

Qualitech Engineering & Construction Co., Ltd.









QTEC has been operated since 1991

Qualitech Engineering & Construction Co., Ltd. (QTEC) is a Construction Company providing services of

- Mechanical Works Fabrication Installation, Piping systems, Structural Steel, Storage Tank & Pressure Vessels, Plate Works, Pipeline, Equipment Installation
- Building & Civil works
- © Electrical & Instrumentation, HVAC and Utilities Systems

HISTORY



Our fabrication facilities are located in Maptaphut, which can provide every steel fabrication works such as structural steel, piping, plate, tanks and small pressure vessels.

QTEC has financial supports from Domestic Commercial Banks and Financial Institution approx. 300,000,000.00 Baht upon request.



AREA OF SERVICES

- Oil and Gas
- Refinery
- Petrochemical
- Energy & Power Plant
- Water and Waste Treatment Plant
- Environmental Protection
- Industrial Plants, Facilities and Warehouses



ACCREDITATION AND SYSTEMS

QTEC is certified ISO 9001:2015 that ensure International Standards for Quality Assurance and Control.

QTEC fabrication shop is also certified ASME "U", "R", "S" and "NB" (National Board) to fabricate and services pressure parts for Heater, Boiler including Piping spools.

Project Management is using computerized tools;

- Primavera Contractor: for scheduling
- Excel and Access: for Progress monitoring and Material Control
- AutoCAD and X-Steel: for Shop Drawings
- Barcode for Material Control System

Safety: QTEC has been striving under the lead of International Company to reach International Standard level.

Factory / Fabrication Shop





RAYONG Facility (Area)			
Total Area	212,800	m ²	
Office	2,000	m ²	
Warehouse	1,800	m ²	
Fabrication Shop	15,000	m ²	
Lay - Down Yard	183,300	m ²	
Blast /Paint Shop	3,320	m ²	
Others	7,380	m ²	



RAYONG Facility (Number of Shops)		
Fabrication	10	Shop
Detail Part Shop	1	Shop
Blasting	2	Shop
Painting	1	Shop
Warehouse	2	Shop
Maintenance	1	Shop



HUMAN RESOURCES

Management	5
Project Managers and Engineers	30
Construction Supervisors	50
QC / Technicians / Draftsman	60
Finance and Accounting Staff	15
Procurement and Material Control Staff	20
Other Administrative and Support Staff	60
Foremen and Direct Workers	1,500



SERVICES CAPACITY for 1 Year

MECHANICAL WORKS

Equipment Installation	5,000	Tons
Vessels and Tanks Fabrication and Erection	1,000	Tons
Steel Structures Fabrication and Erection	6,500	Tons
Piping Works	500,000	di



MLGC (DOW)	Carbide Chemical (Thailand) Ltd. (DOW Group)	56 MB
Thai Oil CFP (Piping Spool Fabrication)	Sinopec Engineering Group (Thailand) Co., Ltd.	65 MB
Main Steel Structure Services(Top Side) for PTTEP Project	Thai Nippon Steel Engineering & Construction Corporation LTD.	150 MB
PTTGC GC3 T/A 2020	PTT Global Chemical Public Company Limited (GC)	45 MB
Mixed C4 GC7	GC Matntenance and Engineering Co., Ltd.	50 MB
Dow Chemical Group Small Project	DOW Chemical Thailand Limited	52 MB
Improving Refinery Energy Efficiency GC6 (Pinch Project)	PTT Global Chemical Public Company Limited (GC)	218 MB



GC Oxyrane Propylene Oxide Project	Samsung Engineering(Thailand) Co., Ltd.	58.5 MB
FCC Reliability Improvement Project	Star Petroleum Refining PCL.	103 MB
NGD WHA # 4 Gas Pipeline & M/R Station	Gulf Energy Development Co., Ltd.	191 MB
DOW Chang Project	DOW Chemical Co., Ltd.	165 MB
NGD WHA # 2 Gas Pipeline & M/R Station	Gulf Energy Development Co., Ltd.	151.5 MB
LPG & NG Pipeline Project	Kabinburi Glass Industry Co., Ltd.	28 MB
IRPC Turn Around 2016	IRPC Public Company Limited.	155 MB
UHV Unit 52 PRS MOV's (IRPC)	GS Engineering & Construction Corporation	38 MB



