PTSC OFFSHORE SERVICES (POS)

WH I W

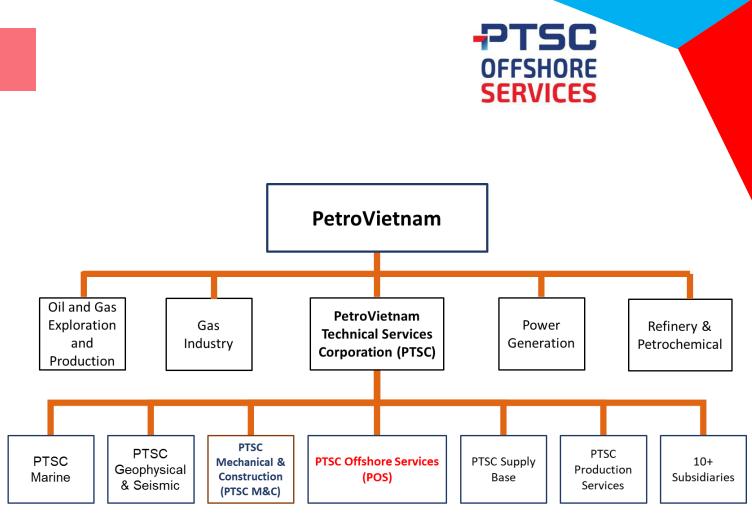
COMPANY PRESENTATION





ABOUT US - POS

- PTSC Offshore Services (POS) is a subsidiary of PetroVietnam Technical Services Corporation (PTSC Corporation), who in turn is a member of Vietnam Oil and Gas Group (PetroVietnam).
- Inside PTSC Corporation there are more than 20 *independent* subsidiaries, of which PTSC M&C (PMC) is well known to the market as an EPC contractor and PTSC POS is well known to the market as a HUC & Brownfield Modification contractor, amongst other services.
- Established in 2007, PTSC POS premise is located within a regionally modern and wellequipped complex in Vung Tau city (the Oil and Gas hub of Vietnam).
- QHSE Management system certified by reputed organization (BSI), Quality Management system (ISO 9001-2008), Environmental Management system (ISO 14001-2004) and Occupational Health and Safety (ISO 45001)



OUR FACILITIES & RESOURCES



Skilled and experienced workforce





- Under POS payroll there are approximately 550 permanent staff, in which:
 - 150 engineers
 - ✓ 300 skilled workforce
 - ✓ 100 functional staff to support projects and company operation
- For big HUC & Brownfield projects, POS can quickly ramp up its workforce to 1,500 pax or more for working simultaneously at various locations.

OUR FACILITIES & RESOURCES

-PTSC OFFSHORE SERVICES

Workshop

The workshop of 11,462m² includes:

- ✓ 01 Valve mechanical workshop
- ✓ 01 E&I/Pump workshop
- ✓ 01 Structure & piping workshop
- ✓ 01 O&M Office building

•02 additional fabrication and painting workshops of 4,500m2

- Well Equipped Workshop











E&I Workshop



OUR FACILITIES & RESOURCES

300 Pax Accommodation Crane Work Barge - PTSC Offshore 1

Barge Specification:

- Built: 2009 Vietnam
- Flag:
- Classed by:
- Clear Deck: 1,800 m2
- Deck strength: 12mt/m2
- Deck Crane : 1 x 300mt HUISMAN

DNV

300 berth • Accommodation:

Barge's qualification:

- Passed Safety Case of Brunei EDPMO
- Qualified by TOTAL E&P Borneo BV
- Certified by OVID

-PTSC

OFFSHORE SERVICES

5,000 Ton Flat Top Barge - PTSC 01

5,5m

4,0m

Principal Dimension:

- Length (overall): 90,0m •
- Breadth: 34,6m ٠
- Depth: ٠
- Draught:
- Displacement: 11.585t
- Dead weight: 9.515t .
- Gross tonnage: 4.424t ٠
- Net tonnage: 1.327t ٠



