



HDD Specialists

Who We Are

- Thaitan International Pte Ltd (TIPL), based in Singapore, is an incorporated joint venture between Thaitan Drilling Co Ltd and Kim Heng Marine & Oilfield Pte Ltd.
- With our combined expertise, experience and resources we can provide our customers a full range of Horizontal Directional Drilling (HDD) services for oil & gas, power, telecommunications and water projects, both onshore and offshore.
- Thaitan Drilling owns and operates a comprehensive fleet of HDD rig spreads and has an extensive HDD project track record.
- Kim Heng owns a large fleet of multi-purpose barges and support vessels and has a strong fabrication, procurement, logistics and project management capability.
- The company's headquarters and marine services base are in Singapore while the main HDD equipment storage and maintenance facility is based in Thailand - strategically positioned to undertake project locations throughout the Asia Pacific region.
- Our technical capability is supported by a strong commitment to quality, health, safety and the environment, through strict adherence to detailed Q&HSE systems and regulatory requirements.

The HDD Method

HDD is increasingly used across a range of sectors including oil & gas, water, power, telecommunications

➤ **What is HDD?**

Horizontal Directional Drilling , known as “HDD”, is a trenchless method of installing pipelines and conduits under obstacles such as rivers, roads, railways, coastal shorelines / landfalls and other areas where open-cut excavations are not feasible or desirable for constructability, economic, social or environmental reasons.

➤ **Benefits of HDD**

HDD has many benefits over the open-cut construction method including:

- Much reduced impact on the natural environment
- Little or no disruption to surface traffic
- Less disturbance to local communities
- Minimised risk of damaging existing sub-surface utilities
- Minimised risk of damaging existing structures
- **For landfalls / shore crossings – avoid damaging natural or man-made beach protections such as seawalls / revetments or breakwaters**
- Greater depth of cover offering better protection to the pipelines or cable conduits being installed
- Faster and more cost-effective method of construction

Our Capability

- Provide smart, fit-for-purpose HDD solutions for oil & gas, power, telecommunications & water sectors
- In-house design / engineering capability
- Skilled, well-trained & experienced HDD crews and project management teams
- Current fleet of 11 HDD rigs ranging in size from 11T to 340T pull capacity
- Capability to install HDD crossings of all sizes and lengths - reaching 2500m - in all kinds of geological conditions from soft ground to hard rock.
- Able to provide intersect drilling solutions for extended reach crossings
- Experts in highly congested, urban project locations
- Able to deliver complex projects including subsea pipeline landfalls / shore crossings and offshore crossings
- Able to offer complete integrated HDD package including engineering / design, HDD construction and marine support services
- Well-located for quick and cost-efficient mobilization throughout Asia

Our Rig Fleet

No	Brand	Model	Year of Manufacture	Dimensions (m)			Weight	Pull / Thrust		Torque	
				Length	Width	Height	kg	lbs	ton	ft/lbs	Nm
1	Vermeer	D750X900	2008 (Major rebuild by Vermeer 2019)	15.4	2.6	3.5	45,812	750,000	340	99,339	134,768
2	American Augers	DD440T	2016	15.4	2.5	3.6	44,479	440,000	200	60,000	81,350
3	Prime Drilling	PD150	2017	15	2.5	3.2	31,570	330,000	150	47,200	64,000
4	Vermeer	D220X300	2017	11.3	2.5	3.4	33,565	220,000	100	30,000	40,675
5	Vermeer	D130X150	2017	9.9	2.5	3.3	20,550	130,000	59	15,000	20,337
6	Vermeer	D130X150	2016	9.9	2.5	3.3	20,550	130,000	59	15,000	20,337
7	Veemeer	D130X150	2015	9.9	2.5	3.3	20,550	130,000	59	15,000	20,337
8	Vermeer	D130X150	2015	9.9	2.5	3.3	20,550	130,000	59	15,000	20,337
9	Vermeer	D130X150	2013 (Major rebuild by Vermeer 2020)	9.9	2.5	3.3	20,550	130,000	59	15,000	20,337
10	Vermeer	D80X100	2002 (Major rebuild by Vermeer 2017)	9.9	2.4	3	17,000	80,000	36	10,000	13,559
11	Vermeer	D24X40	2010	6.1	2.2	2.2	93,389	24,000	11	4,200	5,694

HDD Rigs



Vermeer D750



American Augers DD440



Prime PD150



Vermeer D220

HDD Support Barges



KH1860



KH186



JACK-UP BARGE Chartered



Kim Heng 1668 with Tug & CTB

Our Track Record

- Have installed onshore crossings and shore crossings for installation of steel and HDPE pipes of all sizes and lengths, through a wide range of geological conditions from soft silts & clays to hard rock
- Projects delivered for clients in oil & gas, telecommunications and power sectors
- Almost 350 HDD crossings installed by the Thaitan group over a total length of approx. 150,000 meters
- 25 shore crossings installed
- Longest crossing completed - 2000m (in a single drill length)
- Largest single steel pipe installed - 42" OD
- Largest HDPE pipe bundle – 30 no. x 180mm OD ; 64" drill hole
- 100% of crossings successfully completed
- Impressive HSE record