Bent Steel LACC EP Project (USA) and Upper F104 & F106 (RAPID)	CBI (Thailand) Ltd.	70 MB
DPEX Project (TPE) Mechanical and Piping Works	ThyssenKrupp Industrial Solution (Thailand) Ltd.	347 MB
THEP Project Mechanical and Piping Works	BASF Chemcat (Thailand) Limited.	110 MB
LCNG Station Project Civil, Piping, Mechanical and E & I Works	PTT Company Limited.	50.8 MB
SE Loading Station	Dow Chemical Thailand Ltd.	70 MB
Thai MMA C-1400 Improvement Project	Thai MMA Co., Ltd. (SCG Group)	15.7 MB



PPC & PPE Project (IRPC) Reactor Modification, Warehouse & U/G Piping Works	SINOPEC Engineering Group (Thailand) Co., Ltd.	28 MB
ARDB Aromatic II (PTTGC) Piping Tie-in Work	PTT Maintenance and Engineering Co., Ltd.	21.5 MB
Manpower Supply for IRPC UHV Plant	GS Engineering & Construction Corporation	45 MB
Gas Pipeline & Metering and Regulation Station	Bowin Clean Energy Limited.	71.3 MB
Mechanical Services to ESSO SRIRACHA REFINERY	Esso (Thailand) Public Company Limited.	58 MB
VGOHT Recovery (IRPC) Piping & Mechanical Work	IRPC Public Company Limited.	325 MB
UHV Plant Project (IRPC) 72 & 73	SK Engineering & Construction Co., Ltd.	427 MB



TOC GC EO/EG Expansion - II	Samsung Thai Engineering Co., Ltd.	188 MB
Phenol Plant Train II (PTTGC)	Posco Engineering (Thailand) Co., Ltd.	310 MB
UHV Plant Project (IRPC)	GS E&C Corporation	137 MB
PTT PHR – 3 (ESP)	Samsung Engineering Co., Ltd.	93 MB
Bibiyana Expansion (BANGLADESH) / Modules Work	Chevron / FW.	620 MB
B.V. (PTTGC) / Offisite Area Package #	PTT GC / PTT ME	405 MB
ZCT 1301 (Main Piping Work, Steel Structure & Equipment Installation)	Shinko Plantech (Thailand) Co., Ltd.	110 MB



B.V. (PTTGC) / Piping & Steel Structure Work	Toyo-Thai Corporation	185 MB
Rung Tawan	Toyo-Thai Corporation PLC.	155 MB
EI & PSA-3 Project (Early Mechanical Work)	Thai Oil Public Company Limited.	551 MB
Anaerobic Treatment Project/ Mechanical Works	Purac (Thailand) Ltd.	65 MB
Thailand PV Film – Compounding Bldg. / Mechanical Works	Dow Chemical Thailand Ltd.	60 MB
TMP Project - Malaysia / Piping Fabrication Work	Shinko Plantech Japan	48 MB
New TLB Product Tank / Mech+Pipe Installation	Thai Lube Base Pcl.	89 MB



IRPC/GHU Technology Revamp / Structure/Piping & Eqm. Install	IRPC Public Company Limited.	130 MB
DBN3 (UBE) D-155 (Piping Works)	Toyo-Thai Corporation Public Co., Ltd.	65 MB
NG Underground Pipelines for VDU & Hot Oil Heaters	Thai Lube Base PCL.	35 MB
Gas Pipeline Metering & Regulation Station (EPC Contract)	Amata B. Grim Power 3	83 MB
Sriracha Clean Fuels / Mechanical Works	Foster Wheeler International (Thailand)/ Exxon Sriracha	172 MB
Windmill-ABT (Viny Thai)/HPPOO-HP (EVCC)	Toyo-Thai Corporation	120 MB

PAST EXPERIENCES (1/3)



(Major Projects YEAR 2003 - 2009)

Emerald /Mechanical+Structure	Purac (Thailand)	107 MB
VDU & Hot Oil Heaters Modification and Relocation Tank	Thai Lube Base	122.5 MB
TGTU 1 – ARU2 (IRPC)	Uhde Shedden (Thailand)	53 MB.
Karratha NRU Module Fabrication/Pluto LNG Plant	Linde AG/Woodside	370 MB.
MOC Cracker Project	Samsung Engineering	222 MB.
TOC EO/EG Exp. 1 Project	Samsung Engineering	50 MB.
RRC Upgrade Project	SKEC (Thailand)	240 MB.

