



**LAO PDR**  
Vientiane Capital

**MALAYSIA**  
Shah Alam

**PHILIPPINES**  
Makati City



**WHESOE**

**HEAD OFFICE**

**Whessoe Sdn. Bhd.**

Lot 3801, Batu 6 ¼ Jalan Klinik, Bukit Kemuning, Seksyen 32,  
40460 Shah Alam, Selangor, Malaysia.

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**Subsidiaries, Associated Companies and Branches**

**Whessoe Philippines Construction Incorporated.**

Unit 2207, 88 Corporate Centre, Salcedo Village, Makati City, Philippines  
Philippines Projects, Engineering, Fabrication and Machine Shop

**Whessoe Consultancy Services Ltd.**

#02-00, 80 Robison Road, Singapore  
Project Management Services

**Whessoe Lao Company Ltd.**

Ban Thaphalanxay, Sisattanak District, Vientiane, Lao PDR  
Fabrication and Machine Shop

**Whessoe Sdn. Bhd. South Africa Branch**

Meerzicht Office Park, Jet Park, Johannesburg, South Africa  
Branch Office

## The History of Whessoe 1790 – present

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<b>1790</b>	Incorporated in UK
<b>1890</b>	First Storage Tanks and Refining Plant
<b>1920</b>	Listed on London Stock Exchange
<b>1950</b>	Designed and Built UK First Nuclear Reactor Vessel
<b>1960</b>	Designed and built the world's first LNG Import Terminal
<b>1990</b>	Restructured after closure of UK Nuclear Program
<b>1994</b>	Acquired by Preussag Group – Germany
<b>1996</b>	Merged with Liquid Gas Anlagen of Germany
<b>1999</b>	The LNG Business in UK Bought by Kvaerner / Skanska
<b>1999</b>	South East Asia Companies complete Management buyout and continue to

### **Design, Fabricate and Construct:**

- **Storage Tanks**
- **Pressure Vessels**
- **Spherical Tanks**
- **Hydro-Mechanical Equipment for Hydro Electric Power Plants**

## Strengths of Whessoe

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- Experience of the Product
- International Contracting Experience
- Track Record of Operating Fabrication & Construction Facilities in Remote Locations
- Experienced Design Team
- Planning & Logistical Strengths
- Workshop & Construction Plant & Equipment Ready to Mobilise
- We own the Plant & Equipment
- Experienced Supervisors
- International & Experienced Workforce
- On site Welder Training Schools
- Local Purchasing Capability
- We work with our clients rather than for them to obtain the best possible result for all parties



