN	DCEN

RESULTS

Visual examination of completed weld (QW-302.4): Acceptable

☐ Transverse face and root bends [QW-462.3(a)] ☐ Longitudinal bends [QW-462.3(b)] ☐ Side bends (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant weld metal overlay [QW-462.5(c)]

☐ Plate bend specimen, corrosion-resistant weld metal overlay [QW-462.5(d)]

☐ Pipe specimen, macro test for fusion[QW-462.5(b)] ☐ Plate specimen,macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative Volumetric Examination Results (QW-191): Report No. WQT-S-006 RT ■ or UT ☐ (check one)

Fillet weld-fracture test (QW-181.2): - Length and percent of defects: -

☐ Fillet welds in plate [QW-462.4(b)] ☐ Fillet welds in pipe [QW-462.4(c)]

Macro examination (QW-184): - Fillet size (in): - Concavity/convexity (in): -

Other: -

Film or specimens avaluated by: Mr.Samart Ch. Company: PAE Technical Service Public Company Limited.

Machanacal test conducted by: - Laboratory test no.: -

Welding supervised by: Mr.Cheirdchai N.

We certify that the sraterments in this record are correct and that the test coupons ware prepared, Welded,and tested in accordance with the requirements of Section IX of the **ASME BOILERAND PRESSURE VESSEL CODE.**

Prepared: 29-9-18 (PCR) Miss.Chayanit L. (Welding Engineer)

Certified by: 29/09/18 (PCR) Mr.Kittipong M. (QA / QC Manager)

Approved by: THAVATCHAI K. 29/09/18 (Owner)

Exhibit 9.3 I

RNC RENEWCOILS ENGINEERING & SUPPLY CO.,LTD

WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)



Welder's Name: Mr.Sakon K. Identification no.: W-021

Project Name: NPP Naphtha Pygas Project

Test Description

Identificayion of WPS followed: RNC-WPS-048 ■ Test coupon ☐ Production weld Date welded: 28-Sep-18

Specification and type/grade or UNS Number of base matal(s): SA106Gr.B Thickness: 7.11 mm.

Testing Variables and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process (es)	GTAW+SMAW	GTAW/SMAW
Type (i.e.,manual,semi-autonatic) used	Manual	Manual
Backing (with/without)	Without Backing	With or Without Backing
☐ Plate ■ Pipe (enter diameter if pipe or tube)	NPS 6"	OD 2-7/8" to Unlimited
Base metal P-Number to P-Number	P-No.1 To P-No.1	P-No.1 Through P-No. 15F, P-No.34, and P-No.41 Through P-No.49
Filler metal or electrode specification (s) (SFA) (info.only)	5.18+5.1	
Filler metal or electrode classification(s) (info. Only)	ER70S-6+E7016	
Filler metal F-Number (s)	F-No.6 + 4	F-No.6 + 4/3/2/1
Consumable insert (GTAW or PAW)	N/A	N/A
Filler Metal Product Form (solid/metal or flux cored/powder)(GTAW or PAW)	Solid	Solid
Deposit thickness for each process		
Process 1 GTAW 3 layers minimum ☐ Yes ■ No.	3.00 mm.	Maximum 6.00 mm.
Process 2 SMAW 3 layers minimum ■ Yes ☐ No.	4.11 mm.	Maximum 8.22 mm.
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Type of fuel gas (OFW)	N/A	N/A
Inert gas backing (GTAW,PAW,GMAW)	Without Backing	With or Without Backing
Transfer mode (spray/globular or pulse to short circuit-GMAW)	N/A	N/A
GTAW current type/polarity (AC,DCEP,DCEN)	DCEN + DCEP	DCEN/DCEP

RESULTS

Visual examination of completed weld (QW-302.4): Acceptable

☐ Transverse face and root bends (QW-462.3(a)) ☐ Longitudinal bends (QW-462.3(b)) ☐ Side bends (QW-462.2)

☐ Pipe bend specimen, corrosion-resistant weld metal overlay [QW-462.5(c)]

☐ Plate bend specimen, corrosion-resistant weld metal overlay [QW-462.5(d)]

☐ Pipe specimen, macro test for fusion[QW-462.5(b)] ☐ Plate specimen,macro test for fusion [QW-462.5(e)]

Type	Result	Type	Result	Type	Result
-	-	-	-	-	-
-	-	-	-	-	-

Alternative Volumetric Examination Results (QW-191): Report No. WQT-S-003 RT ■ or UT ☐ (check one)

Fillet weld-fracture test (QW-181.2) - Length and percent of defects -

☐ Fillet welds in plate [QW-462.4(b)] ☐ Fillet welds in pipe [QW-462.4(c)]

Macro examination (QW-184) - Fillet size (in) - Concavity/convexity (in) -

Other:

Film or specimens avaluated by: Mr.Samart Ch. Company: PAE Technical Service Public Company Limited.

Machanacal test conducted by: - Laboratory test no. -

Welding supervised by: Mr.Cheirdchai N.

We certify that the statements in this record are correct and that the test coupons ware prepared, Welded,and tested in accordance with the requirements of Section IX of the **ASME BOILERAND PRESSURE VESSEL CODE.**

Prepared: Miss.Chayanit L. (Welding Engineer) 29-9-18 (PCP)

Certified by: 29/09/18 Approved by: THAYYATCHAI K. 29/9/18

(Owner)

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD



Welder's name. Mr. Sakon K. Identification No. 5-3307-00017-89-3 Welder No. RMC-P-W006

Identification of WPS followed RMC-WPS-002 ■ Test Coupon ☐ Production Weld

Specification of base metall (s) A106 Gr.B Thickness 4.78 mm.

Testing Condition and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process (es)	GTAW	GTAW
Type (ie : manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With/Without
☐ Plate ■ Pipe (enter diameter if pipe or tube)	Ø.1/2"	Ø.1/2" & Above
Base metal P or S-Number to P - or S-number	P No. 1	P No. 1
Filler metal or eletrode specification (s) (SFA) (info only)	5.18	5.18
Filler metal or eletrode calssification (s) (info only)	ER70S-G	ER70S-G
Filler metal F-Number (s)	6	6
Consumable insert (GTAW or PAW)	N/A	N/A
Filler type (solid / metal or flux cored / powder) (GTAW or PAW)	Solid	Solid
Deposit thickness for each process Thickness		
Grove	4.78 mm.	9.56 mm. (Max)
Each Welding Process : GTAW	4.78 mm.	9.56 mm. (Max)
Position qualified (2G, 6G, 3F, etc.)	6G	ALL
Vertical progression (uphill or downhill)	Uphill	Uphill
Shielding gas for GTAW	Argon	Argon
Insert gas backing (GTAW, PAW, GMAW)	N/A	N/A
Transfer mode (spray / globular or pulse to short circuit-GMAW)	N/A	N/A
Welding Current type / Polarity (AC,DCEP,DCEN)	DCEN	DCEN

RESULTS

Visual Examination of Completed Weld (QW-302.4) Acceptable

☐ Bend test ; ☐ Transverse root and face (QW-462.3(a)) ; ☐ Longitudinal root and face (QW-462.3 (b)) ;

☐ Plate bend specimen , corrosion-resistant overlay (QW-462.5 (d)) ; ☐ Macro test for fusion (QW-462.5 (b)) ;

☐ Side (QW-462.2) ; ☐ Pipe bend specimen, corrosion-resistant overlay (QW-462.5(c)) ;

☐ Macro test for fucion (QW-462.5 (e)) ;

Type	Result	Type	Result	Type	Result
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Alternative radiographic examination results(QW-191) Acceptable Report No RT-WQT-S-003

Fillet weld-frature test (QW-180) N/A Length and percent of defects N/A

Macro examination (QW-184) N/A Fillet size (in.) X Concavity/convexity (in.) N/A

Other tests N/A

Film or specimens evaluated by PAE Co.,Ltd. / Thaioil Inspector Radiographic Tests Conducted by PAE Co.,Ltd.

Mechanical tests conducted by N/A Laboratory test no. N/A

According to the Requirements of the Code ASME SECTION IX

We certify that the statements in this record are correct and that the test coupons ware prepared, welded, and tested in accordance with the requirements of section IX of the ASME code.

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN :			
DATE :	25-3-2019		23/3/19
	QC/QA RMC	3rd PARTY (PAE)	THAIOIL ENTS

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD



Welder's name. Mr. Sakon K. Identification No. 5-3307-00017-89-3 Welder No. RMC-P-W006

Identification of WPS followed RMC-WPS-001 ■ Test Coupon ☐ Production Weld

Specification of base metall (s) A106 Gr.B Thickness 10.97 mm.

Testing Condition and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process (es)	GTAW+SMAW	GTAW+SMAW
Type (ie : manual, semi-auto) used	Manual	Manual
Backing (metal, weld metal, double-welded, etc.)	Without	With/Without
☐ Plate ■ Pipe (enter diameter if pipe or tube)	Ø 6"	Ø 2 7/8" & Above
Base metal P or S-Number to P - or S-number	P No. 1	P No. 1
Filler metal or eletrode specification (s) (SFA) (info only)	5.18(GTAW) + 5.1(SMAW)	5.18(GTAW) + 5.1(SMAW)
Filler metal or eletrode calssification (s) (info only)	ER70S-G(GTAW)+E7016(SMAW)	ER70S-G(GTAW)+E7016(SMAW)
Filler metal F-Number (s)	6(GTAW) + 4(SMAW)	6(GTAW) + 4(SMAW)
Consumable insert (GTAW or PAW)	N/A	N/A
Filler type (solid / metal or flux cored / powder) (GTAW or PAW)	Solid	Solid
Deposit thickness for each process Thickness		
Grove	10.97 mm.	21.94 mm. (Max)
Each Welding Process : GTAW + SMAW	3 mm.(GTAW) + 7.97(SMAW)	6 mm.(GTAW) + 15.94(SMAW)(Max)
Position qualified (2G, 6G, 3F, etc.)	6G	All
Vertical progression (uphill or downhill)	Uphill	Uphill
Shielding gas for GTAW	Argon	Argon
Insert gas backing (GTAW, PAW, GMAW)	N/A	N/A
Transfer mode (spray / globular or pulse to short circuit-GMAW)	N/A	N/A
Welding Current type / Polarity (AC,DCEP,DCEN)	DCEN/DCEP	DCEN/DCEP

RESULTS

Visual Examination of Completed Weld (QW-302.4) Acceptable

☐ Bend test ; ☐ Transverse root and face (QW-462.3(a)) ; ☐ Longitudinal root and face (QW-462.3 (b)) ;

☐ Plate bend specimen , corrosion-resistant overlay (QW-462.5 (d)) ; ☐ Macro test for fusion (QW-462.5 (b)) ;

☐ Side (QW-462.2) ; ☐ Pipe bend specimen, corrosion-resistant overlay (QW-462.5(c)) ;

☐ Macro test for fucion (QW-462.5 (e)) ;

Type	Result	Type	Result	Type	Result
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Alternative radiographic examination results(QW-191) Acceptable Report No RT-WQT-S-006

Fillet weld-frature test (QW-180) N/A Length and percent of defects N/A

Macro examination (QW-184) N/A Fillet size (in.) X Concavity/convexity (in.) N/A

Other tests N/A

Film or specimens evaluated by PAE Co.,Ltd. / Thaioil Inspector Radiographic Tests Conducted by PAE Co.,Ltd.

