



# PT GUNANUSA UTAMA FABRICATORS



**Company Profile**

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# PT GUNANUSA UTAMA FABRICATORS (GUNANUSA)

provides project management, engineering, procurement, fabrication, construction, installation, hook-up, commissioning and start-up assistance services for both offshore and onshore projects in oil and gas as well as other heavy engineering structures.

Founded in 1980, GUNANUSA commenced operations in 1983. It has secured work from the Indonesian market and worldwide markets including Thailand, India, Myanmar, Brunei and USA.

GUNANUSA is certified to ISO 9001-2015 for quality management system, ASME Stamps (U, U2, S and PP) for the manufacture of pressure vessels and boilers, OHSAS 18001-2007 and SMK3 for health, safety and welfare management system and ISO 14001-2004 for environmental management system.



# ENGINEERING

The core of GUNANUSA engineering team consists of senior engineers from various disciplines (structural, piping, mechanical, electrical and instrumentation) with at least 10 years experience in oil and gas offshore and onshore projects.

During the bidding stage, the engineering team supports the proposal team by preparing Materials Take Off / Bill of Materials and Materials Requisition (RFQ), as well as providing technical write up and review of the project specifications.

The construction engineering team at GUNANUSA prepares fabrication and construction drawings, the basis for fabrication work. They are also experienced in the design of pressure vessels and boilers to ASME and BS standards.

For load-out activities, the engineering team undertakes structural and ballasting calculations to ensure the smooth and safe operation.

For detailed engineering, we are supported by experienced and reputable engineering firms who have worked with us for many years.

GUNANUSA utilizes a number of engineering software namely SACS (structure), Caesar (piping), PDMS, PV Elite (pressure vessel),



Finglow (pressure vessel), Autocad LT 2018 (Drawing 2D), Autocad LT Mech. 2018 (Drawing Mechanical), Autocad 2018 Full 3D (Drawing 3D), PIMS (Precommissioning), Staad Pro Connect Edision (structure), Nozzle, Traceability System (Document Management System), SCIA (structure), Finglow (pressure vessel).

We also have a comprehensive engineering library for documentation of engineering references like procedures, standards, drawings and etc to expedite the engineering process.



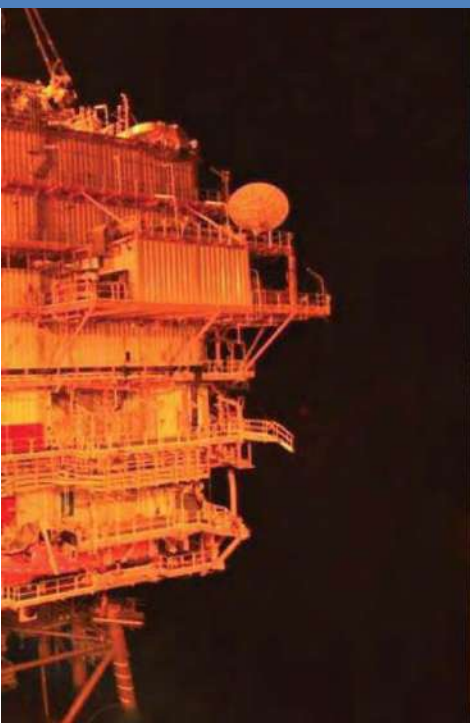


# PROCUREMENT

**Procurement department** ensures that the materials are timely delivered, prompt liaising between vendors and projects, including shipping arrangement, custom clearance, materials handling activities, local/inland transport, warehouse storage, final documentation and manuals. Procurement engineering also provides technical backup for materials and equipment package to meet clients' requirements and project specifications.

GUNANUSA synchronizes its supply chain management by using its Enterprise Resource Planning (ERP) software (Microsoft Dynamic Axapta), which coordinates and provides real-time information to monitor schedule, materials take-off, purchase requisitions and warehouse inventory.

For overseas procurement, we engage the services of International Third party inspection companies, including Moody International (Asia), DNV, Lloyd's Register to ensure that all the procured items meet project specifications including testing and final delivery inspection.



# FABRICATION & CONSTRUCTION

GUNANUSA's reputation in the Oil and Gas industry is built through years of fabrication experience, delivering over 100 offshore platforms, also completed and delivered numerous onshore plants to numerous worldwide customers.