## Xayaburi Dam HEPP Mekong River - Lao PDR

*Owner : Xayaburi Power Company Limited.*

*Main Contractor : CH Karnchang Lao Company Limited.*

**The project consist of The Design, Supply, Installation and Commissioning of 30,000 tonnes of Gates and Stoplogs.**

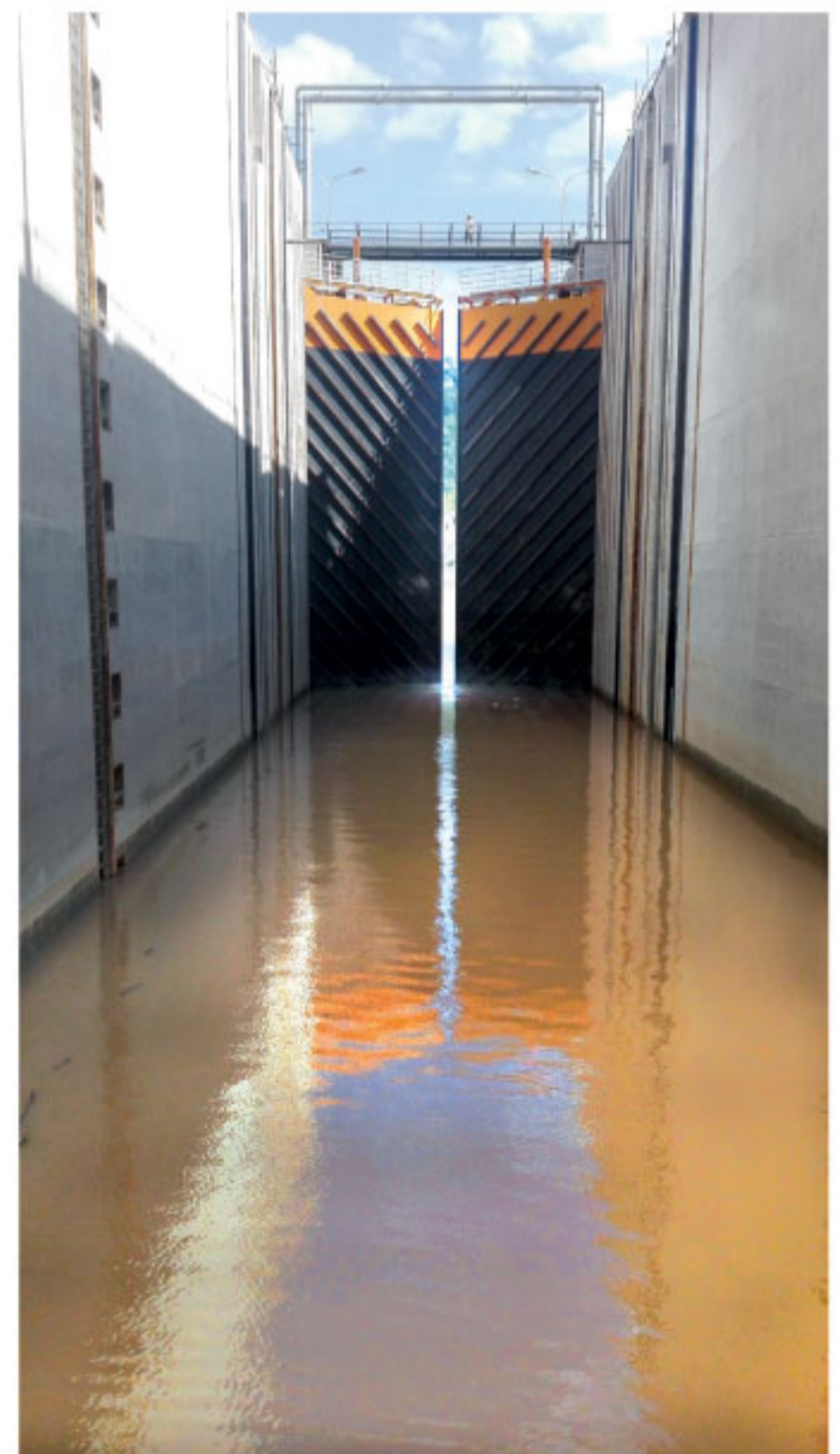
- 7 x Surface spillway radial gates 19m span x 25m high
- 4 x Low Level outlet Radial gates 12m span x 25m high
- 1 x Maintenance gate for the lower level outlets
- Upstream and downstream stoplogs
- 3 x sets of Navigation Lock Mitre gates 14m span x 28m high
- Water feed system bonneted gates and stoplogs
- Fish attraction system bonneted gates and stoplogs
- Power intake gates, stoplogs and trashracks
- Pumping Stations 1 and 2 and Auxiliary Powerhouse complete with Pumps, Gates, and Stoplogs
- Fish passing facilities with over 70 gates

*In addition Whessoe are responsible to operate the Navigation Lock and Spillway until C.O.D.*





W H E S S O E



EPC Contract for the Hydro-Mechanical Equipment



## Nam Ngum 2 HEPP - Lao PDR

*Owner : Nam Ngum 2 Power Company Limited.  
Main Contractor : CH Karnchang Lao Company Limited.*

### Project consists of the following :

- 60m of 10.7m diameter headrace lining
- 10.7m x 8.75m x 6.2m Manifold x 125m long
- 3 x upper penstocks 6.2m diameter
- 3 x 52 degree steel lined inclined shafts 5.35m diameter x 110m long
- 3 x lower penstocks 5.35m diameter x 70m long

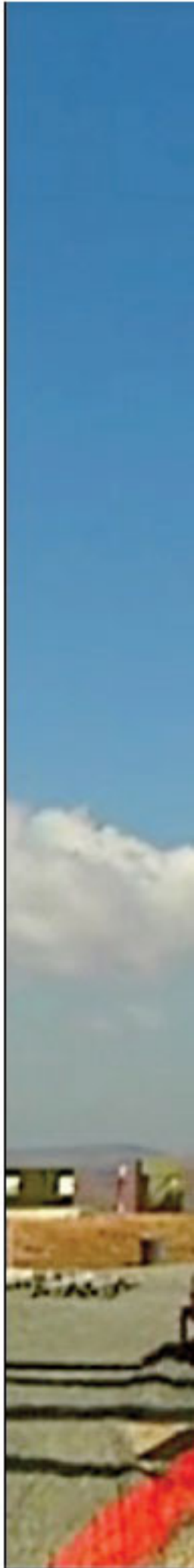




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*EPC Contract for the design, supply, fabrication and installation of 3,500 tonnes of steel lining and manifold.*



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## Ingula Pumped Storage Scheme - South Africa