Mechanical tests conducted by N/A Laboratory test no. N/A

According to the Requirements of the Code ASME SECTION IX

We certify that the statements in this record are correct and that the test coupons ware prepared, welded, and tested in accordance with the requirements of section IX of the ASME code.

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN :			
DATE :	23/3/2019		23/3/19
	QC/QA RMC	3rd PARTY (PAE)	THAIOIL, ENTS

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name: Mr. Sakon Kamma | Clock number: - | Stamp no: SSUT-002

Welding process(es) used: GTAW | Type: Manual

Identification of WPS followed by welder during welding of test coupon: P-15E.15E-G-001

Base material(s) welded: ASTM A106 Gr.B | Thickness: 8.74 mm

Manual or Semiautomatic Variables for Each Process (QW-350)	Actual Values With Out	Range Qualified With Out/With Backing
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)		
ASME P-No. 15E to ASME P-No. 15E (QW-403)	P-No.15E to P-No.15E	P-No.15E through P-No.15E
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.28 Classification (QW-404)	ER90S-G	ER90S-G
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	8.74 mm	17.84 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	Actual Values	Range Qualified
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305): Accepted (WQT-089)

(For alternative qualification of groove welds by radiography): Thai NonDrestructive testing Public company Limited

Fillet Weld -- Fracture test: N/A | Length and percent of defects: N/A in.

Macro test fusion: N/A | Fillet leg size: N/A in. X N/A in. | Concavity/convexity: N/A in.

Welding test conducted by: Mr. Suriyan S. RT II Thai NonDrestructive testing Public company Limited

Mechanical test conducted by: N/A | Laboratory test no: N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code

Organization: Toyo-Thai Corporation Public CO., LTD

Date: 1-Feb-2015

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name: Mr. Sakon Kamma | Clock number: - | Stamp no.: SSUT-002
Welding process(es) used: GTAW+SMAW | Type: Manual
Identification of WPS followed by welder during welding of test coupon: P-15E.15E-GS-001
Base material(s) welded: ASTM A106 Gr.B | Thickness: 10.97 mm

Manual or Semiautomatic Variables for Each Process (QW-350)	Actual Values	Range Qualified
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 15E to ASME P-No. 15E (QW-403)	P-No.15E to P-No.15E	P-No.15E through P-No.15E
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 6"	NPS 2.1/2" and over
Filler metal specification (SFA) 5.28 + 5.5 Classification (QW-404)	ER-90S-G+E9016-G	ER-90S-G+E9016-G
Filler metal F-No.	F-No.6+4	F-No.6+4
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3 mm/7.97 mm	6 mm/15.94 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN/DCEP	DCEN/DCEP

Machine Welding Variables for the Process Used (QW-360)	Actual Values	Range Qualified
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305): Accepted (WQT-090)
(For alternative qualification of groove welds by radiography): Thai NonDrestructive testing Public company Limited
Fillet Weld -- Fracture test: N/A | Length and percent of defects: N/A in.
Macro test fusion: N/A | Fillet leg size: N/A in. X N/A in. | Concavity/convexity: N/A in.
Welding test conducted by: Mr. Suriyan S. | RT II: Thai NonDrestructive testing Public company Limited
Mechanical test conducted by: N/A | Laboratory test no.: N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization: Toyo-Thai Corporation Public CO., LTD

Date: 1-Feb-2015

This form (E0308) may be obtained from the Order Dept. ASME, 22 Law Drive, Box 2350, Fairfield, NJ 07007-2300

PNG LNG PROJECT
HIDES GAS CONDITIONING PLANT

WELDING OPERATOR / WELDER CERTIFICATE REPORT

WELDER'S NAME:	MR.SAKON KUMMA	ID NO:	WP225
TEST COUPON NO:	COUPON-005	TEST DATE:	31 January 2013
WPS OR PQR NO:	P1-1-2	PROCESS:	GTAW/SMAW
BASE MATERIAL GRADE:	A106-B	TYPE:	Manual
ACCEPTANCE CRITERIA:	ASME SECTION IX		

ACTUAL VALUES USED IN QUALIFICATION			LIMITS OF QUALIFICATION
Joint Data: Joint Type (butt etc)	BW		Butt ☑ Fillet ☑ Overlay ☐ Build-up ☐
Backing (insert etc)	Without		With ☐ With or Without ☑
Deposit Thickness: Process 1: GTAW	3 mm		Max. 6 mm
Process 2: SMAW	15.26 mm		Max. Unlimited mm
P-No	P1		P1 ☑ P8 ☐ P10H ☐
Type (Plate, Pipe)	Pipe		Plate ☑ Pipe ☑
Diameter	6 " NPS		2 1/2 " NPS and Over
Filler:	Process1	Process2	
Specification	SFA5.18	SFA5.1	(info. Only)
Classification	ER70S-6	E7016	(info. Only)
F-No.	6	4	F-No.6 + F-No.4

Welding Position	6G	All	Flat	Hor	Vert	O/head	N/A
	Butt - plate	☑	☐	☐	☐	☐	☐
	Butt - pipe	☑	☐	☐	☐	☐	☐
	Fillet:	☑	☐	☐	☐	☐	☐
	Overlay:	☐	☐	☐	☐	☐	☑
	Build-up:	☐	☐	☐	☐	☐	☑
Welding Progression	Uphill	Uphill ☑	Downhill ☐				

Gas Type:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Shielding	Argon	N/A		
Insert Backing	Without	Without	With ☐ With or Without ☑	With ☐ With or Without ☑
Electrical:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Transfer Mode	N/A	N/A	N/A	N/A
Current	DC	AC	DC	AC or DC
Polarity	EN	-	EN	EP

VISUAL ACCEPTANCE OF THE TEST SPECIMEN

Mr.Chaiyasit Heebkeaw		31-1-2013
NAME	SIGNATURE	DATE

TEST RESULT SUMMARY

DESCRIPTION	RADIOGRAPHY	BEND TESTS	MACRO	FILLET BREAK
Testing Laboratory	SK NDT	N/A	N/A	N/A
Test Lab Job No.	N/A	N/A	N/A	N/A
Report No.	RT-WQT-457	N/A	N/A	N/A
Test Result	Accept	N/A	N/A	N/A

STATEMENT OF COMPLIANCE:

We certify that the statements in this record are correct and that the conpons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

REMARK:

-

EXXONMOBIL 03 2013 W. REANTASO QUALITY ASSURANCE

COMPLETED BY	Prepared by	Review by	Approved by
COMPANY	SINO-THAI	SINO-THAI	CBI
SIGNATURE	Sign:	Sign:	
NAME	Name: M.Kamolitas	Name: P.Manat	G.STREICHER Samyos Phimsen Review Witness
DATE	Date: 27-2-13	Date: 27/02/2013	2/3/13

SINO-THAI

PNG LNG PROJECT
HIDES GAS CONDITIONING PLANT

CBI // CLOUGH
PNG LNG

WELDING OPERATOR / WELDER CERTIFICATE REPORT

WELDER'S NAME:	MR.SAKON KUMMA	ID NO:	WP225
TEST COUPON NO:	COUPON-007	TEST DATE:	10 October 2012
WPS OR PQR NO:	P8-8-3.1	PROCESS:	GTAW/SMAW
BASE MATERIAL GRADE:	A106-B	TYPE:	Manual
ACCEPTANCE CRITERIA:	ASME SECTION IX		

ACTUAL VALUES USED IN QUALIFICATION		LIMITS OF QUALIFICATION
Joint Data: Joint Type (butt etc)	BW	Butt ☑ Fillet ☑ Overlay ☐ Build-up ☐
Backing (insert etc)	Without	With ☐ With or Without ☑
Deposit Thickness: Process 1: GTAW	3 mm	Max. 6 mm
Process 2: SMAW	15.26 mm	Max. Unlimited mm
P-No	P8	P1 ☐ P8 ☑ P10H ☐
Type (Plate, Pipe)	Pipe	Plate ☑ Pipe ☑
Diameter	6 " NPS	2 1/2 " NPS and Over

Filler:	Process1	Process2	
Specification	SFA5.9	SFA5.4	(info. Only)
Classification	ER316L	E315L-15	(info. Only)
F-No.	6	5	F-No.6 + F-No.5

Welding Position	6G	All	Flat	Hor	Vert	O/head	N/A
	Butt - plate	☑	☐	☐	☐	☐	☐
	Butt - pipe	☑	☐	☐	☐	☐	☐
	Fillet:	☑	☐	☐	☐	☐	☐
	Overlay:	☐	☐	☐	☐	☐	☑
	Build-up:	☐	☐	☐	☐	☐	☑
Welding Progression	Uphill	Uphill	☑	Downhill	☐		

Gas Type:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Shielding	Argon	N/A		
Insert Backing	With	Without	With ☑ With or Without ☐	With ☐ With or Without ☑

Electrical:	Process1	Process2	Process 1: GTAW	Process 2: SMAW
Transfer Mode	N/A	N/A	N/A	N/A
Current	DC	DC	DC	DC
Polarity	EN	EP	EN	EP

VISUAL ACCEPTANCE OF THE TEST SPECIMEN

Mr.Nopporn Somkumsri		10-10-2012
NAME	SIGNATURE	DATE

TEST RESULT SUMMARY

DESCRIPTION	RADIOGRAPHY	BEND TESTS	MACRO	FILLET BREAK
Testing Laboratory	SK NDT	N/A	N/A	N/A
Test Lab Job No.	N/A	N/A	N/A	N/A
Report No.	RT-WQT-276	N/A	N/A	N/A
Test Result	Accept	N/A	N/A	N/A

