	<b>Floating Storage and Regasification Unit</b>	<b>Doc. No : LDP-FSRU-VIII-22.R0</b>	
		<b>Rev.: 1</b>	<b>Date : -</b>
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## **PROPOSAL DOCUMENT**

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## 1 . Company Overview



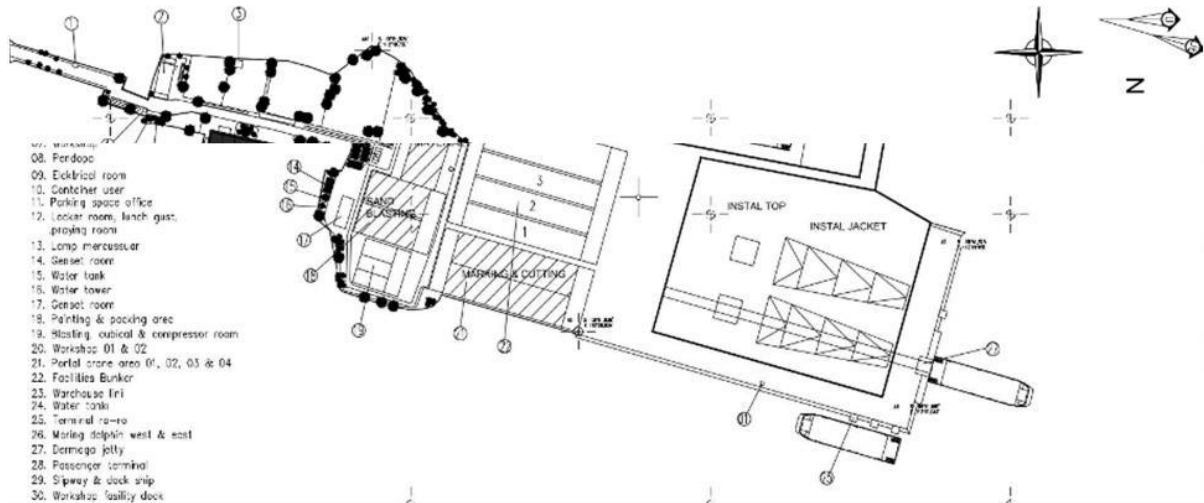
PT. Lintech Duta Pratama (LINTECH) is an experienced company in providing services as following:

Engineering and Design for Civil (Piling/Foundation, Earthwork, Concrete), Steel Structure, Mechanical and Electrical (power and Control System). Fabrication for Carbon, Stainless and other exotic metal in Steel Structure, Plate works and Piping. Plant Construction (civil structure-mechanical-piping-electrical-instrumentation) and Commissioning Works. Our service's customers covering several companies in Oil & Gas, Mining, Power plant, Cement Plant, and Various Industry

We are committed to deliver projects in highest quality and competitive price at committed time Schedule

## 2. Lintech Facility

Layout Lintech Seaside Facility



### Area Availability

Raw Material Area 27.000 m<sup>2</sup>  
 Blasting 864 m<sup>2</sup>  
 Workshop Area 5.000 m<sup>2</sup>  
 Portal Crane 6.000 m<sup>2</sup>  
 Yard Construction/Erection 44.000 m<sup>2</sup>  
 Jetty North 10.000 DWT, 8 m draft 230 m long  
 Jetty East 5.000 DWT, 4 m draft 110 m long

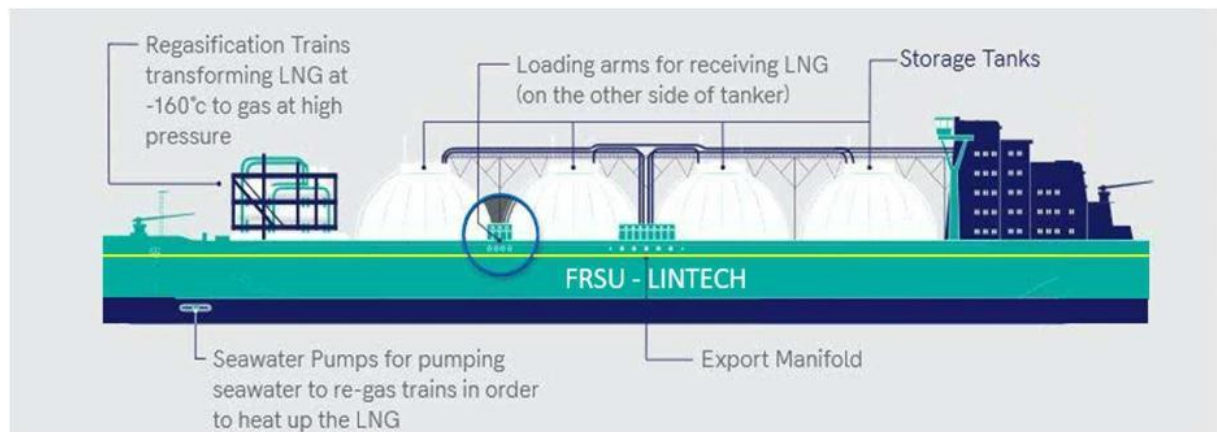
### 3. Specification Floating Storage and Regasification Unit