*Owner : Eskom.*

*Main Contractor : CMI Joint Venture.*

### Ingula Project Description :

- 16,000 Tonnes of Steel linings, Penstocks and Bifurcations in Naxtra 700 and Naxtra 550 Q&T Steel. Minimum yield strengths of 700 MPA and 550 MPA
- 6.6m to 5.235m diameter steel transitions in both LPHT tunnels
- 220m of 5.235m diameter LPHT tunnel lining in both LPHT tunnels
- 220m of 6.1m diameter vertical surge shaft lining in both vertical shafts
- 985m of 5,1m diameter steel tunnel lining in both high pressure inclined shafts
- 2 off 5.1m x 3.6m diameter bifurcations average thickness 80mm thick
- 4 off steel penstocks 3.6m diameter x 70m long including thrust rings and cone to MIV
- 4 off Draft tube linings 60 degree inclined shafts x approx 60m long
- 4 x square to round transitions

# IMPSA/CBK Hydro-Electric Power Project

## Kalayaan / Caliraya / Botocan, Laguna

*Philippines*

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**This contract covered expansion works on the above mentioned 3 schemes. It included detailed engineering, fabrication, Installation and commissioning of:**

- 7,000 tonnes of Penstocks and Steel Lining, Intake and Outfall Gates for Kalayaan
- Radial gates and stoplogs with electrical control systems for the Caliraya Spillway
- Rehabilitation of the cable (Skyway) car and derrick crane at Botocan
- Fabrication was carried out in our own workshop on the construction site in Kalayaan





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**12,000 tonne Pressurized LPG Terminal**  
*Turnkey EPC*  
**Liquigaz Mariveles, Bataan - Philippines**





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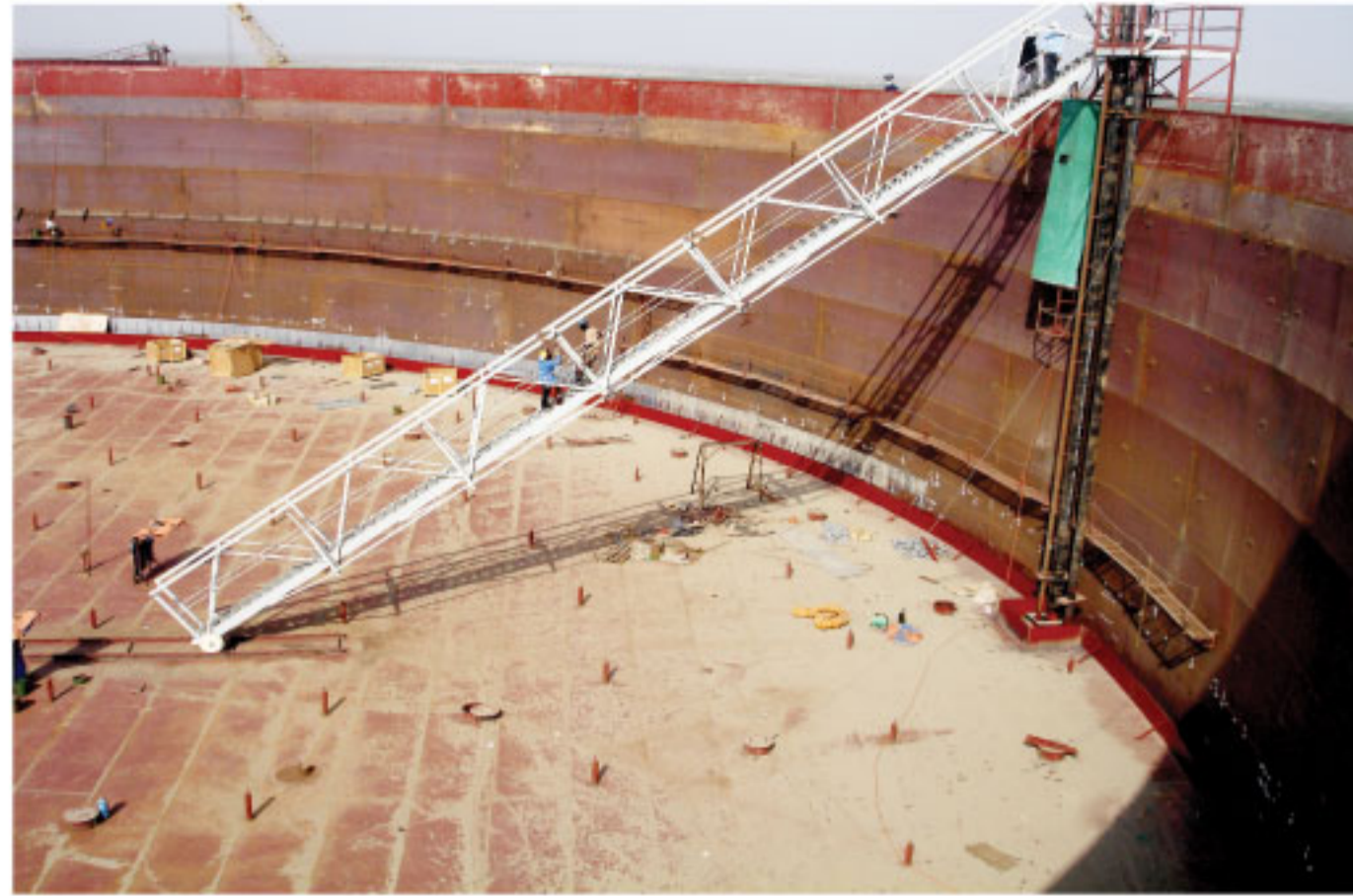
The terminal storage capacity is 24,000 m<sup>3</sup> of pressurized LPG with all six 4,000m<sup>3</sup> storage vessels rated for propane service. The vessels are 8m diameter x 90m long and were fabricated in a purpose built workshop on the construction site. The terminal has a product heating facility which enables the import of refrigerated C3 and C4.