STATEMENT OF COMPLIANCE:
We certify that the statements in this record are correct and that the conpons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

REMARK:
-

COMPLETED BY	Prepared by	Review by	Approved by
COMPANY	SINO-THAI	SINO-THAI	CBI
SIGNATURE	Sign:	Sign:	
NAME	Name: M.Kamolitas	Name: P.Manat	J.G. STREICHER
DATE	Date: 6-11-2012	Date: 9/11/2012	

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-001

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G(GTAW)+E7016 (SMAW)	ER70S-G(GTAW)+E7016 (SMAW)
S.F.A	5.18(GTAW) + 5.1(SMAW)	5.18(GTAW) + 5.1(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current polarity	DC	DC
Transfer mode	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Notes	N/A	N/A
	N/A	N/A

GUIDED BEND TEST			
Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST			
Dete :	13-Jun-14	Report No.	RT-WQT-005
Result :	Acceptable		

FILLET WELD TEST

Fracture	N/A		Macro	N/A			
		Concavity	N/A	Convexity	N/A	Result	N/A
Fillet size	N/A						

Orter test

Welding test conducted by: PAE / THAI OIL / INSPECTOR

Radiographic tests conducted by: PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	16/6/2014	27 Jun 2014	27/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL, ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO. F-2101&F2251 Convection Bank Repleacment — Samples welded on 16-Jun-14

WELDER NAME MR. SAKON K. — Welder No. RMC-W-011

COMPANY RAYONG MAINTENANCE & CONTRACTING CO.,LTD — WPS. RMC-WPS-002

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW	GTAW
Type	Manual	Manual
Base metal	A106 Gr.B	A106 Gr.B
ASME P No.	P No. 1	P No. 1 To P No.1
Backing	Without	With/Without
THICKNESS (mm)		
Groove	4.78 mm.	1.58mm. - 9.56 mm. (MAX)
Weld metal for each welding process	4.78 mm.	9.56 mm. (Max)
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 0.5"	Ø 0.5" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER70S-G	ER70S-G
S.F.A	5.18	5.18
F No.	6	6
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current polarity	DC DCEN	DC DCEN
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST			
Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST

Dete : 13-Jun-14 Report No. RT-WQT-015

Result : Acceptable

FILLET WELD TEST

Fracture N/A Macro N/A

Concavity N/A Convexity N/A Result N/A

Fillet size N/A

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR — Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	19/6/2014	27-6-2014	30/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-009

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	SA 335 P5	Any Assigned P No. Above
ASME P No.	P No. 5B	P No.3,P No.4,P No.5
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER80S-B6 (GTAW)+E8016-B6 (SMAW)	ER80S-B6 (GTAW)+E8016-B6 (SMAW)
S.F.A	5.28(GTAW) + 5.5(SMAW)	5.28(GTAW) + 5.5(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current polarity	DC	DC
	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST			
Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST

Dete : 13-Jun-14 Report No. RT-WQT-030

Result : Acceptable

FILLET WELD TEST

Fracture N/A Macro N/A

Concavity N/A Convexity N/A Result N/A

Fillet size N/A

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	16/6/2014	27-6-2014	30/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

RECORD OF WELDER PERFORMANCE QUALIFICATION



PROJECT OR WORK ORDER NO.	F-2101&F2251 Convection Bank Repleacment	Samples welded on	16-Jun-14
WELDER NAME	MR. SAKON K.	Welder No.	RMC-W-011
COMPANY	RAYONG MAINTENANCE & CONTRACTING CO.,LTD	WPS.	RMC-WPS-007

VARIABLES	RECORD OF TEST	QUALIFICATION RANGE
PROCESS	GTAW + SMAW	GTAW + SMAW
Type	Manual	Manual
Base metal	SA 335 P11	Any Assigned P No. Above
ASME P No.	P No. 4	P No.3,P No.4,P No.5
Backing	Without	With/Without
THICKNESS (mm)		
Groove	7.11 mm.	4.78mm. - 14.22mm.(MAX)
Weld metal for each welding process	3 mm.(GTAW)+4.11 mm. (SMAW)	6.00 mm.(GTAW) + 8.22 mm. (SMAW)Max
Fillet	N/A	All
DIAMETER(mm)		
Groove	Ø 6"	Ø2 7/8" & Above
Fillet	N/A	All
FILLER METAL		
AWS class	ER80S-G (GTAW)+E8016-B2 (SMAW)	ER80S-G (GTAW)+E8016-B2 (SMAW)
S.F.A	5.28(GTAW) + 5.5(SMAW)	5.28(GTAW) + 5.5(SMAW)
F No.	6 (GTAW)+ 4(SMAW)	6 (GTAW)+ 4(SMAW)
Position	6G	All
Progression	Uphill	Uphill
Shielding gas	Argon	Argon
Backing gas	N/A	N/A
Current polarity	DC	DC
	DCEN(GTAW) + DCEP(SMAW)	DCEN(GTAW) + DCEP(SMAW)
Transfer mode	N/A	N/A
Notes	N/A	N/A

GUIDED BEND TEST			
Number & Type	Result	Number & Type	Result
N/A	N/A	N/A	N/A

RADIOGRAPHIC TEST

Dete : 13-Jun-14 Report No. RT-WQT-023

Result : Acceptable

FILLET WELD TEST

Fracture N/A Macro N/A

Concavity N/A Convexity N/A Result N/A

Fillet size N/A

Orter test

Welding test conducted by PAE / THAI OIL / INSPECTOR Radiographic tests conducted by PAE TECHNICAL SERVICE CO.,LTD

We certify that the statement in this record are correct and that samples were prepared and tested according to the requirements of the Code ASME IX Sect. (QW-191.2)

	PREPARED BY	INSPECTED BY	APPROVED BY
SIGN			
DATE	14/6/2014	23/6/2014	23/6/14
	QC/QA RMC	THAI OIL , Welding Inspector	THAI OIL , ENTS

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-8.8-G-001**
Base material(s) welded **ASTM A312 TP304** Thickness **3.91 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 8 to ASME P-No. 8 (QW-403)	P-No.8 to P-No.8	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.9 Classification (QW-404)	ER-308L	ER-308L
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3.91 mm	7.82 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	Argon 99.99%	Argon 99.99%
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness
Signature
Date 11 Sep' 14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-009)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW+SMAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-1.1-GS-001**
Base material(s) welded **ASTM A106 Gr.B** Thickness **10.97 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 1 to ASME P-No. 1 (QW-403)	P-No.1 to P-No.1	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 6"	NPS 2.1/2" and over
Filler metal specification (SFA) 5.18+5.1 Classification (QW-404)	ER-70S-G+E7016	ER-70S-G+E7016
Filler metal F-No.	F-No.6+4	F-No.6+4
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	3 mm/7.97 mm	6 mm/15.94 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN/DCEP	DCEN/DCEP

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness Signature.. Date.. 11 Sep '14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-008)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

TOYO-THAI CORPORATION PUBLIC COMPANY LIMITED



QW-484 MANUFACTURER'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TEST (WQT)

Welder's name **Mr. Sakon Kamma** Clock number - Stamp no. **PPTC-002**
Welding process(es) used **GTAW** Type **Manual**
Identification of WPS followed by welder during welding of test coupon **P-1.1-G-001**
Base material(s) welded **ASTM A106 Gr.B** Thickness **5.54 mm**

Manual or Semiautomatic Variables for Each Process (QW-350)	**Actual Values**	**Range Qualified**
Backing (metal, weld metal, weld from both sides, flux, etc.))QW-402)	With Out	With Out/With Backing
ASME P-No. 1 to ASME P-No. 1 (QW-403)	P-No.1 to P-No.1	P-No.1 through P-No. 15F,P-No.34,and P-No. 41 through P-No.49
( ) Plate ( ) Pipe (enter diameter, if pipe)	NPS 2"	NPS 3/4" and over
Filler metal specification (SFA) 5.18 Classification (QW-404)	ER-70S-G	ER-70S-G
Filler metal F-No.	F-No.6	F-No.6
Consumable insert for GTAW or PAW	N/A	N/A
Weld deposit thickness of each welding process	5.54 mm	11.08 mm
Welding position (1G, 5G, etc.) (QW-405)	6G	ALL
Progression (uphill/downhill)	Uphill	Uphill
Backing gas for GTAW, PAW, or GMAW,: fuel gas for OFW (QW-408)	N/A	With or With Out
GMAW transfer mode (QW-409)	N/A	N/A
GTAW welding current type/polarity	DCEN	DCEN

Machine Welding Variables for the Process Used (QW-360)	**Actual Values**	**Range Qualified**
Direct/Remote visual control	N/A	N/A
Automatic voltage control (GTAW)	N/A	N/A
Automatic joint tracking	N/A	N/A
Welding position (1G, 5G, etc.)	N/A	N/A
Consumable insert	N/A	N/A
Backing (metal, weld metal, welded from both sides, flux, etc)	N/A	N/A

QA/QC ☑ Review ☐ Witness
Signature
Date 11 Sep 14

Guide Bend Test Results

Guided Bend Tests Type ( )QW-462.2 (Side) Results ( )QW-462.3(a) (Trans. R & F) Type ( )QW-462.3(b) (Long. R & F) Results

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Radiographic test results (QW-304 and QW-305) Accepted (WQT-007)
(For alternative qualification of groove welds by radiography) Thai Non Drestructive testing Public company Limited
Fillet Weld -- Fracture test N/A Length and percent of defects N/A in.
Macro test fusion N/A Fillet leg size N/A in. X N/A in. Concavity/convexity N/A in.
Welding test conducted by Mr. Suriyan S. RT II Thai Non Drestructive testing Public company Limited
Mechanical test conducted by N/A Laboratory test no. N/A

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirement of Section IX of the ASME Code.

