

With our competencies and strengths of 5 companies under BE Petrothai Group, we commit ourselves to be Adaptive Innovation Partner to meet all customers and stakeholders' needs in the changing world with stability and sustainability.



## Adaptive

Adapt to the changing world

## Innovation

Innovate and challenge with customer's requirement

## Partner

Partner throughout the equipment life cycle





## HEADQUARTER BANGKOK

### FIVE Partners

ONE Solution

 Operation Business Unit  Support Business Unit

#### **PETROTHAI**

1981 | Marketing

#### **Marketing Consultant and Corporate branding**

Expertise in Thailand petroleum and petrochemical market.  
Provide our world-class partners with the best fit marketplace.



1997 | Engineering Management

#### **Maintenance and engineering professionals**

**Pre-Delivery Inspection (PDI)** : Ensure equipment readiness before the handover to customers.

**Engineering Service** : Provide equipment inspection and maintenance throughout its life cycle and offer end-users training.

**Warranty Service** : Offer reliable service and maintenance for products within the warranty period.



2001 | Selling

#### **Adaptive Innovation Partner. Fits all needs for engineering equipment management.**

Provide engineering distribution and installation services with high quality and environmental-friendly engineering equipment for petroleum and petrochemical industries. Offer optimal management processes to ensure the customers' production will run smoothly and deliver products on schedule. Design and develop new business solution by collaborating with partners to serve customer's various needs.

#### **BE CONCEPT**

2001 | Knowledge Management

#### **Innovation beyond knowledge**

Gather knowledge about engineering, maintenance, data system, distribution, accounting, and other resource management.

Technology service, adjust workflows to support communication with worldwide customers and partners.

#### **BE CONSULTING**

1987 | Resources Management

#### **Caring for communities' resources**

Business compliance, risk management, resource management and employee caring as well as workplace preparation to support our people to work flexibly and efficiently.

## RAYONG WORKSHOP





# ONE STOP SOLUTION

## PROJECT MANAGEMENT

### Engineering Management

To get final specification and reduce engineering time after ordering

- Site survey
- Compare spec
- Technical Solution

### Pre Delivery Inspection (PDI)

- Goods inspection
  - Quantity
  - Quality
- Claim

### Services

- Installation
- Field Supervision
- Commissioning & Start-up
- Performance test

### Monitoring & Recovery Plan

To manage schedule to meet required delivery

- Production timeline
- 3rd party report
- Inspection Test Plan (ITP)
- Document control

### Warranty Management

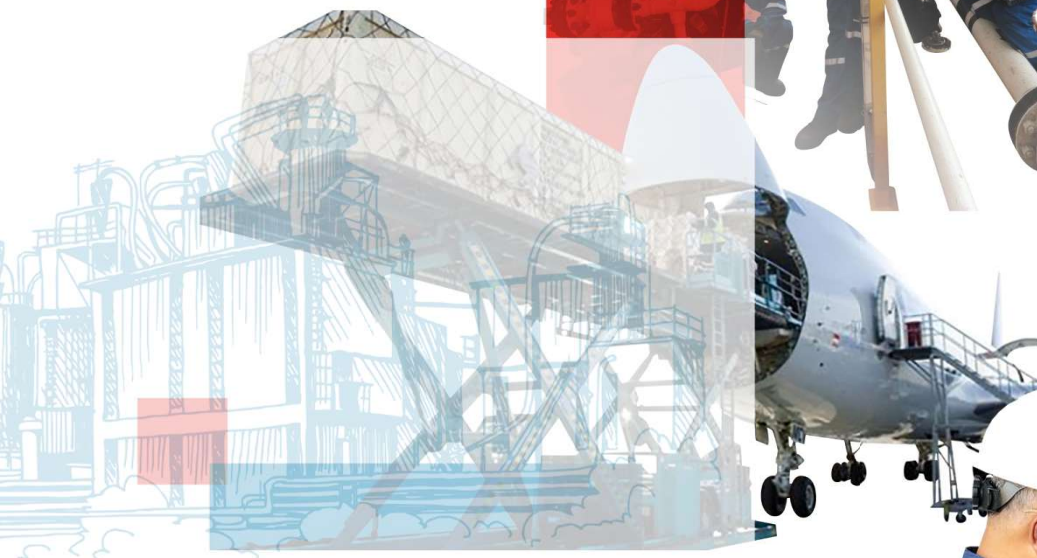
- Investigation
- Provide solution
- Warranty claim

