

ESCO PROCESS (ASIA PACIFIC) PTE LTD (Introduction)

INTRODUCTION

ESCO PROCESS ASIA PACIFIC (ESCOAP) PTE LTD is a Singapore Registered Company. In business since 1989, delivering plant integrating solution and project engineering services to customers in the Oil and Gas, Petroleum, Water, Environmental and Energy Industries that includes process, mechanical, electrical and instrumentation engineering and supplies.

We have worked on projects throughout South East Asia, Japan, China and as far as South Africa and Qatar. This represents the rich cross cultural aspect of our services that we have the privilege to enjoy.

Started out as an engineering and contracting services company, our capabilities now extends to supplying quality specialty packages and specialist services to the offshore oil & gas and petroleum industries Some of these specialty packages are products of our very own research and development.

ESCO Process Asia Pacific main business focuses are:

- 1 Project Delivery Services**
- 2 Engineered Packaged Equipment Supply**
- 3. Site Services**

Speciality Products are: **Water Injection Packages (ACSF Technology)**
Ozone Generators
Wastewater Recyclers
Flash Treaters

SERVICES AND PRODUCTS

PROJECT DELIVERY SERVICES:

Project Delivery Services include integrated mechanical electrical and instrumentation engineering design, project management, startup capability and post project maintenance. We have experiences in **ONSHORE & OFFSHORE** facilities

Our database of designs and projects that we have undertaken in the past includes

- Geothermal Plant
- Gas Receiving and Storage terminal
- Offshore Oil and Gas production
Topsides
- Bulk handling and Mixing Plant
- Lube Blending Plant
- EOR Water Injection/Flooding Packages
- Waste Water Treatment Plant
- Crude Desalting Trains



Capabilities

• Process Plant and Facilities Integration	• Project Management
• Specialty Engineering	• Engineering Management
• Startup Assistance and Training	• Pre-Assembled Process Units (PAUs)
• Modification and Conversion Work	• Plant Maintenance

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Onshore Applications	
· Oil Refining	· Power Plant
· Waste Water Treatment & Reclaim	· Pipeline Transmission
· Municipal Water Treatment	· Produced Water Treatment
· Geothermal Steam Production	· Oil Terminals
· Flue Gas Incineration	· Process Training Module / Facilities
· Odour Treatment	· Cement / Bulk Handling

Offshore Applications	
· Separation Process Modules	· Power / Utilities Modules
· Water Flood / Water Injection Modules	· Gas Conditioning Packages
· Slug Catcher Packages	· Metering (LACT) Packages
· Pumps Packages	· Produced Water Treatment
· Methanol Injection Packages	· Power Barges

ENGINEERED PROCESS PACKAGES:

ESCO Process supply, design, and manufacture process equipment for the oil & gas, water and wastewater, environmental and infrastructure industries that meet international codes and engineering practice. We develop our own process equipment as well as strategically partnering relevant companies to provide a one-stop



source for our customers. Product such ACSF (Automatic Cleaning Stack Filter) Technology, Ozone generators and Wastewater Recycler are results of our own research and development.

Gas Conditioning and Treating	
Gas Dehydration	H ₂ S and CO ₂ Removal
Gas Conditioning and Treatment	Fired Heaters
Vapour Recovery	BTEX mitigation
Acid Gas Scrubbing	Odourisation
Slug Catching, Traps	Flares

Oil Processing	
Desalting Equipment	Fired Heaters
Slop Recovery	Mud Handling Systems
Emulsion Treaters	Flash Treaters
Separators	Sulphate Removers
Chemical Injections	Pneumatic Bulk Handling & Conveying

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Produced Water Treatment	
Belt Press Filter	Traveling Screen Filters
Coarse Filter	Multimedia Filter
Nutshell Filters	Electrostatic Separator
De-oxygenation	Degassers
Micro filtration (ACSF)	Membranes
Odour Treatment Plant	Ozone Treating

Utilities	
Deaerators	Water Treating (RO)

Packaged Equipment are built as standalone, Skid mounted, Modular (Pre-assembled Units) or turnkey and including ancillaries when requested by the client.