Organization Toyo-Thai Corporation Public CO., LTD

Date 8 September 2014 by

TTCL SHOP QA/QC

This form (E0008) may be obtained from the Order Dept. ASME, 22 Law Orive, Box 2300, Fairfield, NJ 07007-2300

Murray & Roberts
Power & Energy
Engineers and Constructors

Douglas Roberts Centre
22 Skeen Boulevard
Bedfordview, 2007
P.O. Box 3040
Bedfordview, 2008
South Africa
Tel: + 27 11 456 1000
Fax: + 27 86 206 6794
Email: info@murrob.com
Web: www.murrob.com

CERTIFICATE OF SERVICE

This is to certify that we employed the person whose details are provided below:

NAME: Sakon

SURNAME: Kamma

ID NUMBER: AA5502164

OCCUPATION: A class welder

DATE OF EMPLOYMENT: 30 September 2015

TERMINATION DATE : 28 November 2017

REASON FOR TERMINATION: End of Contract

EMPLOYEE NUMBER: 6201075

RATE: R 17630.71 PM

ISSUED AT: Medupi

DATE: 04 December 2017

Murray & Roberts
Murray & Roberts Power & Energy
a division of Murray & Roberts Limited
Vat: 4630107995
Co. Reg: 1979 003324 06
P. O. Box 3040
Bedfordview, 2008

For and behalf of Murray & Roberts Power & Energy

Company Stamp

Murray & Roberts Power & Energy
A trading division of Murray & Roberts Limited
Divisional Directors: ST Harrison[1] (Managing Director) AP Plantema

Murray & Roberts Limited Registration No. 1979/003324/06
Directors: HJ Laas (Chairman & Managing Director) PK Bennett[2] AJ Bester O Fenn[1] JN Govender ST Harrison[1] IW Henstock WT Mdluli
Secretary: L Kok

[1]British [2]Australian

ULTIMATE TECHNOLOGY & SERVICE CO.,LTD.

WELDER, WELDING OPERATOR, OR TRACK WELDER QUALIFICATION TEST RECORD



Type of Welder : Manual

Name : Mr. Sakon K. Identification No. : ST-102

Welding Procedure Specification No. : HT-102R Rev. : 0 Date : 27-Nov-04

Variables	Record Actual Values Used in Qualification	Qualification Range
Process / Type [Table 4.10, Item (1)]	SMAW / Manual	SMAW / Manual
Electrode (single or multiple)[Table 4.10, Item (8)]	E-7016U / E-7016	E-7016U / E-7016
Current / Polarity	DCRP	DCRP
Position [Table 4.10, Item (4)]	6GR	All
Weld Progression [Table 4.10, Item (6)]	Up - Hill	Up - Hill
Backing (YES or ~~NO~~) [Table 4.10, ~~Item (7)~~]	No	With and Without
Material Spec.	Gr No. 1 to Gr No. 1	Gr No. 1 to Gr No. 1
Thickness : (Plate)		
Groove	N/A	4.8 mm. to Unlimited
Fillet	N/A	Unlimited
Thickness : (Pipe)		
Groove	13.27 mm.	4.8 mm. to Unlimited
Fillet	All	All
Diameter : (Pipe)	8"	≥ 3" OD to Unlimited
Groove	Yes	Yes
Fillet	N/A	Unlimited
Filler metal [Table 4.10, Item (3)]		
Spec. No.	5.1	5.1 & 5.5
Class		
F-No. [Table 4.10, Item (2)]	F No. 4	F No. 4 and Lower
Gas/Fulx Type [Table 4.10, Item (3)]	N/A	
Other	N/A	

VISUAL INSPECTION (4.8.1)

Acceptable YES or NO (Yes)

Guided Bend Test Result (4.30.5)

Type	Result	Report No.	Type	Result	Report No.
6SB-1	No open defect	BT-002/04	6SB-3	No open defect	BT-002/04
6SB-2	No open defect	BT-002/04	6SB-4	No open defect	BT-002/04

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance : N/A Fillet Size : N/A

Fracture Test Root Penetration : N/A Macroetch : N/A

(Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspection by : Mr. Amorn P. Test Number : 006/04

Organization : COTL Date : 27-Nov-04

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification			Film Identification		
Report No.	Results	Remarks	Report No.	Results	Remarks
001	ACC	-	-	N/A	-

Interpreted by : - Test Number : -

Organization : - Date : -

We, the undersigned, certify that the statement in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, [2000 (year)] Structural Welding Code-Steel.

Manufacturer or Contractor : Authorized By :

Formed : 27 Nov '04 Date : 2/12/04

Chevron Texaco Chevron Offshore (Thailand) Ltd.

WELDER QUALIFICATION TEST RECORD

As per AWS D1.1



Name : Mr.Sakon Kamma ID : 5330700017893

Identification no. : SC-1501

Using WPS No. : WQT-S001

Above Welder is qualified for the following ranges

Welding variables	Actual values	Qualification Range
Welding Process(es)	SMAW	SMAW
Type (ie; manual, semi-automatic) used	Manual	Manual
Backing (material, weld metal, double-welded, etc.)	PIPE	Without backing
Joint type	Single V,Butt weld	
BACKING MATERIAL	None	
Base metal		
Plate / Pipe (enter diameter if pipe or tube)		
Specification	A 106 Gr.B.	
Group (Table 3.1)	I	I through III
Thickness	7.11 mm/14.27 mm Thk.	5mm. to Unlimited
Diameter	6"	100mm. And above
Filler metal		
Trade Name	KOBELCO/LB52-18	
AWS Class	E7018	
SFA-No.	A5.1	
F-No.	4	1 through 4
Position	6 GR	ALL Note 1,2,3
Weld progression	Vertical Uphill	Vertical Uphill
Backing gas	N/A	
Electrical characteristics		
Current type/ polarity (AC , DCEP)	Direct Current (+) / Electrode Pisitive	

Visual Inspection : Acceptable

Method of Testing

Guided bend test	Fracture Test	Macro Test	Radiographic Test
NA	NA	NA	RT-H-TECH-1289/10 3-May-10

Others : NA

We certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of AWS D1.1 2006

APPROVED BY:

CIS.Co.,Ltd.
Date :

CUEL Limited
Date : 13 MAY 2010

ABS BANGKOK
Date : 26 MAY 2010

Chevron 8
Date : 20 MAY 2010

Notes

1. Not qualified for joints welded from one side without backing, or welded from both sides without backgouging.
2. Not qualifird for welds having groove angles less than 30 (Refer section 4.12.42).
3. Also qualified to make PJP and fillet welds in all thickness and diameter of any size.

Welder/Welding Operator Performance Qualification Record (WPQR)

Bahrain LNG

Bahrain LNGIT Project

GS E&C

Project Name:	Baharain LNG Import Terminal Project				
Discipline:	Piping	Contractor:	GPS / GS	Subcontractor:	CUEL



RFI No. :	RFI-GPS-RGPF-0953	WPQ Report No. :	GPS-189
Date :	22-Jan-18	Date of Coupon Welded	23-Jan-18

Type of Test: ■ Test Coupon ☐ Production Weld

Welding Type: ■ Manual ☐ Semi-Auto ☐ Automatic ☐ Other

Welder's Name and Stamp No.	Mr.Sakon Kamma	/	SC-3892
Welder Date of Birth and Nationality	ID 5330700017893	/	Thai
Code / Testing Std.	ASME BPVC Sec.IX : 2015 Ed.		

TEST CONDITION

Welding Procedure Specification No.	BLNGGPS(P No.34 + P No.34)-GTAW-036		
Base Material Welded	ASTM B466 / UNS C70600	ASTM B466 / UNS C70600	
Welding Process	GTAW		

Variables	Actual Value		Range Qualified
Pipe Outside Diameter	Pipe 2"		Min. O.D. 1" - Unlimited
Base Metal Thickness	5.54 mm		Max. 11.08 mm
Weld Deposit Thickness for Each Process	GTAW	-	GTAW
	5.54 mm	-	Max. 11.08 mm
Welding Position	6G		
Backing (With or Without)	Without Backing		
P-No. (or Groups)	P No. 34	to	P No. 34
Filler Metal Spec. / F - No. / Classification)	SFA A5.7 /	F. 34 /	ERCuNi
Progression (Uphill / Downhill)	Uphill		
Welding Current Type / Polarity	DCEN		
Joint Type	Butt Joint- Single Vee		
Shielding Gas	Ar 99.99%		

NON-DESTRUCTIVE and/or DESTRUCTIVE TEST RESULTS

Type of Test	Performed and Result		
Visual Examination Result	■ Accept	☐ Reject	☐ N/A
Radiographic Test Result	■ Accept	☐ Reject	☐ N/A
Fracture Test Result	☐ Accept	☐ Reject	☐ N/A
Macro Test Result	☐ Accept	☐ Reject	☐ N/A
Guided - Bend Test Result	☐ Accept	☐ Reject	☐ N/A

Radiographic Test Report No. : WQT / RT / 083 / 17 Conducted by : TNDT

Welding and Mechanical Test Conducted by : None

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of the applicable code.

	Prepared	Checked			Approved
	Subcontractor	TPI	Contractor Const.	Contractor QC	BLNG
Name	Mr. Apichart Thong-on				
Signature					
Date					

CUEL INSPECTION SERVICE

SINO-THAI

PNG LNG PROJECT
HIDES GAS CONDITIONING PLANT

CBI / CLOUGH
PNG LNG

WELDING OPERATOR / WELDER CERTIFICATE REPORT

WELDER'S NAME:	MR.SAKON KUMMA	ID NO:	WP225
TEST COUPON NO:	COUPON-014	TEST DATE:	14 November 2012
WPS OR PQR NO:	P10H-10H-1	PROCESS:	GTAW
BASE MATERIAL GRADE:	A790-S31803	TYPE:	Manual
ACCEPTANCE CRITERIA:	ASME SECTION IX		

ACTUAL VALUES USED IN QUALIFICATION			LIMITS OF QUALIFICATION
Joint Data: Joint Type (butt etc)	BW		Butt ☑ Fillet ☑ Overlay ☐ Build-up ☐
Backing (insert etc)	With		With ☑ With or Without ☐
Deposit Thickness: Process 1: GTAW	8.74	mm	Max. 17.48 mm
Process 2: -	-	mm	Max. - mm
P-No	P10H		P1 ☐ P8 ☐ P10H ☑
Type (Plate, Pipe)	Pipe		Plate ☑ Pipe ☑
Diameter	2 " NPS		3/4 " NPS and Over

Filler:	Process1	Process2	
Specification	SFA5.9	-	(info. Only)
Classification	ER2209	-	(info. Only)
F-No.	6	-	F-No.6

		All	Flat	Hor	Vert	O/head	N/A
Welding Position	6G						
	Butt - plate	☑	☐	☐	☐	☐	☐
	Butt - pipe	☑	☐	☐	☐	☐	☐
	Fillet	☑	☐	☐	☐	☐	☐
	Overlay:	☐	☐	☐	☐	☐	☑
	Build-up:	☐	☐	☐	☐	☐	☑
Welding Progression	Uphill	Uphill	☑	Downhill	☐		