Professional One-Stop Services



ABOUT US

02

OFFSHORE CONSTRUCTION

ONSHORE CONSTRUCTION

OPERATION & MAINTENANCE



I HUC and BROWNFIELD MODIFICATION / INTEGRATION

I.a Major Brownfield / Integration Projects

I.b HUC and Minor Brownfield Projects

II TRANSPORTATION AND INSTALLATION

III OFFSHORE DECOMMISSIONING



I HUC and BROWNFIELD MODIFICATION / INTEGRATION

I.a Major Brownfield / Integration Projects

GALLAF BATCH 1: **EPCI** HUC & MODIFICATION (2020-2021)

Client: PTSC M&C / North Oil Company (NOC)

Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor <u>PTSC M&C</u> to ultimately serve <u>NOC</u>.

Contract Value: ~ 35.000.000 USD

Total Mhrs: ~ **1,300,000** Mhrs, non-LTI. **850 Pax** mobilized during Covid-19; 3 Jack-up Barges for 3 locations.

Location: Offshore Qatar, Al Shaheen Oil Field

Project SOW:

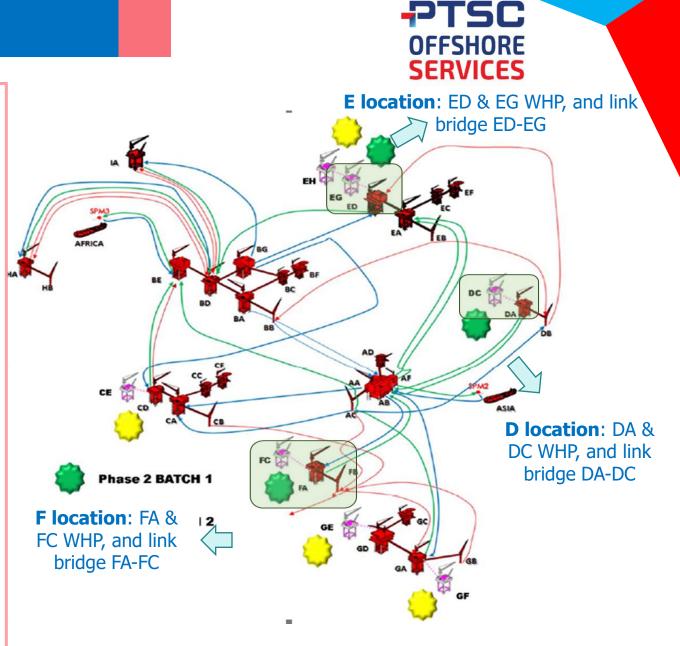
POS performing full EPCI scope for HUC & Integration Work for 3 locations including 6 WHPs and 3 link bridges

Construction:

- > Lifting & scaffolding works.
- Structural Steel works
- Insulation and coating works
- Piping works
- Equipment Erection works
- > HVAC and Architectural works in Buildings
- Electrical works
- Instrumentation works + Telecom

Pre-com/Com:

Pre-Commissioning/Commissioning



GALLAF BATCH 3 – PACKAGE 6: **EPCI** HUC & MODIFICATION (On-going) (2023 – 2024)

-PTSC OFFSHORE SERVICES

Client: DSME / North Oil Company (NOC)

Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor <u>DSME</u> to ultimately serve <u>NOC</u>.

Contract Value (Estimated): ~ 48.000.000 USD

Total Mhrs: ~ assumed 1,250,000 Mhrs.

Location: Offshore Qatar, Al Shaheen Oil Field

Project SOW:

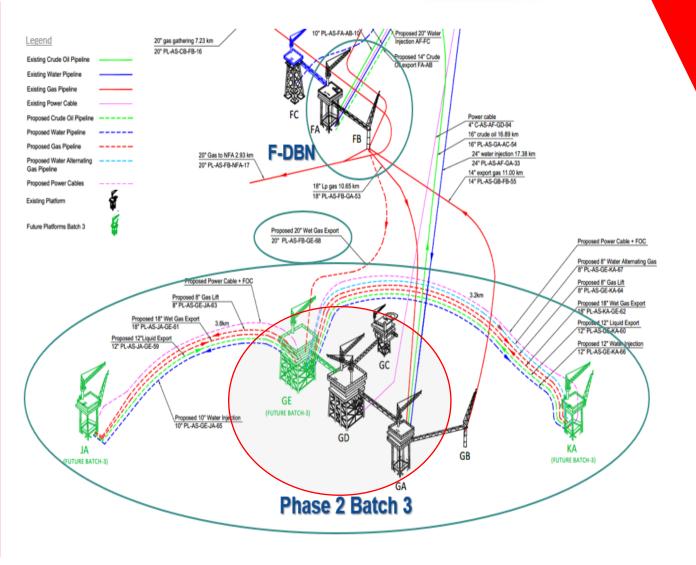
POS performing full EPCI scope of new CPP GE to existing G location (modifications on GA, GE, GD)

Construction:

- Lifting & scaffolding works.
- Structural Steel works
- Insulation and coating works
- Piping works
- Equipment Erection works
- > HVAC and Architectural works in Buildings
- Electrical works
- Instrumentation works + Telecom

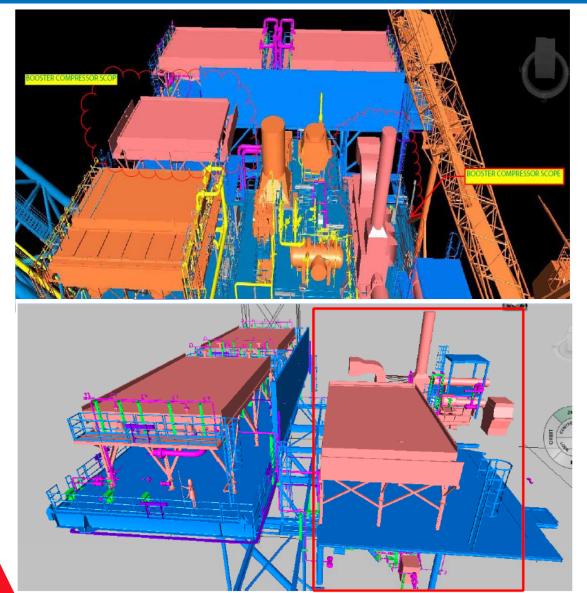
Pre-com/Com:

Pre-Commissioning/Commissioning



BOOSTER COMPRESSOR: **EPCI** HUC & MODIFICATION (2010 – 2012)





Client: KNOC (Korea National Oil Corporation)

Contract Mode: <u>POS</u> signing contract **directly** with KNOC

Contract Value: ~ 45.000.000 USD

Total Mhrs: ~ 450,000 Mhrs.

Location: Offshore Vietnam

Project SOW:

POS performing full **EPCI scope** for upgrading of the Rong Doi CPP, including:

- 1 Train, 1 Stage (1 Turbine+1 Compressor), Discharge cooler, Scrubber Drum.
- Booster Compressor Module: 400 MT
- > Discharge Cooler Module: 110MT
- Scrubber Unit
- Suction Cooler unit
- Structure/Piping & E&I site modification

Professional One-Stop Services

RUBY-B GAS LIFT: **EPCI** HUC & MODIFICATION (2011 – 2013)



Client: PCVL (PETRONAS CARIGALI VIETNAM LIMITED)

Contract Mode: POS signing contract directly with PCVL

Contract Value: ~ 45.000.000 USD

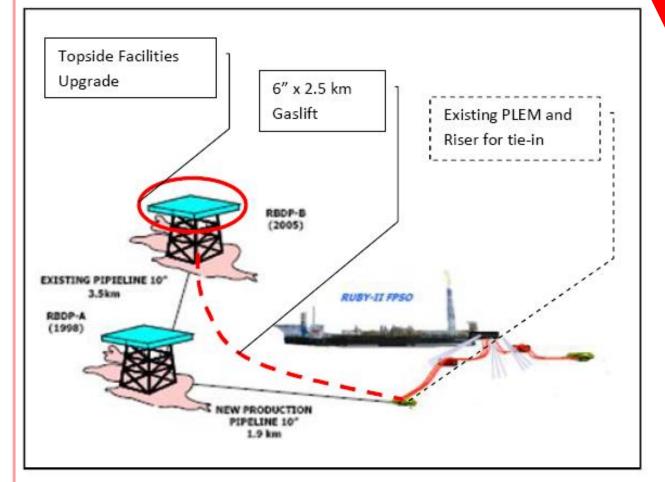
Total Mhrs: ~ 580,000 Mhrs.