GUNANUSA fabrication yard is located 120 km west of Jakarta. The yard occupies an area of 18 ha with an 800 m water front to accommodate two jetties, each with 10,000 ton load out capabilities.

Every structure build at our fabrication yard is custom fabricated by dedicated engineers determined to do their best to fulfill customers' needs, safely and on schedule.

The Javanese traditional heritage in fine craftsmanship manifested in our platform building which comply to the highest international standards. The same skills and attention to details commonly found in Javanese craft and architecture are now applied to the fabrication of oil and gas platforms using modern materials like Duplex Stainless steel, Fiber-reinforced epoxies and other exotic modern materials.

From material received to material identification, from shop drawing to structural works, from erection and assembly to commissioning, our engineers and technicians are working hard to ensure that we deliver in accordance with specification requirements, safely and timely per agreed schedule to our customers.





GUNANUSA Yard is Custom Bonded area where overseas vendors/clients can deliver the material directly to the yard and clear customs formalities therein.

GUNANUSA yard is a fully equipped fabrication facility, with proven track records of delivery of 25,000 tones of various modular fabricated structures and have had 6,500 personnel working at peak period.

A dedicated workshop for welding of exotic materials like stainless steel, duplex, super duplex and CuNi complements the yard facilities along with assembly and erection areas, and a welding school (for training and certification).

The yard has several heavy duty vehicles and equipment, 8 to 250 tones cranes (overhead, cherry picker, crawler crane), welding machines, air compressors, generators, trailers, forklift, winches, tools, etc.

# Fabrication Yard

## Fabrication Yard Facility

Open Area:	18 hectares
Annual Production:	20,000 ton
Office Area:	2,000 m <sup>2</sup>
Bearing Capacity:	30 ton / m <sup>2</sup>
Workshop Area:	33,000 m <sup>2</sup>
Painting Area:	8,000 m <sup>2</sup>
Power Company Grid:	1,800 Kva
House Generators:	2,100 Kva
Emergency Generators:	2 x 500 Kva, 1 x 550 Kva 1 x 200 Kva, 1 x 150 Kva

## Jetty

Jetty I		Jetty II
10,000	Module Weight (ton)	10,000
300	Skid Way Length (m)	153
7.5	Water Depth (m)	7
250 550	Single Point Load Skid way (ton/m) Jetty tip (ton/m)	250 550
1.2	Tide Variation (m)	1.2