Gas Type:	Process1	Process2	Process 1: GTAW	Process 2: -
Shielding	Argon	N/A		
Insert Backing	With	N/A	With ☑ With or Without ☐	With ☐ With or Without ☐

Electrical:	Process1	Process2	Process 1: GTAW	Process 2: -
Transfer Mode	N/A	-	N/A	-
Current	DC	-	DC	-
Polarity	EN	-	EN	-

VISUAL ACCEPTANCE OF THE TEST SPECIMEN

Mr.Chaiyasit Heebkeaw	Chaiyasit	14-11-2012
NAME	SIGNATURE	DATE

TEST RESULT SUMMARY

DESCRIPTION	RADIOGRAPHY	BEND TESTS	MACRO	FILLET BREAK
Testing Laboratory	SK NDT	N/A	N/A	N/A
Test Lab Job No.	N/A	N/A	N/A	N/A
Report No.	RT-WQT-341	N/A	N/A	N/A
Test Result	Accept	N/A	N/A	N/A

STATEMENT OF COMPLIANCE:

We certify that the statements in this record are correct and that the conpons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

REMARK:

-

Exxonmobil QUALITY ASSURANCE

COMPLETED BY	Prepared by	Review by	Approved by
COMPANY	SINO-THAI QC 026	SINO-THAI QC 023	SU REPRESENTATIVE Somsak Phimsen J.GS/RECHER
SIGNATURE	Sign:	Sign:	
NAME	Name: M.Kamoltas	Name: P.Manat	
DATE	Date: 28-1-2013	Date: 28/01/2013	30/1/13

QUALIFIED WELDER CARD

Project	:	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)
Company	:	RAYONG MAINTENANCE & CONTRACTING CO.,LTD
Name	:	Mr.Sakon Kamma
No.	:	RMC-W-006
Issue Date	:	30-Jun-25
Expire Date	:	30-Dec-25



Detail

Range of qualified	:			
Position	:	ALL		
Pipe size dia	:	Ø1/2" & Above	1" OD & Above	Ø2 7/8" & Above
Thick	:	7.46 mm ,	N/A ,	14.22 mm
Process	:	GTAW ,	N/A ,	GTAW+SMAW
Material	:	P No.6 ,7,8,10,11 ,	N/A ,	P No.6 ,7,8,10,11
Inspector		Mitichai P. (for Welding Inspector)	Date	06/07/25
ENTS		(for Inspection Manager)	Date	7/7/25

QUALIFIED WELDER CARD

Project	:	Maintenance For Hot Work Repair on MTA (TLB , TPX , LABIX)
Company	:	RAYONG MAINTENANCE & CONTRACTING CO.,LTD
Name	:	Mr.Sakon Kamma
No.	:	RMC-W-006
Issue Date	:	14-Jun-25
Expire Date	:	14-Dec-25



Detail

Range of qualified	:			
Position	:	ALL		
Pipe size dia	:	Ø1/2" & Above	1" OD & Above	Ø2 7/8" & Above
Thick	:	9.56 mm ,	N/A ,	21.94 mm
Process	:	GTAW ,	N/A ,	GTAW+SMAW
Material	:	P1 ,	N/A ,	P1 ,
Inspector		Mitichai P. (for Welding Inspector)	Date	29/06/2029
ENTS		(for Inspection Manager)	Date	25/6/25

CTCI



銲工資格檢定卡
銲工編號: F-W127
銲工姓名: 沙坤
身分證編: AD0216356
出生日期: 1979/09/26
統包商簽章:
台電核章:
檢定標準:
■ ASME Sec.IX
□ AWS D1.1
□ 其它:
發卡日期: 113.8.19

檢定內容: 沙坤 F-W127 ASME Sec.IX	
銲接方法:	GTAW
銲接姿勢及↑↓立銲:	↑6G
有無背襯:	無
檢定母材材質:	P1
檢定母材管徑:	2"
檢定母材板厚度:	8.74mm
檢定銲材銲接厚度:	8.74mm
合格母材材質範圍:	P1 TO P15F
合格管徑範圍:	NPS 1"以上
合格厚度範圍:	UP TO 17.48mm
銲材 F-NO.:	6(低合金鋼)
檢定日期:	113.07.30

CTCI



銲工資格檢定卡
銲工編號: F-W127
銲工姓名: 沙坤
身分證編: AD0216356
出生日期: 1979/09/26
統包商簽章:
台電核章:
檢定標準:
■ ASME Sec.IX
□ AWS D1.1
□ 其它:
發卡日期: 113.8.19

檢定內容: 沙坤 F-W127 ASME Sec.IX		
銲接方法:	GTAW	GTAW
銲接姿勢及↑↓立銲:	↑6G	↑6G
有無背襯:	無	無
檢定母材材質:	P8 TO P8	P8 TO P8
檢定母材管徑:	4"	2"
檢定母材板厚度:	6.0mm	3.9mm
檢定銲材銲接厚度:	6.0mm	3.9mm
合格母材材質範圍:	P1 TO P15F	P1 TO P15F
合格管徑範圍:	NPS 2½"以上	NPS 1"以上
合格厚度範圍:	UP TO 12.0mm	UP TO 7.8mm
銲材 F-NO.:	6(不銹鋼)	6(不銹鋼)
檢定日期:	113.07.29	113.07.29

TRITON
ENGINEERING AND CONSTRUCTION

WELDER IDENTIFICATION CARD



Welder Name.:	Mr. Sakon Kamma
Stamp No./Welder No.:	WD-005

PIPELINE CONSTRUCTION NORTHERN BAFS PIPELINE TRANSPORTATION PHASE III (ANGTHONG-SARABURI)

This is to certify that the above person is qualified in accordance with the applicable Code
API 1104 Welding of Pipelines and Related Facilities Ed. 2021

Company :	PIPELINE CROSSING ENGINEERING (THAILAND) CO., LTD.
Test Place :	PCE Shop
Issued Date :	31 March 2025

THIS WELDER HAS QUALIFIED AS THE FOLLOWINGS

Base Material	Filler Metal Group	Position Qualification	Welding Process	Nominal pipe size	Backing or Backgouging	Thickness Range Qualified
API 5L Gr.X60 PSL2	5, 3	6G	GTAW+SMAW	12"	Without Backing	3.9 - 16 mm.

Note : Qualified for WPS-PCE-PL-001

We certify that this welder has passed the welding performance qualification test carried out by
PIPELINE CROSSING ENGINEERING (THAILAND) CO., LTD.

Inspected by :	Review / Approved by	Review / Approved by
Sign: Wanchai	Sign: Suor P	Sign:
Name: NANNACHAI B.	Name: Suor P	Name:
Date: 3/4/25	Date: 5/4/25	Date: 22/4/2025

QUALIFIED WELDER CARD



PROJECT NAME :	GSP7 Gas Separation Plant Project
COMPANY NAME :	CPP2
WELDER NAME :	MR.SAKON KAMMA
WELDER No. :	CPP-141
ISSUED DATE :	27-Dec-23
EXPIRE DATE:	26-Jun-24

*Until the end of the Project based on the welder performance continuity record

Welding Process	Performance Qualification				
	Base Metal			Filler Metal F No.	Position
Ref: WPS/PQR No.	P-No.	Pipe Size Range	Thickness of weld metal qualified (t) mm, Max.		
GTAW CPP-WPS-LTCS-001-P	P- No.1 through P-No. 15F, P-No.34, and P-No.41 through P-No.49	Pipe OD 1" (25mm) to Unlimited	11.08 (Max)	F-No.6	All Position
GTAW+SMAW CPP-WPS-LTCS-002-P		Pipe 2-7/8" (73mm.) to Unlimited	8 + Maximum to be welded	F-No.6+1,2,3,4	
Fillet		Unlimited			

Approved by : CCC-JV — QA/QC & Turnover Supervisor — Date: 6-01-24

Approved by : PTT — Nuppadol Saekow — Date: 5-1-2024

CTCI

銲工資格檢定卡
銲工編號: F-W127
銲工姓名: 沙坤
身分證編: AD0216356
出生日期: 1979/09/26
統包商簽章:
台電核章:
檢定標準:
☑ ASME Sec.IX
☐ AWS D1.1
☐ 其它:
發卡日期: 113.8.19

檢定內容: 沙坤 F-W127 ASME Sec.IX		
銲接方法:	GTAW	GTAW
銲接姿勢及↑↓立銲:	↑6G	↑6G
有無背環:	無	無
檢定母材材質:	P8 TO P8	P8 TO P8
檢定母材管徑:	4"	2"
檢定母材板厚度:	6.0mm	3.9mm
檢定銲材銲接厚度:	6.0mm	3.9mm
合格母材材質範圍:	P1 TO P15F	P1 TO P15F
合格管徑範圍:	NPS 2½"以上	NPS 1"以上
合格厚度範圍:	UP TO 12.0mm	UP TO 7.8mm
銲材 F-NO.:	6(不銹鋼)	6(不銹鋼)
檢定日期:	113.07.29	113.07.29

CTCI

銲工資格檢定卡
銲工編號: F-W127
銲工姓名: 沙坤
身分證編: AD0216356
出生日期: 1979/09/26
統包商簽章:
台電核章:
檢定標準:
☑ ASME Sec.IX
☐ AWS D1.1
☐ 其它:
發卡日期: 113.8.19

檢定內容: 沙坤 F-W127 ASME Sec.IX	
銲接方法:	GTAW
銲接姿勢及↑↓立銲:	↑6G
有無背環:	無
檢定母材材質:	P1
檢定母材管徑:	2"
檢定母材板厚度:	8.74mm
檢定銲材銲接厚度:	8.74mm
合格母材材質範圍:	P1 TO P15F
合格管徑範圍:	NPS 1"以上
合格厚度範圍:	UP TO 17.48mm
銲材 F-NO.:	6(低合金鋼)
檢定日期:	113.07.30

BJC Heavy Industries Public Company Limited

CRSP

TACK WELDER QUALIFICATION CARD



Welder Name	Mr.Sakon Kamma
Welder ID.	HCON22040
Issue Date	20-Nov-2022
Expried Date	19-Jan-2023

Peerapan H.