Location: Offshore Vietnam

Project SOW:

POS performing full **EPCI scope** for upgrading of the existing RUBY-B platform and install new pipeline, including:

- > 6" rigid riser and a 6" x 2.5 km flexible pipeline.
- Removal of current Micro-Turbine Generators, Portable Diesel Generator, LP Separator, Air Compressor Unit and Utility Gas Scrubber. Relocation of Navigational Aids System (Nav-Aids).
- Installation of Gaslift Header, Gaslift Receiver, Gaslift Flowlines, Vapour Recovery Compressor, Gas Engine Generator, Portable Diesel Generator, Switchboard, LP Separator, Production Transfer Pumps, Utility Gas Heater and Sand Removal Package.
- > Facilities tie-in for Gaslift pipelines and associated equipments.
- Structural, Electrical, Instrumentation, Piping and Safety Equipments modifications to support the facilities above.



TGT-H1 Water Handling System: **EPCI** HUC & MODIFICATION (2016 – 2017)

HSD-WHP

1 x 16" Multiphase Pipelin

1 x 8" Water Injection Pipelin 1 x 6" Gas-lift Pipeline

44_\A/H

HST-WHP

H1-WH

1.8 km

~ 12.5 km

1 x 12" Multiphase Pipeline 1 x 8" Water Injection Pipeline

1 x 6" Gas-lift Pipeline

H1 Local Water

Handling System

1 x 8" Gas Expo

CCP at Bach Ho Filed

x 10" Water Injection Pipe

WATER DEPTH : ~ 43.9 meter

PLEM



Client: Hoang Long Joint Operating Company (HLJOC – a JV including SOCO and OPECO)
Contract Mode: POS signing contract directly with HLJOC
Contract Value: ~ 3.000.000 USD
Total Mhrs: ~ 220,000 Mhrs.
Location: Offshore Vietnam
Project SOW:

POS performing full **EPCI scope** for modification of the existing TGT-H1 platform for integration of new Water Handling System, including:

No.	NEW SKID / ITEMS	IEW SKID / ITEMS DIMENSION (M)	
1.	DEGASSING PUMP SKID	4.650L x 2.600B x 2.544H	11
2.	DEGASSING VESSEL SKID	2.290L x 2.030B x 5.078H	7
3.	KNOCK-OUT DRUM SKID	4.202L x 2.250B x 2.705H	6
4.	3-PHASE SEPARATOR SKID	14.000L x 5.798B x 8.010H	143
5.	COMPACT FLOATING UNIT	4.809L x 3.809B x 7.300H	36
6.	FLARE BOOM	30.000L x 10.000B x 7.000H	32
7.	CAISSON Section 1: 18.7 x 0.762 x 0.762 Section 2: 16.4 x 0.762 x 0.762 Section 3: 14.6 x 0.762 x 0.762		Section 1: 10 Section 2: 8 Section 3: 7

Professional One-Stop Services

E1 EXTENSION DECK MODULE : **EPCI** HUC & MODIFICATION (2018 – 2019)



Client: JVPC (JAPAN VIETNAM PETROLEUM CO.LTD)

Contract Mode: <u>POS</u> signing contract **directly** with JVPC

Contract Value: ~ 3.000.000 USD

Total Mhrs: ~136,000 Mhrs.