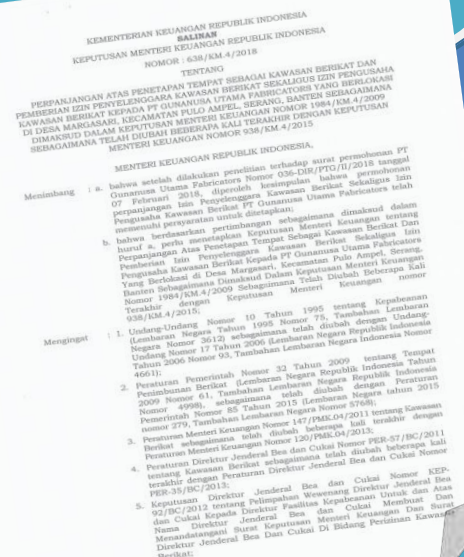
Water front 800m

## Storage Capacity

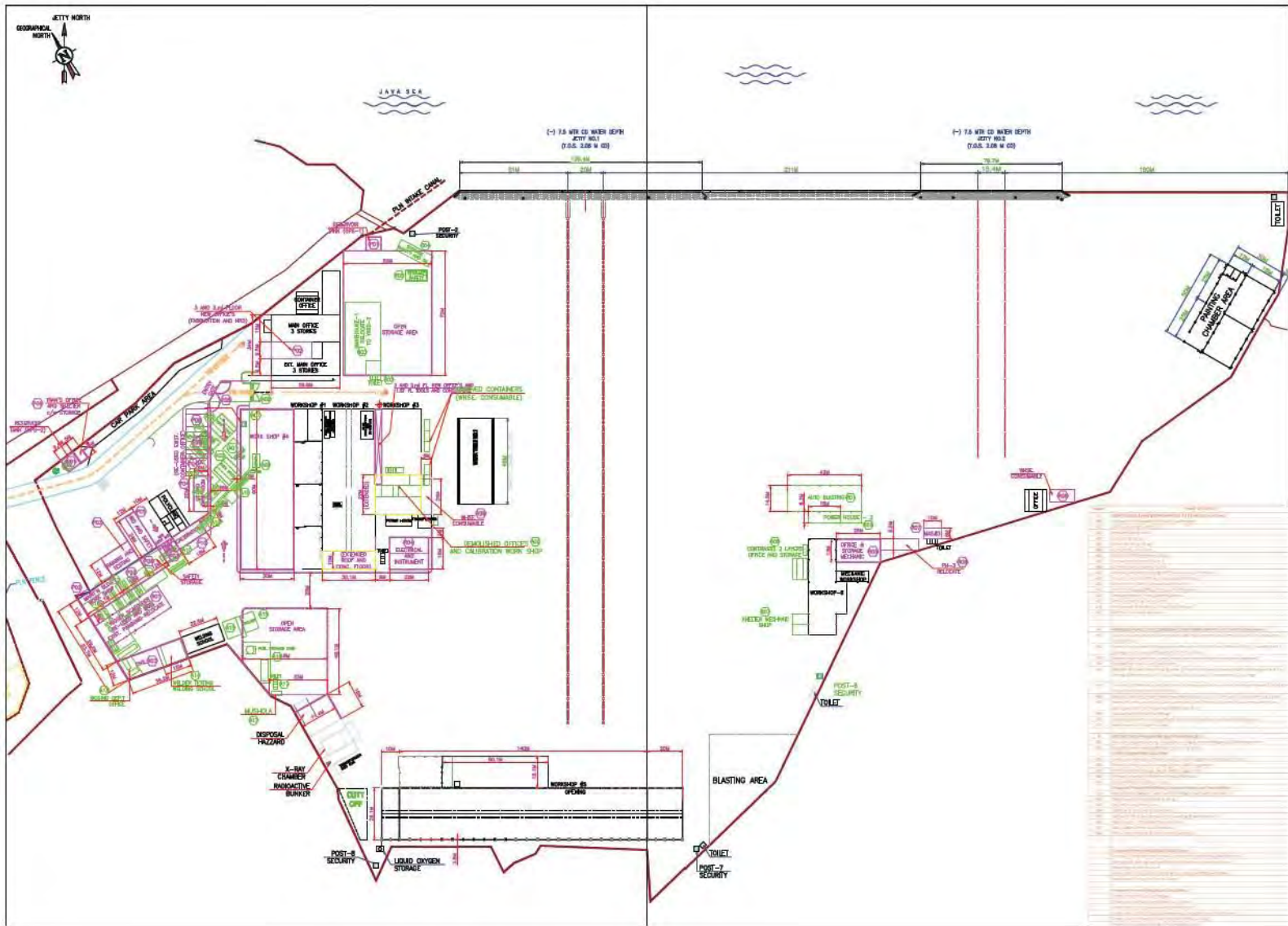
Warehouse	2,500 m <sup>2</sup>
Open Storage	40,000 m <sup>2</sup>
Air conditioned closed warehouse	275 m <sup>2</sup>
Equipment Storage	53 m x 19 m

Gunanusa Yard is certified as Bonded Zone from Indonesian Government

which allows overseas vendors to deliver materials directly to the yard and clear customs formalities therein.



# Fabrication Yard





# INSTALLATION & HOOK-UP

Our experienced engineers are capable of performing offshore and onshore hook up and installation. The team is supported by versatile marine spreads, equipment, tools, consumables, utilities and other resources as required for site work.

For shallow water installation, GUNANUSA uses the float over method. The barge, with full-loaded deck, is positioned above the site and lowered by using high capacity ballast pumps and taking advantage of local tide.

For open sea installation GUNANUSA will engage with Client's approved offshore installation company. Through years of working at the customers' premise, GUNANUSA has become very adept in the hook-up process.



# PRE-COMMISSIONING & COMMISSIONING



Our teams are specialized to perform pre-commissioning/commissioning activities such as megger and continuity test, hydro-test, dielectric test, valve functional, leak test, gauge and transmitter calibration, safety valve test, cold and hot loop check, system functional test (with assistance from control system sub-contractor), mechanical equipment running test and up to Compressor running test and string test.

Pre-commissioning, Commissioning activities and start up activities will directly influence the ultimate success of an entire project.

Proper knowledge, planning, qualified personnel, experience are the keys to avoid delays, cost overrun and potential safety hazards.