### Logistics Management

- Route Management
- Risk assessment in transportation
- Route survey
- Control time

### Strategic Maintenance Management Service (SMMS)

- Asset information
- Maintenance strategy
- Maintenance planning
- Maintenance action

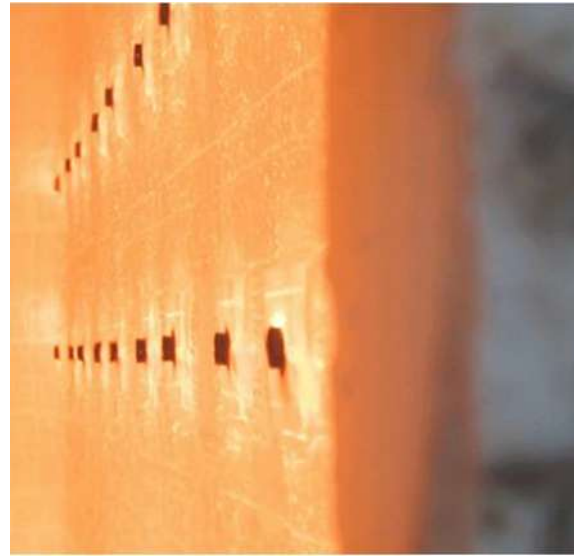




## ENERGY RECOVERY

Reuse: Waste Heat to Power

- Organic Rankine Cycle
- Waste Heat Recovery Unit



## NEW ENERGY

Replace Hydrocarbon to H<sub>2</sub>

Power Generation

- Hydrogen Gas Turbine

Combustion Process

- Hydrogen Burner

Production Plant

- Steam Methane Reforming



## ENERGY SAVING

Reduce GHG

- XP Flare
- Mass Transfer Device Improvement
- Twisted Tube Heat Exchanger
- Radiant Coil SCOPE HT E



## CARBON CAPTURE UTILIZATION & STORAGE

Reduce CO<sub>2</sub>

- NET Power Technology
- CO<sub>2</sub> Gas Compressor
- CO<sub>2</sub> Liquid Pump





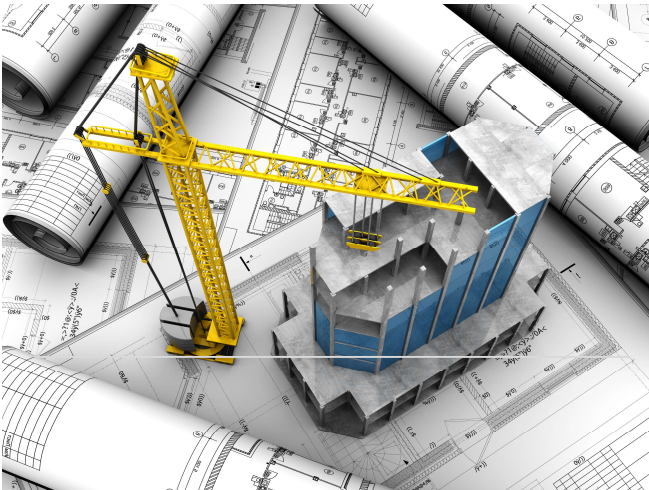


## ENGINEERING MANAGEMENT SERVICES



### FEASIBILITY STUDY

- Fact Finding
  - Assessment
  - Solution
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### DETAILED ENGINEERING

- Engineering Design
  - Process Design
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### PROJECT EXECUTION