PAST EXPERIENCES (2/3)



(Major Projects YEAR 2003 - 2009)

The Ethanolamine (TEA) Project	Thai Ethanolamine (PTT Chemical Group)	190 MB.
PTT Ethane Separation Plant	Samsung Engineering (Thailand) Co., Ltd.	830 MB.
NPCX Polyethylene Plant	Samsung Engineering Co., Ltd.	140 MB.
Truck Tyre Factory Extension	Siam Tyre Industrial Co., Ltd.	165 MB.
TOC EO/EG Plant	Samsung Engineering Co., Ltd.	85 MB.
Tyre Steel Cord Factory Expansion 2004 (SSC 4)	Siam Steel Cord Co., Ltd.	80 MB.
MIGP Air Separation Plant	Air Products / BIG	85 MB.



PAST EXPERIENCES (3/3)

(Major Projects YEAR 2003 - 2009)

ALCAN G3	ALCAN	480 MB.
Motorcycle Tyre Production Plant	Siam Tyre Phra Pradaeng	120 MB.
Vincent FPSO Project	Vetco Aibel	55 MB.
TPX Revamp Project / Steel Structure Fabrication	Bechtel International, INC	120 MB.
C4175 EGTL Nigeria Chevron Module Supply	Air Products PLC (UK)	320 MB.
ATC Reformer & Aromatic Complex II	SKEC (Thai)	134 MB.
Quienten /Mechanical works	Purac	40 MB





Civil Work including Engineering, Piping Work	30,000	di
Steel Structure and Equipment Installation Work	700	tons
Tanks and Pressure Vessels Work	9	Nos
Project Schedule	Nov. 2012	Nov. 2013
Final Contract Amount	405,000,000	Baht



IRPC Public Company Limited. VGOHT Recovery Project

PROJECTS GALLERY (3/26)

Before















Demolish Work, Steel Structure Work	600	Tons
Equipment Installation Work	350	Tons
Piping Work	40,000	Di
Project Schedule	Sep. 2014	Apr. 2015
Final Contract Amount	352,900,000	Baht





(4/26)







PROJECTS GALLERY (5/26)





Primary & Secondary Superheater Tube and Evaporator Tube

Economizer Tube, Internal Steam Drum Replacement













Tank Repair Work (Shutdown)





PROJECTS GALLERY (8/26)



U/G Gas Pipeline 8"	1,200	meters
Structural Steel Work	1.4	tons
Electrical & Instrumentation work		







11,000





tons





PROJECTS GALLERY (12/26)

Piping Work	248,000	di
Structural Steel Work	1,400	tons
Equipment Installation	4,965	tons







Equipment Installation



tons

600

PROJECTS GALLERY (15/26)







PROJECTS GALLERY

Piping Work	80,000	di
Structural Steel Work	1,000	tons
Equipment Installation	300	tons







PROJECTS GALLERY (17/26)

Piping Work	40,000	di
Structural Steel Work	800	tons
Equipment Installation	550	tons



PROJECTS GALLERY (18/26)









Piping Work	120,000	di
Structural Steel Work	750	tons
Equipment Installation	1,400	tons





Piping Work100,000 diStructural Steel Work2,200 tonsEquipment Installation1,000 tons

PROJECTS GALLERY (19/26)





PROJECTS GALLERY

<u>(20/26)</u>



	5	Piping Work	50,000	di
		Structural Steel Work	400	tons
		Equipment Installation	650	tons
		,		

<u> Air Products UK</u>



PROJECTS GALLERY

(21/26)



Piping Work	100,000	di
Structural Steel Work	800	tons
Equipment Installation	1,500	tons



PROJECTS GALLERY (22/26)





ASIA PET Continuous Polyester Electrowatt-Ekono (Thailand) Ltd.

Piping Work	60.000	Di
PTA Silos, Demin. Tank,	202	tons
Feed Silo and Vessels		



Maptaphut Feederline (THAPPLINE)

U/G Pipeline Φ 16" x 14"	1,200	m
A/G Pipeline Φ 16"	4,100	m
Piping Work	8,000	di
Structural Steel Work	180	Tons
Cone Roof Tank	1	No.