GUNANUSA continuously enhance our Pre-commissioning and Commissioning Personnel knowledge and skills. They are trained to operate all kinds of Pre-commissioning /Commissioning tools and equipment.

GUNANUSA has dedicated teams to perform pre-commissioning, commissioning and assist for start up. They work closely with design engineers, construction and field engineers to develop effective, safe and efficient start-up plan for offshore or onshore projects.

Our teams will be on site to coordinate and perform all pre-commissioning/commissioning based on the plan.



# HEALTH, SAFETY, ENVIRONMENT

## ***GUNANUSA Safety Objectives:***

- No Fatality
- No major accident
- No Major Fire
- No Explosion

Safety is paramount for GUNANUSA's way of life. The value of safety is ingrained in GUNANUSA's workforce, through regular safety induction, tool box meeting, safety courses and in house training.

The application of these principles is monitor by HSE and all workers in generals through Safety, Health, Observation Card (SHOC).



## Lost Time Incident (LTI) :

is an industry measurement, based on worker not having lost a day work due to work related incident.

Safety inspectors supervise all projects activities on a regular basis. For example, scaffolding is inspected weekly, certified scaffolding inspectors will inspect to ensure that the scaffolding is safe for use. If they need to be rectified, immediate action will be taken. For other equipment, like cranes, riggings, electrical, air compressor, inspection is conducted on a monthly basis by certified safety inspector with Client Representative where appropriate.

GUNANUSA also has procedures in place for reporting and investigation of hazards, risk assessments, and accident including near misses. All incidents are recorded and reported to the management for the purpose of lessons learnt and to develop follow-up actions.

**SSHE CAMPAIGN : HEAVY & CRITICAL LIFTING**

**Lakukan Go-No-Go List Sebelum Pengangkatan Berat dan Kritis**  
Apply Go-No-Go List Before Heavy & Critical Lifting

**Periksa dan pastikan semua persyaratan keselamatan terpenuhi sesuai checklist**  
Check and ensure all safety requirements in the checklist are implemented

**GO NO GO checklist**

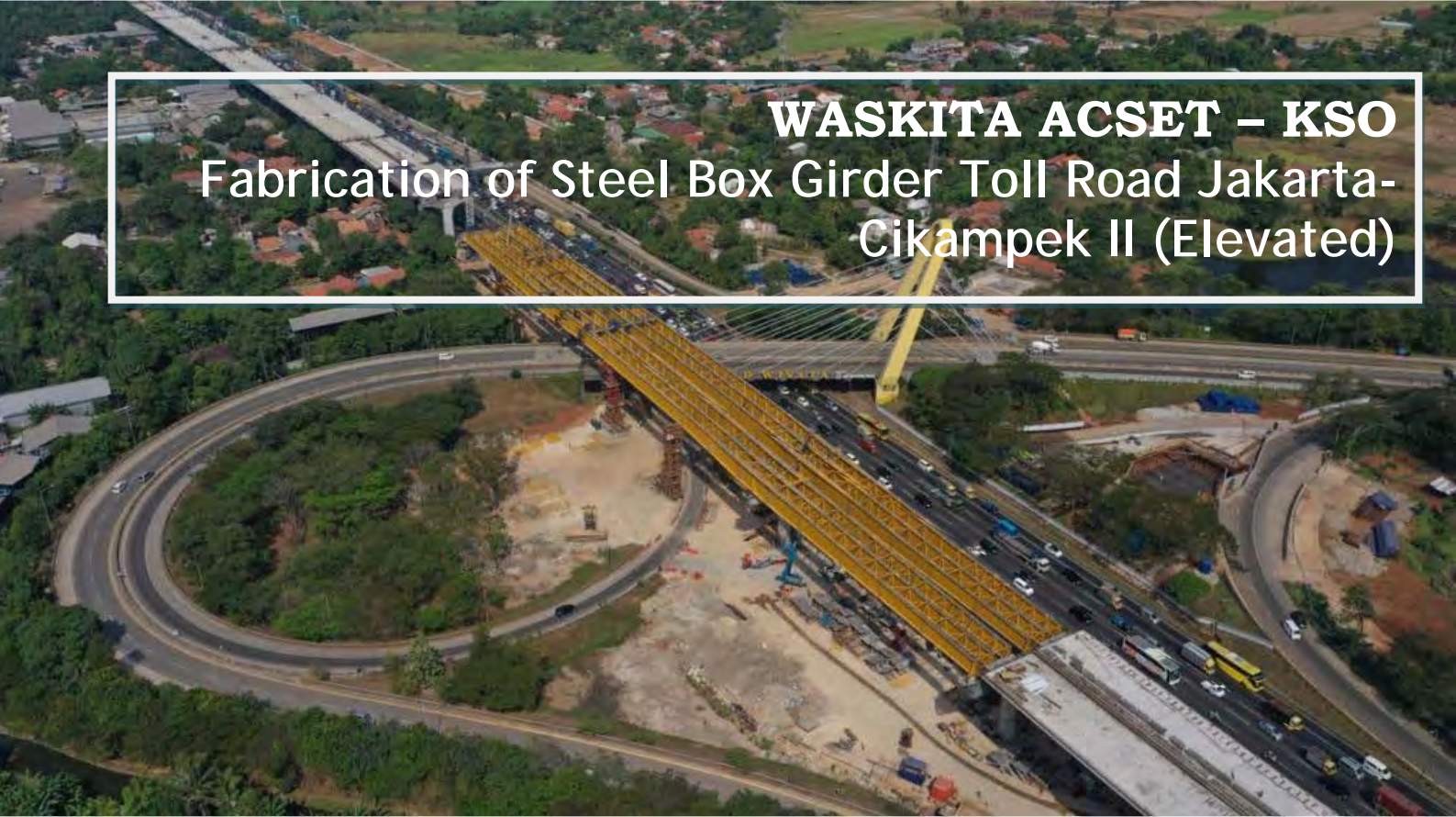
**Zantika Development Project Phase 1C - Rev 0**  
To be updated for each Phase of work between P11P and P12