3 OCT 2022

Client /third party

QA/QC BJCHI

Qualification Details					
Process	Code	Material Group	Dia.(mm) Range	Thk.(mm) Range	Welding Position
FCAW-G	AWS D1.1	C/S	All	3 to Unlimited	H, V-Up

Welding Consumable (ลวดเชื่อม)	
1. E71T1-C1A4-CS1	

Project Name : PNG LNG Plant

WELDER QUALIFICATION CERTIFICATE



Welder ID : CTL-SW- 1136

Welder Name: Mr.Sakon Kamma

Authorized By : S. Somchai

Date 26 July 2019

PNG LNG

CLOUGH

RANGE QUALIFIED

Code/Specification	AWS D1.1 (2010)
Certificate No.	SW-CTL-776, SW-CTL-812
Welding Process	FCAW, SMAW
Welding Position	1G, 2G, 3G, 4G
Material Grade	AWS D1.1 Group I & II
Material Thickness	3 mm to Unlimited
Filler Metal No.	F No.6

This is to certify that above named person has been qualified in accordance with AWS D1.1 (2010) and is qualified to perform welding within the welding process, welding position, material grade and material thickness indicated on the reverse side of this card.

BJC

WELDER IDENTIFICATION CARD



Project Name :GERALDTON PORT BERTH 7

Welder No. : BJC-W-1251

Welder Name : Mr.Sakon K.

Issued Date : 18 Jan 20

Authorized By : Mr. Woravit P.

CSSVIP
WORAVIT PUANGPACHUNG
56803
WI 3.1
QA/QC MANAGER

Qualification Limits

F No.	Process	Test Position	Qualification Limits			Certified By
			Position	Thk.	Dia.	
6	FCAW	3G;4G	F,H,V,OH	3.00 mm. to 40 mm.	600 mm. and over	Woravit P.

UCS

WELDER QUALIFIED CARD wood.



Project : DES-15 Unit MTP Project

Company : Union Construction & Supply Co.,Ltd.

Name : Mr. Sakon Kamma

Welder No. : UCS-W-110

Issue Date : 8-Oct-2021

Expire Date : 8-Apr-2022

5330700017893

UCS : UCS

WOOD : Visuwat Thammavuthi

Date : 3/10/2021

Date :

This Welder has Qualified as the following

Applicable Code ASME BPVC Section IX						
WPS No.	:	WPS-UCS-007	,	WPS-UCS-008	,	WPS-UCS-011
Position	:	ALL	,	ALL	,	ALL
Pipe size diameter	:	O.D. 1" to Unlimited	,	O.D. 2 7/8" to Unlimited	,	O.D. 1" to Unlimited
Thickness	:	11.08 mm.	,	21.94 mm.	,	11.08 mm.
Process	:	GTAW	,	GTAW+SMAW	,	GTAW
Material	:	P1 + P1	,	P1+P1	,	P8 + P8
Filler Metal F-No.	:	6	,	6+4	,	6

HMC Polymers

HMC PP-4 Project

Welder Identification Card

GS E&C



ID No.	5 3307 00017 89 3 SUD-114
Name	Mr.Sakon Kamma
Date Qualified	19/8/2021

This is to certify the above person is qualified in accordance with ASME BOILER AND PRESSURE VESSEL CODE

Subcontractor | Contractor | Owner

Sungdo Thai Engineering & Construction Co., Ltd.

Qualification Details

Name: Mr.Sakon Kamma ID No. : 5 3307 00017 89 3

Process	Material	Electrodes	Range Thk.	Range Dia.	Position	Date Qualified
GTAW	P-1 through P-15F,P-34, and P-41through P-49	SFA-5.18	11.08 mm.(max)	1" OD to Unlimited	All	7/5/2021
GTAW+SMAW	P-1 through P-15F,P-34, and P-41through P-49	SFA-5.18+5.1	21.94 mm (max)	2 7/8"OD to Unlimited	All	7/5/2021
GTAW+SMAW	P-1 through P-15F,P-34, and P-41through P-49	SFA-5.18+5.1	28.54 mm (max)	2 7/8"OD to Unlimited	All	20/8/2021

Valid Up to :

"Thickness in mm" & "Diameter in Inches".

T&E

WELDER INDENTIFICATION CARD

SAMSUNG

SAMSUNG C&T



Project Name: ROY HILL IRON ORE PROJECT - PKG 1

Welder No: BTE-W-253

Welder Name : Mr.Sakon Kamma

Issued Date : 17-May-2021

Welding Process: FCAWgs(136)

Authorized By : Mr.Panom P.

T&E PANOM P. 1
QA/QC MANAGER

BTE QC | BTE QA/QC Manager | SAMSUNG C&T

Qualification Limits

Weld Test Detail					Range of Qualification					
Mat'l Group No.	Process	Joint Type	Position	Mat'l Thk.	Mat'l Group No.	Joint Type	Position	Mat'l Thk.	Product Type	Certified by
1	FCAWgs(136)	BW bs	OH (4G)	PL.16 mm.	1 & 2	BWss,BWss nb and All Fillet	F,H,VU,OH	PL.≥ 5 mm.	PL & Pipe OD.≥600 mm.	BTE

As accordance AS/NZS 2980:2007

PAE TECHNICAL SERVICE

WELDER QUALIFICATION CARD

PAE Welders Certification and Training Centre



Company: ITALIAN-THAI DEVELOPMENT PUBLIC CO.,LTD. ITD-SAP-138

Name: Mr.Sakon Kamma Cert.No. SA-4-3-21-148

Range of Qualified; ASME-IX : 2017 ID. No. 5 3307 0017 89 3

Process: GTAW Position: ALL

Thickness: 11.08mm Dia.: 1" to Unlimited

Material Spec: P-1 through P-15F,P-34&P-41-49

Filler Metal: SFA 5.18 (ER70S-6 and Any Same Group)

Certified by: /Mr.Chamun S. Date: 25/2/2021

PAE TECHNICAL SERVICE

WELDER QUALIFICATION CARD

PAE Welders Certification and Training Centre



Company: ITALIAN-THAI DEVELOPMENT PUBLIC CO.,LTD. ITD-SAP-138

Name: Mr.Sakon Kamma Cert.No. SA-4-3&1-21-154

Range of Qualified; ASME-IX : 2017 ID. No. 5 3307 0017 89 3

Process: GTAW+SMAW Position: ALL

Thickness: 6.0mm(GTAW),15.94mm (SMAW) Dia.: 2 7/8" to Unlimited

Material Spec: P-1 through P-15F,P-34&P-41-49

Filler Metal: SFA 5.18/5.1 (ER70S-6,E7016 and Any Same Group)

Certified by: /Mr.Chamun S. Date: 25/2/2021

RANGE QUALIFIED			
WELDING PROCESS	GTAW+SMAW		GTAW
POSITION	ALL		ALL
MATERIAL	CARBON STEEL P.No.1		CARBON STEEL P.No.1
P-NO.	P.no.1-15F, 34, 41-49		P.no.1-15F, 34, 41-49
DIAMETER	OD. 2 7/8" to Unlimited		OD. 1" to Unlimited
WELD THICKNESS (MAX.)	GTAW 6 mm.	SMAW 15.94 mm.	GTAW 11.08 mm.
AWS CLASSIFICATION	ER70S-6	E7016	ER70S-6
F-NO.	6	4	6
VALID DATE	13-Sep-20		10-Sep-20

ช่างเชื่อมวิศวกรรมไทย (ญี่ปุ่น) จำกัด (มหาชน)

TTCL PUBLIC COMPANY LIMITED

PROJECT NAME : MOCD2 Project

COMPANY NAME : C.A.P.K. Engineering Co.,Ltd.

WELDER NAME : Mr.Sakon Khumma

WELDER NO. : CAK054

ID. NO. : 5-3307-00017-89-3

ISSUED DATE : 10-Sep-20

THAWATCHAI

PREECHA

29-9-20 29 Sep 2020

ISSUED BY : APPROVED BY :

Detail

Range of qualified :

Position : ALL

Pipe size dia : 01/2" & Above | 1" OD & Above | 02 1/" & Above

Thick : 8.56 mm (Max) | N/A | 21.94 mm (Max)

Process : GTAW | N/A | GTAW+SMAW

Material : P1 | N/A | P1

Inspector : (for Welding Inspector) Date : 22/09/19

ENTS : (for Inspection Manager) Date : 22/9/19

RMC

QUALIFIED WELDER CARD



Project : FIREWATER SYSTEM IMPROVEMENT PROJECT

Company : Rayong Maintenance & Contracting Co.,Ltd.

Name : Mr. Sakon K.

No. : RMC-P-W006

Issue Date : 22-Sep-19

Expire Date : 22-Mar-20

Qualification Details

Process	Code	Material Group	Dia.(mm) Range	Thk.(mm) Range	Welding Position
GTAW	ASME-IX	P1-15F,P34, P41-P49	OD. ≥ 25	11.08 (max.)	F,H,V,OH
GTAW+ SMAW	ASME-IX	P1-15F,P34, P41-P49	OD. ≥ 73	6.0(max.) 8.22(max.)	F,H,V,OH

WELDER QUALIFICATION CARD

BJC Heavy Industries Public Company Limited



SANTOS GLNG	
Welder Name	Mr. Sakon K.
Welder ID.	BJC-W-536
Issue Date	February 20, 2020

QA/QC DEPARTMENT 31 BJCHI

Client QA/QC Manager

Qualification Details

Process	Material	Electrods	Range		Position	Qualified Date
			Thk.	Dia.		
GTAW	P-No.8	ER308L	Max. 5.54 mm.	Min. 1/2" Over	All	16-Nov-19
GTAW	P-No.8	ER308L	Max. 12.04 mm.	Min. 1" Over	All	16-Nov-19

"Thickness in mm & Dia. In inches"

GC Polyols

Welder Identification Card



ID No. : IB-PP-316

Name : Mr.Sakon Kamma

Qualified Date : 16-Nov-19

This is to certify that the above person is qualified in accordance with the applicable Codes & Standards

Polyols Project

DAVID Dell
Field Quality Manager
SK Polyols Project

Welding Process	Base Metal			Filler Metal	Position
	P-No.	size	thickness (max)		
GTAW	1	OD 1" & OVER	11.08 mm.	F-No. 6.	ALL
GTAW + SMAW	1	OD 2.7/8" & OVER	21.94 mm.	F-No. 6 + 4	ALL

ASC Alliance Services Co., Ltd.
Welder Qualified Card

GC

S11B piping repair work package B for turnaround at GC6



WEIDER NAME : Mr.SakohKamma

ID NO. : 5-3307-00017-89-3

WELDER ID : ASC-P-102

AUTHORIZED BY INSPECTED ASC

APPROVED BY

20-Sep-19

Alliance Services Company Limited

SINO-THAI

CB&I CLOUGH

PNG LNG

PNG LNG PROJECT.