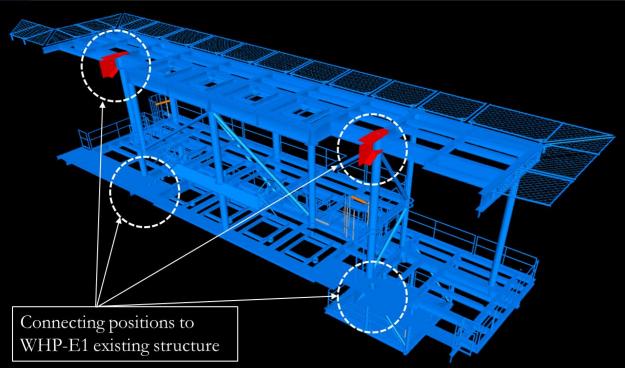
Location: Offshore Vietnam

Project SOW:

POS performing full **EPCI scope** for modification of the existing E1 platform for integration of extension deck module, 03 x conductor guide frames, and conductor guides, including:

- Extension deck of 91-ton including piping and E&I for new wells
- Subcellar Deck Extension at level +16m
- > 03 x conductor guide frames
- > 01 x conductor guard
- Piping, E&I, Structure hook-up & commissioning from Extension module to existing system.

No.	Description	Q'ty	Dimension (m)	Weight (MT)
1	E1 Extension Module	1	3x20.5x10.5	91



BADAMYAR: **EPCI** HUC & MODIFICATION (2015-2017)



Client: Huyndai Heavy Industries Co., LTD / TOTAL E&P Myanmar

Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor <u>HHI</u> to ultimately serve <u>TOTAL</u>.

Contract Value: ~ 20.000.000 USD

Total Mhrs: ~ 850,000 Mhrs.

Location: Offshore Myanmar

Project SOW:

Piping

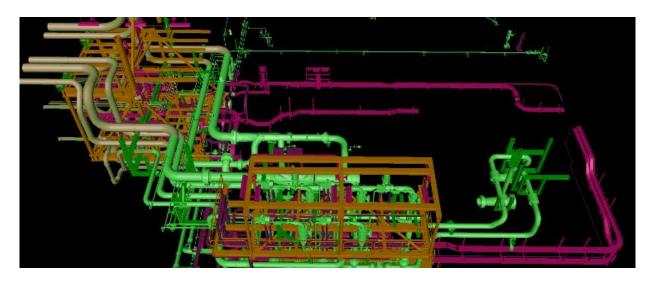
- > 561 spools
- Off-shore weld: 2,033 inch diameter

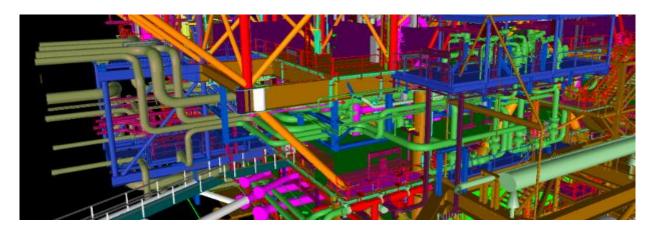
Structure

- Offshore welding: 70 tons, including bridge access extension-10 tons; deck extension-10 tons)
- > 2,500 E&I support

Mechanical

- > Installation of sand removal package;
- Installation of coaleser package
- Installation of 02 oily water pumps
- Replacement of 02 condensate injection pumps







I HUC and BROWNFIELD MODIFICATION / INTEGRATION

I.b HUC and Minor Brownfield Projects

NASR PROJECT: HUC & MODIFICATION (2017-2019)



Client: Hyundai Heavy Industries Co., LTD/ ADMA

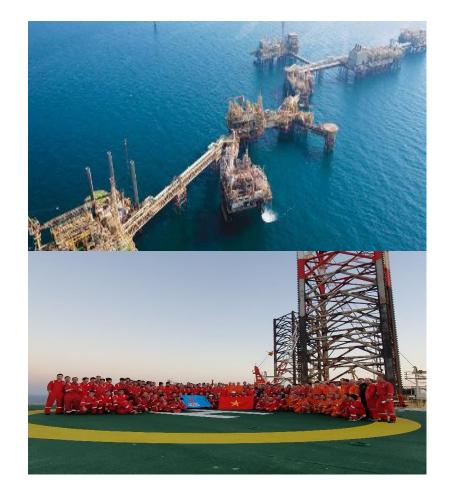
Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor <u>HHI</u> to ultimately serve <u>ADMA</u>.