Work Description: Lifting Beam  
Schedule Commence:

No	Activity	Responsibility	Status	Comment
1	<b>A. Preparation</b>			
1.1	Documents administration: Company (P11P)	PTG		
1.2	Approved JSA for heavy lifting of beam and to be briefed to the team on site	PTG	Ab	Lifting plan approved by JSA Approval & Serialised
	on site	PTG		
	low	PTG		

# WASKITA ACSET – KSO

## Fabrication of Steel Box Girder Toll Road Jakarta-Cikampek II (Elevated)



### *selected experience*

In 21<sup>st</sup> November 2018 Gunanusa received the Contract or SPK from Waskita-Acset KSO for Fabrication and Erection Long Span Girder above Grand Wisata Bridge and part of Jakarta Cikampek ( Japek ) 2 Elevated Toll Road Project.

Total length of Long Span Girder is 240 m consist of 3 part : 70 m - 100 m - 70 m . Design I girder with high 4,5 m and average weight per girder 30 Ton. Total erection weight of Long Span Girder is 3.160 Tonnage.

Project completion with Hand Over certificate signed both party on 25<sup>th</sup> July 2019.



# ZAWTIKA FIELD DEVELOPMENT PROJECT PHASE 1C EPCI OF WHP, ASSOCIATED PIPELINE & TIE-IN

*selected experience*



In May 4th, 2016, GUNANUSA was awarded the contract for the ZAWTIKA FIELD DEVELOPMENT PROJECT PHASE 1C, EPCI OF WHP, ASSOCIATED PIPELINE & TIE-IN from PTTEP as Thailand's National Oil & Gas company

This project consisted of 2 (two) LOTs. The scope of project included Detailed Engineering, Procurement, Construction, Installation, Hook-up & Commissioning of 2 (two) Wellhead Platforms (WP8 and WP9) as LOT-1 and 2 (two) Wellhead Platforms (WP10 and WP11) as LOT-2

The details are as follow :

- LOT-1 consisted of 2 (two) Wellhead Platforms (WP.8 and WP.9), 3,246 Ton Topsides, 13,120 Ton Jackets, 2 (two) Associated Pipelines (IP8 :18"Ø -22 KM and IP9 14"Ø-10 KM), One (1) Pipeline and Manifold (IP2 PLEM), Brownfield Modification and Tie-in to Existing Platforms
- LOT-2 consisted of 2 (two) Wellhead Platforms (WP.10 and WP.11), 3,246 Ton Topsides, 13,100 Ton Jackets, 2 (two) Associated Pipelines (IP10 :18"Ø -5.6 KM and IP11 18"Ø-15.3 KM), One (1) Pipeline and Manifold (IP2 PLEM)