WELDER QUALIFICATION CERTIFICATE



NAME: MR.SAKON KUMMA

WELDER NO.: WP225

JOB NO: 2388-0-M

ISSUE BY: Sino-Thai Engineering & Construction Plc.

APPROVED BY:

DATE: 10 October 2012

This Welder has Qualified as the followings						
Welding process(es)	Base Metal P-No.	Base Metal Thk. (Max)	F-No	Position	Pipe Dia	Remark
GTAW/SMAW	P8	6 mm. + Unlimited	F6 + F5	All	2 1/2" NPS. And Over.	

We certify that the statements in this record are correct and that the coupons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

SINO-THAI

CB&I CLOUGH

PNG LNG

28-2-13 PNG LNG PROJECT.

WELDER QUALIFICATION CERTIFICATE



NAME: MR.SAKON KUMMA

WELDER NO.: WP225

JOB NO: 2388-0-M

ISSUE BY: Sino-Thai Engineering & Construction Plc.

APPROVED BY:

DATE : 24 November 2012

This Welder has Qualified as the followings						
Welding process(es)	Base Metal P-No.	Base Metal Thk. (Max)	F-No	Position	Pipe Dia	Remark
GTAW	P8	11.08 mm.	F6	All	3/4" NPS. And Over.	

We certify that the statements in this record are correct and that the coupons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

SINO-THAI

CB&I CLOUGH

PNG LNG

PNG LNG PROJECT.

WELDER QUALIFICATION CERTIFICATE



NAME: MR.SAKON KUMMA

WELDER NO.: WP225

JOB NO: 2388-0-M

ISSUE BY: Sino-Thai Engineering & Construction Plc.

APPROVED BY:

DATE : 13 September 2012

This Welder has Qualified as the followings						
Welding process(es)	Base Metal P-No.	Base Metal Thk. (Max)	F-No	Position	Pipe Dia	Remark
GTAW	P10H	17.48 mm	F6	All	3/4" NPS. And Over.	

We certify that the statements in this record are correct and that the coupons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

PAE Technical Service Company Limited

HDT, Testing, Inspection & Engineering Consultance

RNC ptt

WELDER'S ID.CARD

Project Name :	Repair Radiant Coil Project
Company Name :	Renewcoils Engineering & Supply Co.,Ltd.
Welder No. :	W-006
Welder Name :	Mr.Sakon K.

ISSUED BY

DATE : 22-1-2014

APPROVED BY

WITNESSED

APPROVED

QA/QC SIGN Kandit C

DATE 05/02/2014



QUALIFIED AS FOLLOWS

WPS No.	Mat'l P. No.	Pipe O.D	Process/Th'k GTAW	Process/Th'k SMAW	F. No.	POS.	Remark
SB7/60648	25Cr35Ni	≥2 7/8"	15.2	-	-	ALL	

APPLICABLE CODE : ASME Sec.IX:2010

Employed Company : RENEWCOILS (RNC)

Bahrain LNG

GS

CUEL

WELDER/WELDING OPERATOR IDENTIFICATION CARD



ID No. : SC-3892

Name : Mr. Sakon Kamma

Date Issued : 25-Jan-18

This is to certify that the above person is qualified in accordance with the applicable Codes and Standards

Project Name: Bahrain LNG11 Project

GPS

QUALIFICATION DETAILS

Name : Mr. Sakon Kamma

Process	Material	Electrodes	Range Thk.	Range Dia	Position	Date Qualified
GTAW	CuNi	F No. 34	Max 11.08	3/4"	All	23/01/2018

Thickness in "mm" / Diameter in "inches" (NPS)

AkerSolutions

Kashagan Hook Up

Aker

Agip KCO

WELDER ID CARD



Issued Date	25.11.2010
Name	Kamma Sakon
Badge No	
Welder ID	1658

WPS Qualified :

SEE WELDER QUALIFICATION LIST

PIPE [X] STRUCTURAL [X]

QA/QC Lead: Justus Schiefer, Ralph Thomas

QUALITY CONTROL DEPARTMENT

QUALIFIED RANGE AS PER ASME / IX

EXPIRE DATE	PROCESS	RANGE QUALIFIED Material F No.	DIA (mm)	THK (mm)	POS
19-06-2011	111	1.2	B	84.00 to 4/5 to unlim	6G
06-03-2011	111	8.1	RB	84.00 to 4/5 to unlim	6G
05-03-2011	111	1 2/8.1	RB	84.00 to 4/5 to unlim	6G
06-02-2011	GTAW	P43	F43	25 to unlim 0 - 11.08	6G
04-06-2011	GTAW	P34	F34	73 to unlim 0 - 12.00	6G
19-06-2011	GTAW	P1.1	F6	25 to unlim 0 - 11.08	6G
05-02-2011	GTAW	P8.1	F6	25 to unlim 0 - 11.08	6G
06-02-2011	GTAW	P45	F43	25 to unlim 0 - 11.08	6G
05-03-2011	GTAW/SMAW	P8.1	F6/F5	73 to unlim 0 to unlim	6G
19-06-2011	GTAW/SMAW	P1.1	F6/F4	73 to unlim 0 to unlim	6G
25-06-2011	SMAW	1.2	B	73 to unlim 5 to unlim	3G/4G

REMARKS:

Material	Base Metal P-Number	Filler Metal FNo GTAW	Filler Metal FNo SMAW	Name	Low / High Pressure
CS A333, Gr.6	P1.1	F6	F6	C Steel	LP
316L	P8.1	F6	F5	Stainless Steel 316L	LP
Duplex	P10.1	F6	F5	Duplex UNS S31803	LP
Copper Nickel	P34	F34	F34	Cu/Ni Alloys	LP
Inconel 625	P43	F43	F43	Ni Alloys P43	LP
Alloy 825	P45	F43	F43	Ni Alloys P45	LP
Super Duplex	P10.10	F6	F5	Super Duplex UNS S32760	HP
Inconel 625	P43[illegible]	F43	F43	Ni Alloys P43	HP
API 5L X60	P1.1	F6	F4	X60	HP
P22 (CrMo)	P[illegible]	F6	F4	P22 (CrMo)	HP
SMO / S31254	P8.4	F43	F43	Austenitic 6Mo/ S31254	HP

WELDER'S ID CARD

ASME IX

Welder's No : W42230

Name : Mr.Sakon Kamma



Qualification Date :	05/05/2020
Expiring Date	05/11/2020
Welding Process/es	GTAW
Base Material Qualification	ASTM A312-TP304L (P-No.8)
Qualified Production Base Metals	P-No.1 through P-No.15F,P-No.3 and P-No.41 through P-No.49
Number Qualified :	All F-No.6
Welding Position	All position
Thickness	11.08 mm (max), Fillet : All
Pipe Diameter :	1" OD and over
With / Without Backing :	Without / With
Progression	Uphill

On behalf of Sakon

Accepted by Krishnadas B.

Issued by

SCC QC Section

GC Polyols

Welder Identification Card



ID No. : IB-PP-316

Name : Mr.Sakon Kamma

Qualified Date : 16-Nov-19

This is to certify that the above person is qualified in accordance with the applicable Codes & Standards

Polyols Project

Field Quality Manager

QA/QC Dept.
Polyols Project

Qualification Details

Process	Material	Electrods	Range		Position	Qualified Date
			Thk.	Dia.		
GTAW	P-No.8	ER308L	Max. 5.54 mm.	Min. 1/2" Over	All	16-Nov-19
GTAW	P-No.8	ER308L	Max. 12.04 mm.	Min. 1" Over	All	16-Nov-19

"Thickness in mm & Dia. In inches"

BJC Heavy Industries Public Company Limited

WELDER QUALIFICATION CARD



SANTOS GLNG	
Welder Name	Mr. Sakon K.
Welder ID.	BJC-W-536
Issue Date	February 20, 2020

QA/QC DEPARTMENT 31 BJCHI

Client

QA/QC Manager

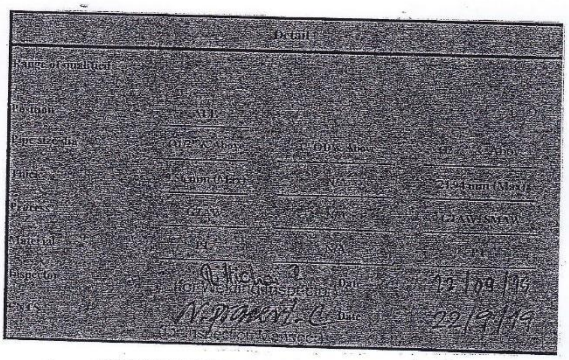
Qualification Details

Process	Code	Material Group	Dia.(mm) Range	Thk.(mm) Range	Welding Position
GTAW	ASME-IX	P1-15F,P34, P41-P49	OD. ≥ 25	11.08 (max.)	F,H,V,OH
GTAW+ SMAW	ASME-IX	P1-15F,P34, P41-P49	OD. ≥ 73	6.0(max.) 8.22(max.)	F,H,V,OH

RMC

QUALIFIED WELDER CARD





ASC

Alliance Services Co., Ltd.
Welder Qualified Card

GC

S11B piping repair work package B for turnaround at GC6

WEIDER NAME : Mr.SakonKamma

ID NO. : 5-3307-00017-89-3



WELDER ID : ASC P-102

AUTHORIZED BY

INSPECTED ABC

Alliance Services Company Limited

20-Sep-19

APPROVED BY

Welding Process	Base Metal			Filler Metal	Position
	P-No.	size	thickness (max)		
GTAW	1	OD 1" & OVER	11.08 mm.	F-No. 6.	ALL
GTAW + SMAW	1	OD 2.7/8' & OVER	21.94 mm.	F-No. 6 + 4	ALL

ENGINEERING AND CONSTRUCTION Co.,Ltd.