Recent Projects

IGG Subsea FOC Landfall HDD Project

- Completed: November 2019
- Location: Singapore
- Owner: NEC
- Scope: 1 no. HDD shore crossing – total length 440 meters
- FOC casing pipe: 9-5/8" OD steel casing pipe
- HDD Rig: PD150



Recent Projects

PTT – 5TH Gas Transmission Pipeline – Phase II

- Completed: March 2020
- Location: Thailand
- Owner: PTT
- Scope: 12 no. HDD crossings – total length 17,250 meters
- Product pipe: 42" OD steel gas pipeline plus 6" FOC duct
- HDD Rigs: D220, DD440, D750



Recent Projects

MEA - Bangkok Underground Cables Project

- Completed: 2021
- Location: Bangkok, Thailand
- Owner: Bangkok Metropolitan Electricity Authority
- Completed: ongoing
- Scope: multiple HDD crossings for installation of power cable duct bundles
- Pipe ducts: HDPE 180mm OD PN20; each bundle comprises 30 pipes
- Final hole size: 64" dia
- Soils : mainly clay
- HDD Rigs: D130, DD440, D750



Recent Projects

Project: Yunlin Offshore Wind Farm Cable Landfalls

- Completed: 2021
- Location: Taiwan
- Owner: WPD
- Client / Main Contractor: Seaway Offshore Cables (S7)
- Principal Subcontractor - Hung Hua Corporation
- Scope - 12 No HDD landfalls – total HDD length 3500m
- Installed Pipe - 18" OD HDPE cable conduit pipes
- Scope included fabrication & testing of conduit pipe strings plus supply of offshore support barges
- HDD Rigs – Thaitan's Vermeer D130 & D220.



Recent Projects

Project: CFXD Offshore Wind Farm Cable Landfalls

- Completed 2021
- Location: Taiwan
- Owner: CFXD (CIP)
- Client / Main Contractor: Seaway Offshore Cables (S7)
- Principal Subcontractor - Hung Hua Corporation
- Scope - 7 No HDD landfalls – total HDD length 3600m
- Installed Pipe - 20" OD HDPE cable conduit pipes
- Scope included fabrication & testing of conduit pipe strings plus supply of offshore support barges
- HDD Rigs – Thaitan's PD150 (on jack-up barge) & AA DD440 (onshore)



Recent Projects

Project: Zhong Neng Offshore Wind Farm Cable Landfalls

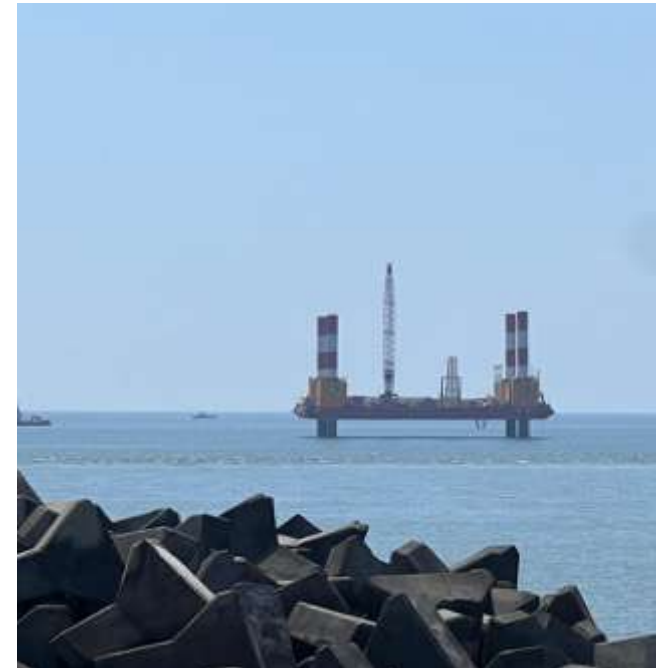
- Completed Sep 2022
- Location: Taiwan
- Owner: China Steel Power Corporation Ltd & partners
- Client / Main Contractor: Seaway Offshore Cables (S7)
- Principal Subcontractor – Dong Fang Offshore
- Scope - 4 No HDD landfalls – total HDD length approx. 2000m
- Installed Pipe - 20" OD HDPE cable conduit pipes
- Scope included fabrication & testing of conduit pipe strings plus supply of offshore support barge spread
- HDD Rigs – Thaitan's PD150 (on jack-up barge) & AA DD440 (onshore)



Ongoing Project

Project: Hai Long Offshore Wind Farm Cable Landfalls

- Location: Taiwan
- Owner: Hai Long Offshore Wind Power Co Ltd
- Client / Main Contractor: Seaway Offshore Cables (S7)
- Principal Subcontractor – Dong Fang Offshore
- Scope - 4 No HDD landfalls – total HDD length approx. 4936m (longest crossing 1350m)
- Installed Pipe - 22” OD HDPE cable conduit pipes
- HDD Rigs – Thaitan’s PD150 (on jack-up barge) & AA DD440 (onshore)



Taiwan – HDD Shore Crossing Project

Hai Long Offshore Wind Farm Cable Landfalls



Thank you!