The platforms were completed ahead of schedule and were installed at Gulf of Mottama, 300 km South of Yangon, Myanmar in May, 2018

ZAWTIKA FIELD DEVELOPMENT PROJECT PHASE 1C  
JACKET INSTALLATION

selected experience



# PERTAMINA HULU ENERGI (PHE) WEST MADURA OFFSHORE (WMO) EPCI-1 SERVICE CONTRACT for PHE- 12, PHE-24 and CPP<sub>2</sub> Platforms and Pipeline.

selected experience

In August 24th, 2015, GUNANUSA with its consortium partner TIMAS Suplindo, an Indonesian installation company, was awarded the contract for the PERTAMINA HULU ENERGI (PHE), WEST MADURA OFFSHORE (WMO) - EPCI-1 SERVICE CONTRACT, Indonesia's National Oil & Gas Company

The scope of the project included Detailed Engineering, Procurement, Construction, Installation, Hook-up & Commissioning of 2 (two) Wellhead Platforms (PHE-12 and PHE-24), 1 (one) Central Process Platform (CPP-2), Bridges, Pipelines and KE5 Brownfield Modification.

The total weight of platforms were as follow :

- 2 (two) Wellhead Platforms (PHE-12 and PHE-24) consisted of 795 Ton Topsides with 916 Ton Jackets which including 528 Ton Piles.
- 1 (one) Central Process Platform (CPP-2) consisted of 2,500 Ton Deck, 1,200 Ton Jacket and 1,240 Ton Piles
- 1 (one) 50 Ton Bridge
- 12 Km pipelines.

The platforms were installed at West Madura Offshore, East Java, Indonesia in December, 2017.





# YADANA FIELD DEVELOPMENT PROJECT EPSCC.1 and EPSC.2 FP2 AND QP2 PLATFORMS AND BROWNFIELD MODIFICATIONS ON EXISTING PLATFORMS

selected experience



In July and September, 2012, GUNANUSA was awarded the contract for the Yadana Field Development Project EPSCC1 and EPSC.2 from Total E&P Myanmar.

The project scope included Detailed Engineering, Procurement, Supply, Construction and Commissioning, of FP2 and QP2 Platform and Engineering, Procurement, Supply and Construction of Brownfield Modification On Existing Platforms.

The total weight of platform were as follows:

- QP2 Topsides 1,500 Ton.
- QP2 Jacket 1,800 Ton.
- Piles 2,600 Ton.
- FP2 Tripod Flare Tower (80 M Height) 320 Ton.
- FP2 Jacket Flare 430 Ton.

The platforms were installed at Adaman Sea 60 Km Offshore in October, 2014.

# ONGC ICP-R

In May 29th, 2009, GUNANUSA with its joint venture partner AFCONS, an Indian construction company, was awarded the contract for the ICP-R Platform from ONGC (Oil and Natural Gas Company), India's National Oil company.

The project scope included Detailed Engineering, Procurement, Construction, Commissioning, and Offshore Installation of the ICP-R process platform and jacket, including a bridge to the nearby ICP platform, and Flare Tripod. The total weight of the platform is 10,000 ton and 5,800 ton jacket.

ICP-R platform was modularized into five modules to facilitate transport and installation namely:

1. Main Support Frame
2. Building Module
3. Process Gas Compressor
4. Separator Module
5. Turbine Generator

The platform was installed at Mumbai High North in March 2011.

## String Test

String test of turbo compressor trains are normally carried out in a controlled factory environment. For this project, The String Test was carried out in GUNANUSA's fabrication yard to simulate actual

operation condition when the modules are finally installed. GUNANUSA tackled this very tough challenge splendidly.

**Safety Record:  
4.8 million hours without  
LTI**

selected experience





ONGC Building Module heading to barge using multi wheel transporter



ONGC - INDIA ICP-R  
"Installed" 2011

selected experience

# TOTAL's Tunu Development



Total Indonesia E&P operates the Tunu gas and condensate fields in East Kalimantan on the outer margin of the Mahakam Delta, an average water depth of 8 m. GUNANUSA scope included Engineering, Procurement, Construction and Installation. For phase 11, the project consisted of 2 platforms, South Manifold Platform (SMP) and South Compression Platform (SCP). SMP, weighing 2,700 ton, consisted of deck, Middle Pressure Manifold with pig launcher and receiver, Low Pressure manifold, 2 slug catchers, and flare KO drums. SCP, weighing 4,600 ton, consisted of deck, inlet and

discharger, air cooler, turbo-compressors, suction scrubbers, gas turbine power generator packages. SCP compressed the gas before delivery to Bontang LNG Plant. The project was awarded in December, 2006 and was completed in February, 2008.