The key specification of the FSRU

Length O A : 276 Mtr  
 Breadth moulded : 43 Mtr  
 Depth : 26 Mtr  
 Cargo Tank Capacity (100%) : 137.000 m<sup>3</sup>  
 Regasification Capacity : 240 mmscfd

### 4. Drawing Arrangement and Doc Technical

Drawing Arrangement FRSU



Length O A : 276 Mtr  
 Breadth moulded : 43 Mtr  
 Depth : 26 Mtr  
 Cargo Tank Capacity (100%) : 137.000 m<sup>3</sup>  
 Regasification Capacity : 240 mmscfd

### LNG Storage Tank Calculation

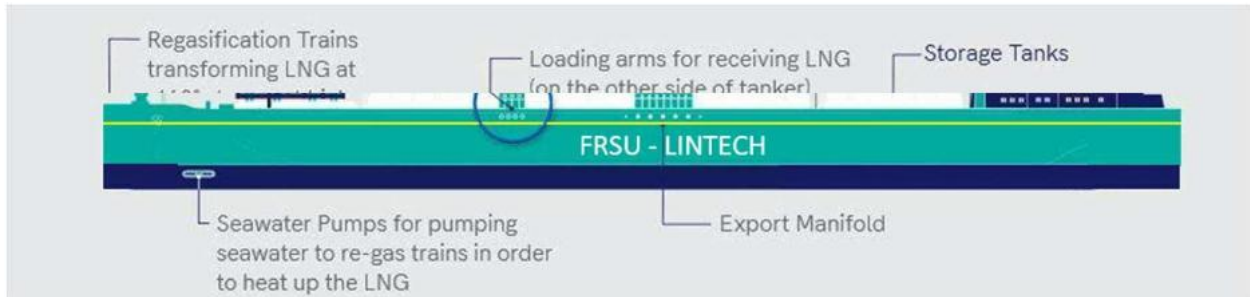
#### Thickness of Shell Under Internal Pressure ( UG- 27 )

Design Pressure	Pd :	30	Psi	
Design Temperature	Td :	-	°F	
Material	:	SS304		
Inside Radius of Shell	R :	788.236	in	( 20,021 mm)
Max Allowable Stress at Td	S :	20000	Psi	
Joint Efficiency	E :	1		
Corrosion Allowance	CA :	0.1181	in	
Minimum Thickness as per UG-16(b)	tr :	0.063	in	(1.5 mm )
(UG-27'(d))	:	13300	Psi	
		$P < 0.665SE$	<b>OK</b>	
Minimum Required Thickness	tr :	0.591	in	( 15.02 mm)
$t = (Pd*(R+CA)) / (2S*E-0.2*Pd)$				
		$0.356R :$	280.612 in	
		$t < 0.356R$	<b>OK</b>	
Design Thickness	Td :	0.591	in	( 15.02 mm)
		( Use Largest)		
Thickness Used	t :	<b>0.709</b>	in	( 18 mm)

#### Regasification Equipment

- LNG vacuum powder storage tank
- Unloading pressure booster skid
- LNG high pressure centrifugal pump (including PLC control panel)
- Ambient air vaporizer
- Hot water reheating device
- BOG heater
- BOG hot water reheating device
- EAG vaporizer
- BOG buffer tank
- BOG compressor
- Metering & odorizing skid (double way metering and auto-odorizing)
- Instrument air system & PSA nitrogen system
- N2 buffer tank
- Control system

## 5. Flow Process Floating Storage and Regasification Unit



## 6. Preliminary Schedule

Construction Time : 36 Months  
 Discussion and feasibility studies  
 Permitting and pre-engineering to achieve project approval  
 Construction

### Primary Schedule

Contract Award	: Month 1
Eng Design and Approval	: Months 2 - 10
Procurement Material	: Months 10 – 25
Construction Vessel	: Months 10 - 32
Construction Tank	: Months 14 - 30
Installation Regasification	: Months 25 - 33
Sea Trial and Commissioning	: Months 33 – 36

## 7. Price of Quotation

Cost for New Building Floating Storage and Regasification Unit USD xxx.xxx.xxx  
 (please to contact [admin@lintech.co.id](mailto:admin@lintech.co.id))

### Specification of the FSRU

Length O A	: 276 Mtr
Breadth molded	: 43 Mtr
Depth	: 26 Mtr
Cargo Tank Capacity (100%)	: 137.000 m3
Regasification Capacity	: 240 mmscf

## 8. Term of Condition

- Response of Approval drawing has sent, not more than 5 days
- Free issue material to be assembly shall be come to our warehouse in a week before time of assembly
- Currency quotation in USD
- Term of payment is
  - 20% DP
  - 75% progress payment
  - 5% Retention – 6 Months
- Validity of the offer : 4 Months
- Excluded as follow :
  - VAT / PPN
- Quotation based on unit rate, any volume deviation will be revision quoted