Contract Value: ~ 7.000.000 USD

Total Mhrs: ~ 500,000 Mhrs. 250 pax mobilized

Location: Offshore U.A.E

Project SOW: Provision Of Offshore Manpower to HHI as a subcontractor (amongst many other subcontractors to HHI) and having been highly regarded by HHI for good productivity and performance over others.



FMB HUC and CARRY-OVER WORK (2016-2017)



Client: Technip FMC / Qatar Petroleum (QP)

Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor Technip FMC to ultimately serve QP.

Contract Value: ~ 7.000.000 USD

Total Mhrs: ~ 250,000 Mhrs, 300 pax mobilized

Location: Offshore Qatar

Project SOW:

Construction

- Scaffolding
- Structural Steel Works
- Insulation Works
- Piping Works
- Painting Works
- Equipment Erection Works
- > HVAC and Architectural Works in Buildings
- > Electrical Works
- Instrumentation Works + Telecom

Pre-com/Com

- Pre-Commissioning
- Commissioning





ZAWTIKA 1A HUC & CARRY-OVER WORK (2013-2014)



Client: PTTEP Thailand

Contract Mode: <u>POS</u> signing contract **directly** with PTTEP Thailand

Contract Value: ~ 9.000.000 USD

Total Mhrs: ~ 100,000 Mhrs

Location: Offshore Myanmar

Project SOW:

- Carry-over work for 3 well-head platforms
- Flange Management and Leak test
- Survey and procure permanent materials to close Piping, E&I punch list
- Located offshore Myanmar, logistics base at Ranong, Thailand
- Remote working, stay on POS's Accommodation Barge, daily transportation by Crew Boat
- ➢ SIMOPS with Rig





MAHARAJA LELA SOUTH HUC & MODIFICATION (2014-2015)



Client: PTSC M&C / TOTAL E&P Borneo BV

Contract Mode: <u>POS</u> as a subcontractor through the EPC contractor PTSC M&C to ultimately serve TOTAL

Contract Value: ~ 11.000.000 USD

Total Mhrs: ~ 105,000 Mhrs.

Location: Offshore Brunei

Project SOW:

- Onshore fabrication of permanent pipeline, structure, installation aid for T&I operation
- Onshore commissioning with SPIE, utilizing ICAPS Software following UPERCOM Methodology.
- Offshore hook-up and commissioning for MLJ3 Platform.
- Offshore brownfield modification for MLJ1 and MLJ2.
- Provision of POS's Accommodation Barge (our own Barge POS-1), fast crew boat, first AHT, second AHT cum supply vessel



GALLAF BATCH 2: HUC & MODIFICATION 01/2022 – 08/2022



Client: North Oil Company (NOC)

Contract Mode: <u>POS</u> signing contract **directly** with North Oil Company (NOC).

Location: Qatar

Project SOW: Provision of supervisors and engineers from POS directly to NOC as an integral part of NOC's team for managing the EPCI Contractor, including below disciplines:

- > Electrical and Instrument
- Structure and Piping
- Pre-Commissioning



STT FFD PHASE 1 HUC & MODIFICATION (2015 – 2016) SAO VANG CPP HUC & MODIFICATION (2019 – 2020)

Client: Cuu Long JOC (ConocoPhillips) / PTSC M&C

Work Location: Offshore Viet Nam

Project SOW:

Construction

- > Lifting & scaffolding works.
- Structural Steel Works
- Insulation and coating Works
- Piping Works
- > Equipment Erection Works
- > HVAC and Architectural Works in Buildings
- Electrical Works
- Instrumentation Works + Telecom

Pre-com/Com

- Pre-Commissioning
- Commissioning

Manpower:

- HUC STT FFD Phase 1: 166,000 man-hours with 455 pax for 03 locations at the same time.
- HUC SV-CPP: **110,000** man-hours with 250 pax for main HUC campaign (CPP Jacket: 17.000 MT & CPP Topside: 10.000 MT)





