



Course Info

Title	: Horizontal Directional Drilling (HDD) – Machine Operator		
Duration	: 2 days		
Location	: 69A, Jalan Teratai 7, Taman Johor Jaya, 81100 Johor Bahru, Johor, Malaysia		
Category	: Fundamental		
Trainer Name	:		
Target Audience	a) Engineer	d) Workers	
	b) Supervisor	e) Anyone interested in the HDD industry	
	c) Machine Operator		

Course Objective

Upon completion of this module, participants shall be able to:

- 1) Demonstrate a clear understanding of the principles and fundamentals of HDD.
- 2) Identify, select, and operate appropriate HDD machines and associated equipment.
- 3) Prepare and set up HDD machines in accordance with operational requirements.
- 4) Apply suitable drilling techniques while effectively managing varying ground conditions.
- 5) Adhere to established safety protocols and industry best practices to maintain a safe working environment.
- 6) Perform routine maintenance and basic troubleshooting to ensure equipment reliability.
- 7) Exhibit effective communication and teamwork during drilling operations.

Learning Outcome

Upon completion of this module, participants shall be able to:

- 1) Articulate the key concepts, processes, and applications of HDD.
- 2) Operate HDD equipment safely and in compliance with relevant standards and procedures.
- 3) Execute proper equipment setup and drilling activities with competence and efficiency.
- 4) Evaluate site conditions and implement appropriate drilling methods.
- 5) Apply hazard identification and risk control measures to enhance workplace safety.
- 6) Conduct preventive maintenance and address common operational issues.
- 7) Collaborate professionally with team members to support efficient project execution.

Training Approach/Methods

The training will be conducted using the following methods:

- 1) Brief facilitator-led discussion.
- 2) Group reflection based on real-life examples.
- 3) Role-play exercises / VR Simulator.
- 4) A summary with key takeaway tips.

Course Outline

The training will be cover using the following outline:

Chapter 1 - Introduction to HDD

- 1) Overview of HDD Technology
- 2) HDD Basic Design
- 3) HDD Process

Chapter 2 - HDD Locating System

- 1) HDD Rigs Component
- 2) Operation Control
- 3) Service & Maintenance



Course Outline (Continued)

The training will be cover using the following outline:

Chapter 3 – Jobsite Safety & Preparation

- 1) Safety Guidelines
- 2) Machine & Site Safety
- 3) Jobsite Setup

Chapter 4 - HDD VR Simulator

- 1) Bottom Familiarizations
- 2) Drilling Open Fields
- 3) Reaming Open Fields

Time Table

Day 1

Time	Topics	Hours/Mins	Trainer
08:30 - 09:00	Registration and Ice-Breaking Session	0.30	
09:00 - 10:30	CP1: Introduction to HDD	1.30	
10:30 - 10:45	Morning Break	0.15	
10:45 - 12:15	CP2: HDD Rigs	1.30	
12:15 - 13:15	Lunch Break	1.00	
13:15 - 14:15	Cont CP2: HDD Rigs	1.00	
14:15 - 15:45	CP3: Jobsite Safety & Preparation	1.30	
15:45 - 16:00	Tea-Break	0.15	
16:00 - 17:00	Cont CP3: Jobsite Safety & Preparation	1.00	
17:00	End of Day		

Day 2

Time	Topics	Hours/Mins	Trainer
08:30 - 09:00	Ice-Breaking Session	0.30	
09:00 - 10:30	CP4: HDD VR Simulator	1.30	
10:30 - 10:45	Morning Break	0.15	
10:45 - 12:15	Cont CP4: HDD VR Simulator	1.30	
12:15 - 13:15	Lunch Break	1.00	
13:15 - 15:45	Practical: HDD VR Simulator	2.30	
15:45 - 16:00	Tea-Break	0.15	
16:00 - 17:00	Practical: HDD VR Simulator	1.00	
17:00	End of Day		