## PTTEP - BONGKOT Quarter Platform South (QPS)



PTT Exploration and Production Plc (PTTEP) awarded GUNANUSA the contract for the Engineering, Procurement, Construction, Installation, Hook Up and Commissioning of the living Quarter Platform South (QPS)., for the Development Phase 4A of Greater Bongkot South area in December 29th, 2008.

QPS has a 3,800 ton topside, with a 1,200 ton jacket, which includes living quarters for 160, galley, recreational room, office, helideck, workshop, emergency diesel, fresh water package, and sewage treatment. The water depth was 78 m. The platform was installed in August, 2011.

**PTTEP Bongkot  
Deck Stacking**



**PTTEP Bongkot  
Ready for Loadout**



*selected experience*

# HESS - Ujung Pangkah CPP & AUP

Hess (Ujung Pangkah) awarded GUNANUSA the contract for Engineering, Construction, Hook Up and Commissioning of Central Processing Platform (CPP) and Accommodation & Utility Platform (AUP) in October 27th, 2008.

CPP comprised of the Deck module (2,000 ton) and Compression Module (650 ton). AUP comprised of the Deck (1,600 ton) and Living Quarter (700 ton). The both jacket weighted 260 ton with 640 ton piles. The water depth was 10 m. The platforms were installed at Ujung Pangkah, East Java, Indonesia in March, 2011.



selected experience

Hess awarded GUNANUSA the safety award for 5 million manhours without LTI during CPP-AUP Project.



HESS Ujung Pangkah  
Project CPP - Compression  
module load out using  
skidding method

selected experience



# BP TANGGUH GAS PRODUCTION FACILITIES



The BP Indonesia's Tangguh Gas field in Berau Bay in the province Irian Jaya, Indonesia. The natural gas field contains over 500 billion m<sup>3</sup> (17 tcf) of proven natural gas reserves, with estimates of potential reserves reaching over 800 billion m<sup>3</sup> (28 tcf).

Saipem as the main contractor for the project subcontracted GUNANUSA to fabricate two Gas Production Facilities (GPF) platforms (VR-A and VR-B), each deck weight is 1,200 tons, including jackets (1,900 tons each) and piles (1,300 tons each). The BP Tangguh facilities have a special requirement, 40 years long term corrosion protection accomplished by coating the structures with Thermally Spray Aluminum (TSA). The project was completed in October, 2006.

selected experience

## Alstom Astoria Energy Projects Heat Recovery Steam Generators



As part of a project to increase the electricity supply to the City of New York, Alstom power Inc. contracted GUNANUSA to fabricate two identical Heat Recovery Steams Generators (HRSG). The HRSG will recover the heat from the exhaust gas for power generation. Each structure weight was 2,500 tons with a 40 m height. GUNANUSA completed the project in 8 months and loaded out in April 2005 and shipped around the world to city of New York to run another Generator. GUNANUSA completed the fabrication ahead of time in April 2005, including load out and transport arrangement to accommodate a 'dockwise' vessel at GUNANUSA's Yard.



# PECIKO 6 (EPSC1) LP COMPRESSION PLANT



In September 14th, 2007, GUNANUSA was awarded the contract for the Peciko 6 EPSC-1 LP Compression Plant from Total E&P Indonesia.

The project scope included Detailed Engineering, Procurement, Supply, Erection and Construction, Tie-In Work on Site, Precommissioning and Assistance for Commissioning & Start Up of LP Compression Plant

The Peciko 6 (EPSC.1) LP Compression Plant has Production Facilities which consisted of:

- 2 Turbo Compressors
- Inlet and Discharge Gas Air Coolers
- Suction Scrubbers, Fuel Gas Package, Pressure Vessels & Pumps, Open and Closed Drains System
- Nitrogen Package



selected experience

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## PT. GUNANUSA Utama Fabricators

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