SITE SERVICES:

Site Services personnel are job focused experienced are required to work safely under the most demanding situations onshore and offshore and across diverse cultural backgrounds.

Site services personnel must have competent process and technical knowledge, international codes and practices such as AMSE, API, ISA, NEC, IEC, JIS, GPSA, BS, OSHA), are computer literate and familiar with the work environment from fabrication to mechanical completion to commissioning to maintenance and validating work.



We provide Site Services for:

- Project Management**
 Esco Process also executes turnkey or specialist projects. Project Managers are well articulate people who have involved with project delivery from engineering design to startup. They exhibited cost, time and resource management efficiency and are supposed to make informed decision into actuality able to report progress on a daily basis.
- Commissioning Services**
 Competent and experience pre-commissioning and commissioning services whether it be a process package or system to a full-scale plant. We also augment other principal process equipment suppliers in the startup service:

Packaged equipments: Glycol Dehydration, Fired Heaters, Flares, Burner management System, DCS, Water Flood, Cranes, Thermal Oxidisers, Blending Plant

Process Plants: Water and Wastewater Treatment Plant, Refinery Debottlenecking, Offshore Oil and Gas Production, Geothermal Plant, Re-instrumentation, FPU Additional Wells Modifications, Condensate Distillation Units.

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- Expediting Project Procurement and Fabrication**
 We provide project monitoring services and project control documentation to expedite equipment procurement, fabrication and assembly ensuring specification codes compliance, established QA and QC procedures are met. All members assigned are imbued with a good knowledge of applicable codes and their differences working across a diverse cultural platform.
- Validating Services**
 (for revamp, debottlenecking, re-instrumentation , optimization, validating services)
 We have performed validating service for Waste Water Treatment Plant Run In, Incineration Plant Flue Gas Cleaning Unit troubleshooting, Sludge Dewatering Plant Training, FPSO Kuito Ship Conversion

EXPERIENCE

Onshore Plant Experience

Types of Facilities

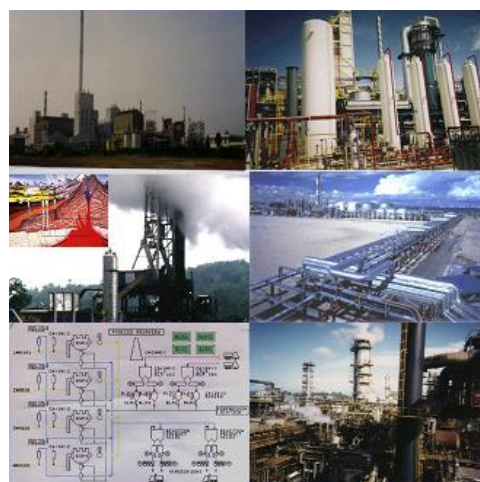
Oil Refinery, Utilities Terminal, Storage Terminals, Geothermal Plant, Chemical Plant

Supplying

Plant Integration Capabilities, System Integration Packages, Chemical injection Skids, Ozone Generators Backwashable Micro Filtration Packages, LACT (metering) System

Industrial Applications

Petroleum Processing, Gas Processing, Water Treatment, Steam Generation, Ozone Production Syngas, Waste Incineration, Water Flooding, Gas Compression, Pipeline Transmission, Utilities, Balance of Plant (Electrical & Instrument)



Partial Projects List

Chemical Process Training Center – 2002	Pertamina's Lahendong Geothermal Steam – 1999
Soxal Hyco Project (Syngas) – 1998	Kranji Odour Treatment Facilities – 1998
Eastman Chemical Waste Treatment Plant – 1997	Mobil JLUB Project (Lube Plant) – 1997
Mobil Oil Exp 300 CDU debottlenecking – 1997	Mobil Oil Waste Water Treatment Plant – 1996
Saigon Petro Mini Refinery - 1995	SUT Phase 1A – 1995
Ulu Pandan Incineration Flue Gas Cleaning – 1994	ISK TiO2 Plant – 1991