II TRANSPORTATION AND INSTALLATION

Professional One-Stop Services

TRANSPORTATION AND INSTALLATION PROJECTS

Typical T&I Projects that POS has carried out:

1. Client: Idemitsu Gas Production Vietnam

Project: Transportation and Installation of Sao Vang CPP

Location: Offshore Viet Nam

Project SOW: T&I for SV-CPP Jacket, Piles, Wellhead Service Deck and SV-CPP Topside including:

> SV-CPP Jacket : 17,000 MT

- > SV-CPP Platform: 10,000 MT
- 2. Client: Cuu Long JOC

Project: T&I for Su Tu Trang Full-field Development

Location: Offshore Viet Nam

Project SOW: T&I for the following offshore facilities:

- > LQ Jacket, Pile & Topside
- CPP Topside (2 Modules)
- Linked Bridges

3. Client: Bien Dong POC

Project: T&I for Hai Thach PQ, Hai Thach WHP & Moc Tinh WHP

Location: Offshore Viet Nam

Project SOW: T&I for the following offshore facilities:

- > 1 Jacket (11,000 MT) + 1 Jacket (16,500 MT)
- > 01 Topside (3,000MT) + 1 Topside (14,000 MT)













III OFFSHORE DECOMMISSIONING

Professional One-Stop Services

OFFSHORE PIPELINE DECOMMISSIONING 10/2021 – 7/2022



Client: Chevron Thailand

Contract Mode: <u>POS</u> signing contract **directly** with Chevron Thailand

Total Mhrs: ~ 500,000 Mhrs

Location: Offshore Thailand

Project SOW:

- Workpack 01: Disconnection and removal of 60 tie-in spools
- Workpack 02: Disconnection and removal of Tantawan PLEM.
- > Workpack 04: Installation of Tie-in Spool for Phase 59





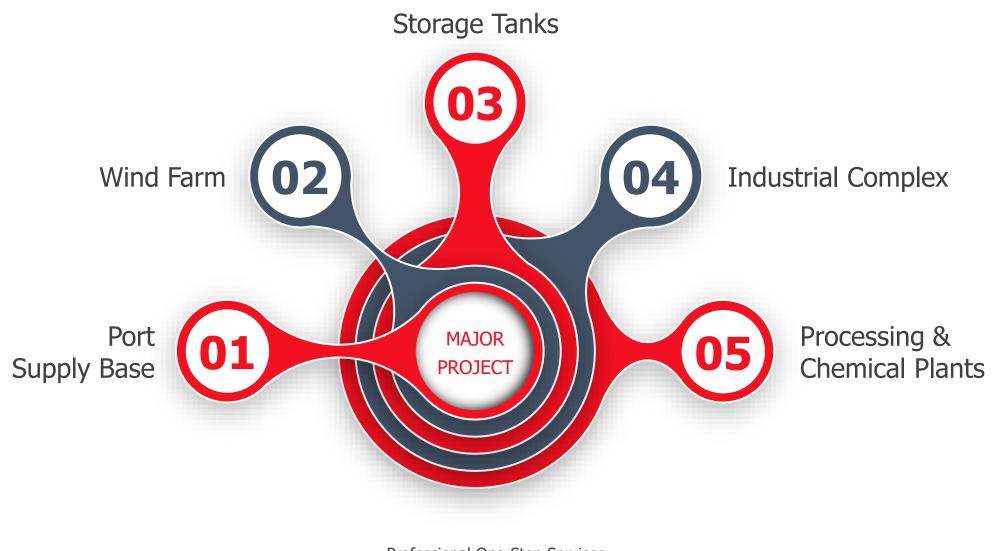






ONSHORE CONSTRUCTION





LSP COMPLEX PROJECT- PACKAGE A1 OLEFINS PLANT (ONGOING)



Client: TPSK

Work Location: Long Son, Vung Tau city

Project SOW:

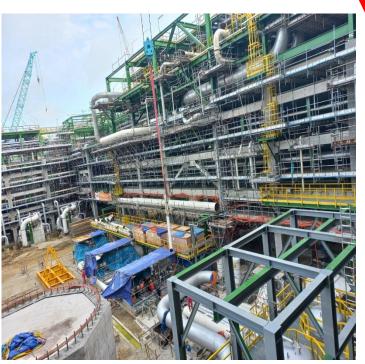
- Civil works
- ➢ PC Piperack
- Steel structure erection
- > Piping work fabrication and erection
- Common scaffolding erection works

Insulation works

- > Equipment Installation:
- Pre-commissioning







HSVC1 PP4 PROJECT (2018 – 2019)



Client: Hyosung Vina Chemicals/ Etec Work location: Cai Mep, Vung Tau City Project SOW:

- Piping fabrication & erection~ 160,000 DI, Duplex, SS, CS
- Equipment Installation: ~ 3000MT static & rotating equipment
- Pre-com & Commissioning





LPG ENHANCEMENT FOR GPP DINH CO (2017 – 2018)



Client: PetroVietnam Gas (PVGas)

Work location: Long Dien District, Ba Ria Vung Tau Province

Project SOW:

- ➢ Installation of Rectifier C-05B
- ➢ Installation of Heat Exchanger E-14B
- Construction, Installation of Technonoly System, Electrical system, Lighting system and other support system.
- Hook-up and Commissioning between new and existing system including piping, valve system
- ➢ Installation of DCS, SSD, F&G



STRUCTURES & SPOOLS PRE-METROLOGY FABRICATION for GREAT WESTERN FLANK 2 PROJECT (2017)



- Project: Structures and spools for Great Western Flank 2 Project (GWF2) - 2018
- > Client: Subsea 7 Australia / Woodside
- Scope of work: Fabrication of Structures and Inconel 625 clad spool kits
- > Total Weight: 1200 MT





FABRICASTION OF SUBSEA STRUCTURE FOR PHONG LAN DAI FIELD DEVELOPMENT (PLD Project) (2018)



- > **Project:** Fabrication of Subsea Structures for PLD Project
- > **Client:** Subsea 7 Australia / Rosneft Vietnam
- > **Scope of work:** Fabrication of PLEMs, PLETs, Tie in spools
- > Total Weight: 500 MT





EPC FOR INLET AND OUTLET DUCT FABRICATION (ONGOING)



- Project: ePC for Inlet and Outlet Duct System
- Client: Innovative Steam Technologies /Siemens
- Scope of work: Fabrication of Inlet and Outlet Ducting System
- > Total Weight: 800 MT







OPERATION AND MAINTENANCE

Currently, PTSC Offshore Services (POS) has long-term contracts to provide Operation and Maintenance (O&M) services for almost of the big Oil and Gas Exploration and Production (E&P) Companies in Vietnam, including:

Client	Service	Location
Cuu Long JOC	Long-Term Manpower Services For CPP & Thai Binh VN	Thai Binh VN FPSO
KNOC	Operation & Maintenance Service for KNOC	Rang Dong Oil Field
JVPC	Long-term Operation & Maintenance Service for KNOC	CPC Platform
PCVL	Provision of supplying Wellhead Operators for PCVL	Ruby A & Ruby B platform





OFFSHORE MAINTENANCE PROJECTS

1. Client: Bien Dong POC

Project: Turnaround 2021- Pressure Vessel Internal cleaning & Inspection

Work location: Offshore Viet Nam

Project SOW:

- > Fabricate thin spades
- > Scaffolding and Insulation for NDT, breaking joints
- Flushing & cleaning for vessel entry
- > Reinstate the breaking joints and manholes
- Support production for leak test
- **2. Client:** Binh Son Refining and Petrochemical **Project:** Maintenance of Single Point Mooring (SPM) of Binh

Son Refinery

Work location: Binh Son Refinery

Project SOW:

Covers all routine activities that are essential to maintain an uninterrupted operation of the SPM Package & Subsea Crude Pipelines, all performed by POS's resident team at work site at the Refinery.





MAJOR CLIENTS





PTSC OFFSHORE SERVICES JOINT STOCK COMPANY

THANK YOU VERY MUCH FOR YOUR KIND ATTENTION