PROJECTS GALLERY (23/26)



Escravos Gas to Liquid (EGTL)
Chevron Small Module Supply/Nigeria
Air Products PLC

Plate Work, Piping, E & I	200	tons
Steel Structure	650	tons



PROJECTS GALLERY (24/26)

CTEC QUALITECH

Escravos Gas to Liquid (EGTL) Air Products PLC

Piping Fabrication Work

40,000 Di











PROJECTS GALLERY (25/26)

Chevron / BPE (AMSE "R1" Stamp)

Modify Pressure Vessels

8

units









PROJECTS GALLERY (26/26)

Rocky Point Project Alstom Power Australia(Austrian Energy)

Tubular Air Heater (2 Units)

84 tons









ELECTRICAL & INSTRUMENTATION







TPN Food Pak Project



ELECTRICAL & INSTRUMENTATION





National Starch HVPU and POPIT Project



Polytype New Factory Project



ELECTRICAL & INSTUMENTATION















QUALITECH ENGINEERING AND CONSTRUCTION CO., LTD.

10/9 SOI KEE REE, SUKHUMVIT ROAD, HUAY PONG DISTRICT, AMPHUR MUANG, RAYONG 21150 THAILAND

Bureau Veritas Certification Holding SAS - UK Branch certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 9001:2015

Scope of certification

FABRICATION OF STEEL STRUCTURE, TANK, PRESSURE VESSEL, STEEL PLATE WORK, PIPING WORK

Original cycle start date: 10 April 2013
Expiry date of previous cycle: NA
Recertification Audit date: NA
Recertification cycle start date: 9 April 2019

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on:

9 April 2022

Certificate no.

TH013914

Version 01, Revision date: 09/04/2019





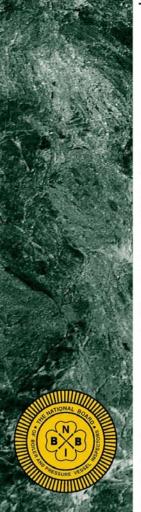
Gertification body address: 5th Flour, 66 Prescut Street, Lundon, EL 8HG, Unitrd Kingdom Local office Bureau Vertian Gertification (Thailand), Ltd. 16th Floor, Bangkok, Tower, 2170 New Petebbari Road, Bangkok, Husykwang, Bangkok 10310, Thailand

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consisting the organization. To check this certificate visibility please will +662-670-4800.

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THE NATIONAL BOARD

OF

BOILER & PRESSURE VESSEL INSPECTORS

Certificate of Authorization



This is to certify that

QUALITECH ENGINEERING & CONSTRUCTION CO., LTD.

Rayong Factory 10/9 Soi Kee Ree, Sukhumvit Road,

Huaypong District Rayong 21150 Thailand

Acceptable Abbreviation: QTEC

is authorized to use the R Symbol in accordance with the provisions of the National Board Inspection Code and NB-415, Accreditation of "R" Repair Organizations.

All activities within the scope of this Authorization shall be controlled by the above location.

The scope of this Authorization is limited to:

Metallic Repairs and Alterations At Shop and Field Locations

Certification Number: 9636

Issue Date:

November 15, 2017

Expiration Date:

December 1, 2020

Executive Director



THE NATIONAL BOARD

JF.

BOILER & PRESSURE VESSEL INSPECTORS

Certificate of Authorization to Register



This is to certify that

QUALITECH ENGINEERING & CONSTRUCTION CO., LTD.
RAYONG FACTORY
10/9 SOI KEE REE, SUKHUMVIT ROAD,
HUAYPONG DISTRICT
RAYONG 21150
THAILAND

is authorized to apply the "NB" mark and register boilers, pressure vessels or other pressure retaining items with the National Board.

The scope of Authorization is limited to items manufactured in accordance with:

ASME Designator(s): US

ISSUE DATE:

January 12, 2015

This Certificate of Authorization to Register will remain in effect as long as the manufacturing organization holds a valid Certificate of Authorization issued by the American Society of Mechanical Engineers.