We were responsible for the turnkey facility (Excluding the jetty structure which existed) ship loading arms, heaters, piping, booster and export pumps, storage, mixing, dosing and road tanker and barge loading facilities. The contract also included responsibility for the maintenance of the facility for one year after handover.



**Sudan Melut Basin  
Oil Development Project  
Marine Terminal**  
**Petrodar Operating Company**  
*Port Sudan*





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Design, Supply, Construction and commissioning of Approx 13,000 tonnes of storage tanks including 6 double deck floating roof rack tanks each 82.1 meters diameter and 86,000 diameter inch pipe work.

Fabrication of the Tanks and Pipework was carried out in a purpose built fabrication facilities fully equipped with automated plate cutting, auto blast and rolling machines. PWHT of shell plates and nozzles was carried out in the site workshop.

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*The whole project from start of design to final commissioning took 23 months. Erection and commissioning of the 13 storage tanks and piping facilities were completed in 14 months.*

## Head Office Management

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### Project Director

- Single point Responsibility to the client and Whessoe Board
- Formulates and ensures adherence to the project execution plan

### Project Services Manager

- Responsible for Planning, Procurement, Commercial and Cost Control
- Ensures the construction site is fully equipped with necessary Spare Parts and Consumables
- Responsible for monthly Invoicing and Reporting
- Based between Head Office and Site

### Technical Manager

- Establishes the design and engineering team incorporating Specialised Consultants if necessary
- Formulates the Functional Requirements of the Plant/Facility and the required codes and standards
- Establishes and is responsible for Design and Drawing Deliverables

## Workforce

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Whessoe has extensive experience in recruiting and training skilled personnel in many countries worldwide.

The local labour market will be properly screened for suitable employees who will receive the necessary “on site” training and contracts would be issued in accordance with local labour laws.

To protect our client’s interest we maintain and provide a permanent core of supervisors and skilled tradesmen of mainly Philippine, Indonesian and Malaysian Nationals.

*All of our own workforce have substantial experience of working on similar projects in the past.*





## Project Management

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### Resident Project Manager

Is authorised and assumes full responsibility to the client on a day to day basis for overall field operations of the project and reports directly to the Project Director. He is also responsible for safety, quality and timely completion according to the established and approved schedules.

### Logistic Manager

Experienced Logistics staff will be placed locally and Head Office. Whessoe believe that absolute attention to local customs, regulations, documentation, transportation, customs clearance and site services is critical to the successful outcome of the project.

### Fabrication and Construction Superintendants

Function under the direction of the Construction Manager and using their own discretion within the limits of the WHESSOE policy to obtain the desired results. They are responsible for all phases of production, quality control, construction records and any site sub contractors.

### HSE Manager

Functions under the direction of the Project Manager and in close co-ordination with the client's representatives. He administrators the Project Safety, Health and Environmental programme and instructs site personal in safe working practises and policies to be adopted.



## Temporary Fabrication and Construction Facilities



One of Whessoe strengths is to provide and operate temporary fabrication and construction facilities in remote and hazardous locations worldwide. Whessoe currently has 4 x fully equipped workshops. All fabrication in our temporary workshop facilities is carried out in accordance with our corporate quality manual to ISO-9001-2008.

Whessoe recently established another permanent Fabrication Facility in the Capital city of Lao PDR, Vientiane. This facility has been fitted with the latest heavy duty, steel fabrication and machining equipment to provide high quality and cost effective production for the local market as well as the surrounding countries. The workshop will be commissioned in March 2016.





**WHESOE SDN BHD (638935-K)**

Lot 3801, Batu 6 ¼ Jalan Klinik,  
Bukit Kemuning, Seksyen 32,  
40460 Shah Alam,  
Selangor, Malaysia.

**T** : 603-5161 6613  
**F** : 603-5161 1663  
**E** : [customerservice@whessoe.com.my](mailto:customerservice@whessoe.com.my)  
**W** : [www.whessoe.com.my](http://www.whessoe.com.my)