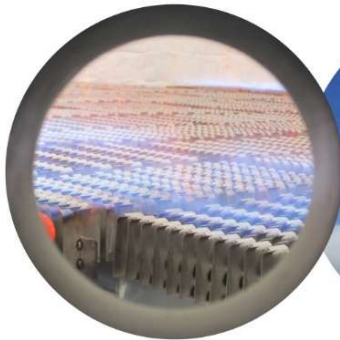
- Resource Management
- Progressive Measurement
- Risk Management

# Feasibility Study

Successful Project



ENGINEERING  
MANAGEMENT  
SERVICE



## Flare Study @ Polypropylene Plant

Evaluation of the existing flare system against new flaring scenario



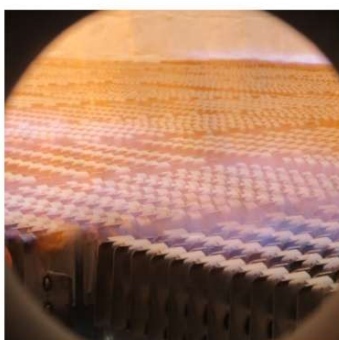
## Gas Compression Study @ Gas Compression Station

Study gas compression operation in case of gas composition changed



## Hydrogen Burner Assessment @ Olefin Plant

Assess the ability of burner for operation with hydrogen content 85%



## Flare Study @ Refinery Plant

Study and evaluate flare system in smokeless improvement



# Detailed Engineering

Successful Project



ENGINEERING  
MANAGEMENT  
SERVICE



## Flare Modification Engineering @ Oleflex Plant

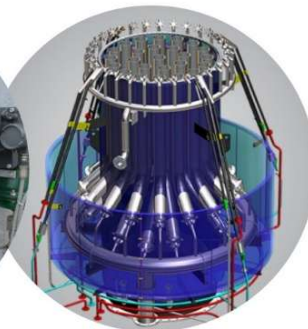
Engineering design of existing flare to meet new process design due to flare increase capacity



## Flare Design @ Gas Separation Plant

Engineering Design and CAPEX estimation of flare smokeless improvement

- Complete combustion with minimal emission
- Reduce noise and visible smoke

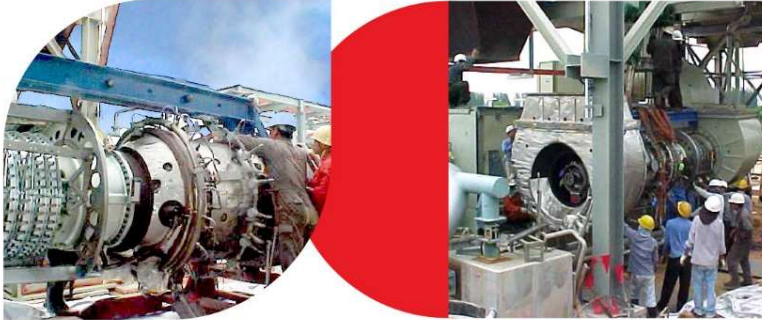


# Project Execution

Successful Project



ENGINEERING  
MANAGEMENT  
SERVICE



## Gas Compressor Relocation from Bangprakong to Ratchaburi @ Gas Compression Station

- Removal & Disassembly
- Inspection
- Refurbish & Improvement
- Installation
- Commissioning Support



## Liquid Thermal Oxidizer @ Gas Separation Plant

- Site Preparation
- Procurement
- Installation & Commissioning
- Mechanical Test Run
- Quality Assurance



## Control System upgrade @ Gas Compression Station

- Procurement
- Installation & Commissioning
- Mechanical Test Run
- Quality Assurance



# BE PETROTHAI

Adaptive Innovation Partner



## พันธมิตรนวัตกรรม เพื่อธุรกิจพลังงานไทย

Market & Trusted Customer



Technology Partner

Baker Hughes



KOCH  
ENGINEERED SOLUTIONS

JOHN ZINK

KOCH-GLITSCH

KOCH  
HEAT TRANSFER

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## BE PETROTHAI GROUP

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