Executive Director



IB 137 Rev. 9





CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the certification mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this certification mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

QUALITECH ENGINEERING & CONSTRUCTION CO., LTD.
Rayong Factory

10/9 Soi Kee Ree, Sukhumvit Road, Huaypong District Rayong 21150 Thailand

SCOPE:

Manufacture and assembly of power boilers at the above location and field sites controlled by the above location

AUTHORIZED:

October 23, 2017

EXPIRES:

December 1, 2020

CERTIFICATE NUMBER: 48,366

Board Chair, Conformity Assessment



Managing Director, Conformity Assessment



CERTIFICATE OF AUTHORIZATION

The named company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the certification mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this certification mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

QUALITECH ENGINEERING & CONSTRUCTION CO., LTD.

Rayong Factory 10/9 Soi Kee Ree, Sukhumvit Road, Huaypong District Rayong 21150 Thailand

SCOPE:

The American Society of Mechanical Engineers

Manufacture of pressure vessels at the above location and field sites controlled by the above location (This authorization does not cover impregnated graphite)

AUTHORIZED:

October 23, 2017

EXPIRES:

December 1, 2020

CERTIFICATE NUMBER: 48,367

Board Chair, Conformity Assessment



Managing Director, Conformity Assessment















Client/customer

IRPC Public Company Limited

Client reference

Rangsan Intho, Project Manager

Location

Rayong, Thailand

Dates/timing

Sep.2014 - May.2015

Project value

Contract Value 189.69 MB. Actual Value 320.00 MB.

Project Capacity (Refinery Plant)

215,000 barrels per day

Services/ scope

Demolition/Modification service repair the refinery Plant (Vacuum Gas Oil Hydrotreating Units) which damage by fire incident Civil work for Repairing the refinery Plant (Vacuum Gas Oil Hydrotreating Unit) which damage by fire incident Remove and Transport the existing column and Replace the new column and Vessels

Fabrication and Erection the Structural Steel, Plant form and Ladder

Fabrication and Erection Piping work, Painting work, Insulation work and fire proof work

Project key highlights

Urgent site Development and Construction of the damaged Plan

Urgent dismantle of damaged items

Heavy Lifting for removal of damaged Column and Drums and installation of new ones

Repairing of the damaged Concrete Columns, Foundations, Pipe Racks, Shelter, Painting, Insulation and fire proof Replacement of damaged Piping, Pumps, Pressure Vessels & Columns, Steel Structure, Painting, Insulation and fire proof

Systems testing and Hand Over

Pre-Commissioning/ Commissioning and Start-Up

Provide the raw materials and delivery on time

Installation the fire proofing concrete

Fabrication and Installation the Fire Fighting System

QTEC personnel:

Project Manager: Torsak Sorn-Ard Site Manager: Chawalit Asasee

Project description

The IRPC Public Company Limited would like to recovery the damaged Vacuum Gas Oil Hydrotreating by Fire Case on Jun 09, 2014. IRPC require replacing and repairing the VGOHT Units which damage by fire incident and want them ready for starting plant again by end the of May 2015. Several preparation works has been done by IRPC's maintenance team and require further engineering and consultant service from Amec-Foster Wheeler and Construction by QTEC.

Project highlights (key service(s) provided)

Urgent Construction and recover the damaged unit by fire case

Fabrication and Erection for fire fighting system for VGOHT Unit

Heavy Lifting for the existing new column and vessels

Construction Management and Supervision

QA/QC Monitoring and Control

Manpower Supply for Pre-Commissioning, Commissioning and Start up

Project challenges/solutions

Manage the construction with the big OT work was provided to achieve the required schedule

Project Critical Path such as piping, equipment works that management to crash the project schedule / Pay extra money to long lead equipment suppliers to minimize lead time

Crashed the Construction schedule by intensive paying to the direct and indirect manpower

Overlap schedule for construction and precommissioning/commissioning activities to minimize the pre-commissioning, commissioning and start-up schedule.

Client requirements / restrictions

Recover the damaged unit to normal operation ASAP.

Zero accident, Safety and Environmental issue

Plant Reliability, Availability

Benefit statement

Cost/Budget Optimization

2 Months ahead schedule from original plan for Plant Start-Up

Zero Safety Record

No Environmental Issue

Flawless Plant Start Up and Operation.

Improvement of Plant Safety and Reliability

Signed

(RANGSAN INTHO)

VACUUM GAS OIL HYDROTREATING RECOVERY
PROJECT MANAGER

an

Issue Date : May 30, 2015

Page 1 of 2

Certificates & Safety Awards Year 2019 - 2020







Certificates & Safety Awards Year 2016 - 2017







Certificates & Safety Awards Year 2015 - 2016

















ประกาศเกียรติคุณ ด้านโครงการ SAFE WHITE GREEN

มอบให้เพื่อแสดงว่า



Qualitech Engineering & Construction Co., Ltd.