PROJECT NAME	:	C12 ACTH-TFRD GR2-DEMO MONO
COMPANY NAME	:	CCK
WELDER NAME	:	Mr. Sakon Kamma นาย สกนธ์ คำมา
WELDER NO	:	CL2-W.06
DATE Qualification	:	16/10/2019
ISSUED BY CCK	:	
INSPECTOR & APPROVAL BY OWNER :		

Qualification Limits

Welding Process	Base Metal P-No.	Mat'L	Thx.(Max)	Pipe Dia.	Positio
GTAW	P No.1	A106B Gr.B	7.82 mm.	1" And Over	6G
GTAW/SMAW	P No.1	A106B Gr.B	14.22 mm.	2-7/8" And Over	6G

WELDER QUALIFICATION CARD

UTOC

Project name : EQ-2 Project

MKKA

WELDER NAME :	Mr. Sakon Kamma
NATIONAL ID No. :	5 3307 00017 89 3
WELDER No. :	UTM-044
ISSUED DATE :	23 Dec 2018



Signature — MKKA QA/QC

Signature — UTOC QA/QC

This welder is certified to the following

WPS No.	Welding Process	Base Metal Group No.	Base Metal Thickness (mm)	Filler Metal	Backing	Position	Pipe OD	WQT No.
RNC-WPS-047	GTAW	1	11.08 mm.	F6	-	All	25.4 mm. & Over	-
RNC-WPS-048	GTAW+SMAW	1	14.22 mm.	F6/F4	-	All	73 mm. & Over	-

We certify that the above person has passed the welding performance qualification test carried-out by UTOC in accordance with the requirement of ASME IX Edition 2017

Transfer



Bangchak Corporation PLC
TAM 2018

Welder Identification Card

BCP ID No.: T18-WQ-029

Company:TCM

Welder's Name
Mr.Sakon Karmma

Approved By:
( )
QC Engineer

Carbon Steel	Low alloy steel	Stainless steel	Ni - base

Bangchak Corporation PLC : Welder Identification Card

Process	Weld Pos/ Qualified Pos	Filler Mat.	F-No.	Testing Size	Qualified	Exp. Date
GTAW	6G / All	ER70S-6	6	2", 5.54mm	Ø≥3/4",Thks11.08 mm	31/6/18
GTAW+ SMAW	6G / All	ER70S-6 E7016	6+4	6", 10.97 mm	Ø≥2.5",Thks6 mm Ø≥2.5",Thk ≤ 15.94 mm	31/6/18

SCG CHEMICALS — *Rayong Olefins Company Limited.* RNC

WELDER QUALIFICATION CARD

PROJECT NAME : NPP Naphtha Pygas Project WELDER NO.W-021

WELDER NAME : Mr.Sakon K.

AUTHORIZED BY : Mr.Chaitat S.

APPROVED BY : THANATCHAI V.

APPROVED DATE : 29-9-18



EXTENT QUALIFICATION

WPS NO.	PROCESS	MATERIAL	AWS	POSITION	DIA.RANGE	THK.RANG
RNC-WPS-047	GTAW	SA 106 Gr.B	ER70S-6	All	1" Up to Unlimited	Up to 11.08 mm. (Max
RNC-WPS-048	GTAW+SMAW	SA 106 Gr.B	ER70S-6 (GTAW) + E7016(SMAW)	All	2 7/8" to Unlimited	Up to 14.22 mm. (Max

Welder Qualified For

Pipe Size :	2 7/8" & above	Plate :	All
Thickness :	Upto 22 mm	Position :	6G
Material :	C.S	Class :	2D
Electrodes :	ER70 S2 / E7018	Date of Test :	**28/03/2011**
Technique :	Uphill	Valid Until :	**30/06/2011**

Date of Renewal :

Note: 1.

This card is clearance for the mentioned limits only and may be revoked on the job if the opinion of the Inspection Engineer weld quality is not satisfactory. Class will be as per details in the procedure (IC-23).

Process : GTAW + SMAW

KUWAIT NATIONAL PETROLEUM CO.
Inspection & Corrosion Division(SHU)
WELDERS CERTIFICATE

Name **Sakon Kamma**
No. **SBC-122**
Employed By **M/s. SBC (CS/1977)**
Approved By



KNPC INSPECTION CORROSION SHUAIBA REFINERY

Naser Al-Sebaii
TL Insp. & Corr.

This Welder has Qualified as the followings

Welding process(es)	Base Metal P-No.	Base Metal Thk. (Max)	F-No	Position	Pipe Dia	Remark
GTAW/SMAW	P8	6 mm. + Unlimited	F6 + F5	All	2 1/2" NPS. And Over.	

We certify that the statements in this record are correct and that the coupons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

SINO-THAI — CBI / CLOUGH — PNG LNG

PNG LNG PROJECT.

WELDER QUALIFICATION CERTIFICATE



NAME : MR.SAKON KUMMA
WELDER NO.: WP225
JOB NO: 2388-0-M
ISSUE BY : Sino-Thai Engineering & Construction Plc.
APPROVED BY:
DATE : 10 October 2012

This Welder has Qualified as the followings

Welding process(es)	Base Metal P-No.	Base Metal Thk. (Max)	F-No	Position	Pipe Dia	Remark
GTAW	P8	11.08 mm.	F6	All	3/4" NPS. And Over.	

We certify that the statements in this record are correct and that the coupons were prepared,welded and tested in accordance with the requirements of Section IX of the ASME Code. : 2010

SINO-THAI — CBI / CLOUGH — PNG LNG

28-2-13

PNG LNG PROJECT.

WELDER QUALIFICATION CERTIFICATE



NAME : MR.SAKON KUMMA
WELDER NO.: WP225
JOB NO: 2388-0-M
ISSUE BY : Sino-Thai Engineering & Construction Plc.
APPROVED BY:
DATE : 24 November 2012

Detail

Range of qualified			
Position	ALL		
Pipe size dia	0.072" & Above	1" OD & Above	.622" & Above
Thick	2.8 mm	N/A	11.22 mm
Process	GTAW	N/A	GTAW/SMAW
Material	P1	N/A	P1
Inspector		Date :	2-12-2012
ENTS		Date :	

QUALIFIED WELDER CARD

Project	:	P-2101&E2251 Convection Bank Replacement
Company	:	RAYONG MAINTENANCE & CONTRACTING CO.,LTD.
Name	:	MR. SAKON K.
No.	:	RMC-W-011
Issue Date	:	16-Jun-14
Expire Date	:	15-Nov-14

INSPECTION



QUALIFIED WELDER CARD

THAIOIL

Project	:	F-2101&F2251 Conv... Unit, Refinery Department
Company	:	RAYONG MAINTENANCE & CONTRACTING CO.,LTD
Name	:	MR. SAKON K.
No.	:	RMC-W-011
Issue Date	:	16-Jun-14
Expire Date	:	15-Nov-14



Detail

Range of qualified	:			
Position	:	ALL		
Pipe size dia	:	Ø1/2" & Above	1" OD & Above	Ø2 7/8" & Above
Thick	:	N/A	N/A	14.22 mm
Process	:	N/A	N/A	GTAW+SMAW
Material	:	N/A	N/A	P3,P4,P5
Inspector	:		Date	27-6-2014
ENTS	:		Date	1/7/14 ✓

ptt PHENOL | BECHTEL | posco ENGINEERING | QTEC

WELDER QUALIFICATION ID CARD

Welder Name	:	Mr.Sakon Kh.
National ID No	:	5 3307 00017 89 3
Welder No.	:	PET-QTE-056
Issue Date	:	22-Jul-2014



Approved by / Signature By: PET QA/QC Mgr.

Signature by: OWNER/PMC

Steel Structure | CS | Alloy | Stainless

QUALIFICATION RANGE OF WELDING

Process	P-NO.	Range		Position		Date
		Thk (mm.)	Dia (inch)	Groove	Fillet	Qualified
GTAW	8 to 3	1.06	Above 1"	All (0F)	All (2F)	27 Jun 14

This is to certify that the above mentioned person was qualied as the welder or welding operator in accordance with applicable code and standard

IRPC | Vatana Phaisal Engineering

Welder No. :	IRPC-02524
Effective Date :	14/10/2014
Exp.Date :	13/10/2015
ID No.	5330700017893
Project No :	UHV Project
Welder Name :	Mr.Sakon Kamma
Process :	GTAW (2"Sch80)
Thickness(Max) :	GT:1.06 mm
Material :	P-No.1 to P-No.1
Groove :	6G (Plate&Pipe over 25 mm.)
Fillet :	All
Filler Metal :	GT:8

Manager | Client | Welder | ASME IX

IRPC | WELDER CARD | Project Record

W/O Project	UHV Project	Contractor Company	VPE	Start	D	14	M	10	Y	14	End	D	M	Y

ASME IX

IRPC | Vatana Phaisal Engineering

Welder No :	IRPC-02524
Effective Date :	1/10/2014
Exp.Date :	13/10/2015
ID No.	5330700017893
Project No :	UHV Project
Welder Name :	Mr.Sakon Kamma
Process :	GTAW+SMAW (6"Sch.160)
Thickness(Max) :	GT:4.0mm, SMAW:Max tobe weld
Material :	P-No.1 to P-No.1
Groove :	6G (Plate&Pipe over 25 mm.)
Fillet :	All
Filler Metal :	GT:8 , SM:5

Manager | Client | Welder | ASME IX

IRPC | WELDER CARD | Project Record

W/O Project	UHV Project	Contractor Company	VPE	Start	D	14	M	10	Y	14	End	D	M	Y

ASME IX

CUEL CARIGALI HESS

WELDER & WELDING OPERATOR
IDENTIFICATION CARD



Welder I.D. :	EP-119
Identification :	5 3307 00017 89 3
Name :	Mr.Sakon Kamma
Date of Issue :	25 May 2011

28 MAY 2011 | CARIGALI HESS

CODE	PROCESS	MAT'S	DIA. Range	Thk(mm) Range	POSITION
AWS D1.1	SMAW	C/S	≥ 4"	≥ 5.0	6GR

Note: 28 MAY 2011

CUEL CARIGALI HESS

WELDER & WELDING OPERATOR
IDENTIFICATION CARD



Welder I.D. :	EP-119
Identification :	5 3307 00017 89 3
Name :	Mr.Sakon Kamma
Date of Issue :	28 May 2011

28 MAY 2011 | CARIGALI HESS

CODE	PROCESS	MAT'S	DIA. Range	Thk(mm) Range	POSITION
ASME IX	GTAW	CS	≥ 3/4	17.48 max	6G
ASME IX	GTAW	DUPLEX	≥ 3/4	11.08 max	6G
ASME IX	GTAW	DUPLEX	≥ 2 1/2	15.24 max	6G