ได้รับรางวัล บริษัทผู้รับเหมาที่จัดทำระบบ การจัดการตามโครงการ SAFE WHITE GREEN

> ในงาน 2014 TOP Group QSHE Day เมื่อวันที่ 12 พฤศจิกายน 2557



นายอธิคม เติบศิริ ประธานเจ้าหน้าที่บริหารและกรรมการพู้จัดการใหญ่ บริษัท ไทยออยล์ จำกัด (มหาชน)

Certificates & Safety Awards Year 2013-2014





ประกาศเกียรติคุณ ฉบับนี้เพื่อแสดงว่า
บริษัท ควอลิเทค เอ็นจิเนียริ่ง แอนด์ คอนสตรัคชั่น จำกัด
ได้รับรางวัลชนะเลิศ การแข่งขัน "การติดตั้งนั่งร้านมาตรฐาน B.S."
งานสัปดาห์ความปลอดภัยในการทำงานจังหวัดระยอง
ให้ไว้ ณ วันที่ ๙ พฤษภาคม พ.ศ. ๒๕๕๖

(นายวซีระ ศรีบัวชุม) สวัสดิการและค้มครองแรงงานจังหวัดระยอง









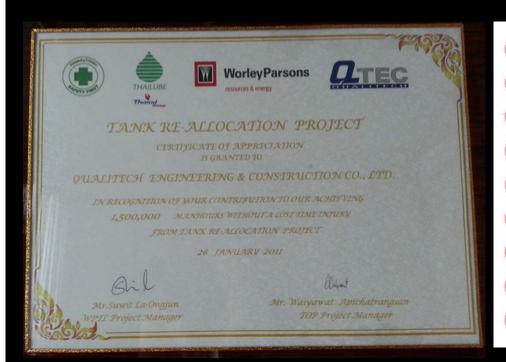






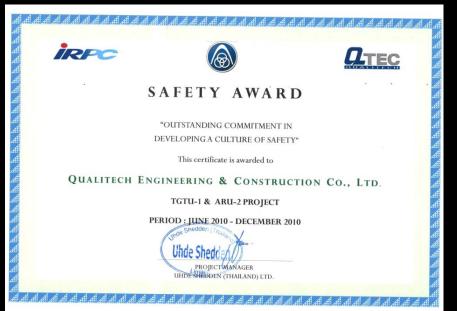


















FLUOR



SAMSUNG ENGINEERIN

This Award is presented to
Qualitech Engineering & Construction Co., Ltd.

For Dedication to Excellence

in industrial Construction Safety and your unique Contribution towards achievement of

1,000,000 MANHOURS

without a lost time accident
On PTT ESP Project

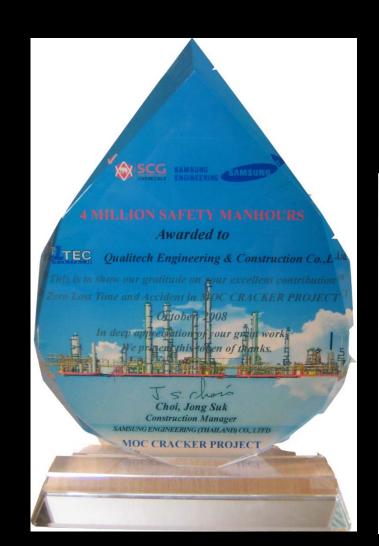
01 April, 2009



CHO, Yong Hwan Construction Manager























AWARD IN RECOGNITION FOR SAFETY

We, the Consortium of SKEC and GS E&C are pleased to award to

Qualitech Engineering & Construction Co., Ltd.

For Your Commitment and Contribution Towards Safety in Achieving 6,000,000 Safe Man Hours on ATC# 2 Project

> Date of achievement 17th February 2007 Reformer & Aromatics Complex Il Project

Mr. S. I. Lee Construction Manager Mr. H. R. Park

Deputy Construction Manager



Reformer & Aromatics Complex II Project In Thailand 29th June 2007

Mr. S.I. Lee

Mr. H.R. Park

Construction Manager

Deputy Construction Manager





