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UNIVERSITI
TEKNOLOGI
MARA



AXIANERGY (M) SDN. BHD.

INDUSTRIAL TRAINING FINAL REPORT

SESSION : 2022 - 2

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Duration (Date) : **21/2/2022 – 4/8/2022**

Lecturer Evaluation

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Last but not least, it is a special honour to be a part of the company itself for 24 weeks, so I acknowledge AXIANERGY (M) SDN. BHD., solely for accepting me. All the sense of concern towards me are tremendous and unforgettable from the staffs. It is a beautiful experience to engage with the prestige company, therefore, the least I can hope is that my hard work and training can be the great epitome to a better application of Chemical Engineering course in near future.

ABSTRACT

This industrial training report of Syahirul Hakim bin Kamaruzaman to undergo an industrial training for duration of 6 month which consist of 24 weeks before completing the Diploma courses. Starting industrial training on 22 February 2022 until 4 August 2022 at AXIANERGY (M) SDN. BHD., which guided by Mr. Imran. The purpose of this program is to fulfil the course requirement in order to complete the Diploma as well as graduate from UITM Pasir Gudang. The training refers to work experience that is relevant to professional development prior to graduate. In first chapter this report is defining the term of industrial training and description on industrial training objectives. This part explains the details of objectives of industrial training report and industrial report. In second chapter of report is overview of the company and departments. The next chapter describes the summary of the duties and various tasks in weekly of industrial training activities that carried out. The next chapter explain the knowledge or experience gained during the 6 months of training. The last chapter will further describe the job activity and knowledge gained during this training that has been done during this 6 month of internship. Last but not least, this training gives students a good experience in working as a Chemical Engineer.

INTRODUCTION

1.1 Overview

In general, Industrial Training (IT) refers to work experience that is relevant to Chemical Engineering prior to graduation. One of the requirements for student to graduate from Diploma of Chemical Engineering was to complete a 6 month or 24 weeks of Industrial Training. Industrial training provides students with learning experience in order to improve. To increase the level of graduates able to work, industrial training program was introduced to strengthen the competencies required.

Industrial training holds the objective to introduce UITM students to industrial cultured and working environment and at the same time increases student's employability rate by enhancing their industrial skill and knowledge. They also will undergo several briefings as guidance and remainder for trainee. The duration of industrial training is 24 weeks from 22 February 2022 until 4 August 2022. It is compulsory for students. During the internship period, student will be assigned to one Lecturer Evaluation to assessing the student's performance. The logbook and finalized report should be submitted to the college via online and hardcopy due two weeks after internship end.

Industrial Training (IT) courses give students learning opportunities in the world of work to receive practical experience in order to improve the reliability of the market. In preparing the students as an engineering technician, the industrial training helps to produce chemical engineering technician graduates with excellent technical skill and soft skill competency. Theories learnt in all the core and non-core courses can be applied by the students in industrial training, hence expected that students can solve the problem or project assigned by supervisors creatively and innovatively. In addition, the industrial training also helps elevate the students' confidence level, improve communication and teamwork skills. On top of it, students are expected to demonstrate a high level of integrity, ethics, and accountability in engineering practice.

1.2 Objective

The main objective of Industrial Training (IT) is to give students learning opportunities in the world of work to receive practical experience in order to improve the reliability of the market. In preparing the students as an engineering technician, the industrial training helps to produce chemical engineering technician graduates with excellent technical skill and soft skill competency. The other objectives are:

- Mastering technical skills
- Gaining essential background knowledge
- Perfecting interpersonal skills (soft skills)
- Building a Network of Contacts

1.3 Industrial Training Placement

1.3.1 Industrial Schedule

Normal working hour	8 hours
Day of working	Monday - Friday (5days)
Work in	8.00 am
Break hour	Monday – Thursday ❖ 1.00 pm – 2.00 pm Friday ❖ 12.00 pm – 2.30 pm
Work out	5.00 pm (Monday – Thursday) 5.30 pm (Friday)

2 COMPANY PROFILE

2.1 Company Background

AXIANERGY (M) SDN BHD is a private company that has been involve in the oil and gas industry for almost 8 years up till now. The company was established on November 2014. The company is based in Malaysia, and its main office is located at Sendayan, Negeri Sembilan. The company provided many services towards both, an upcoming plant and existing plant in Malaysia. For Example, the company provide service such as pipeline installation for an upcoming plant and provide a pipe maintenance service for an existing plant. The company is currently undergoing a project under Petronas Gas Berhad (PGB), to install a mainline pipe to transport natural gas, such as methane from an already made power plant, that is located at Puchong, to a new power plant, that will be constructed at Pulau Indah.

DAYS	WORKING HOUR	OPERATING HOUR
Monday – Thursday and Saturday	8.00 am – 1.00 pm 1.00 pm – 2.00 pm (lunch hour) 2.00 pm – 5.00 pm	5 Hours 1 Hours 3 Hours
Friday	8.00 am – 12.00 pm 12.00 pm – 2.30 pm (lunch hour) 2.30 pm – 5.30 pm	4 Hours 2 Hours and 30 minutes 3 Hours
Sunday	Holiday (Except site workers who in charge)	

Table2: Company’s Working Hour

2.2 Company History

AXIANERGY (M) SDN. BHD. started its journey with its inception in November 2014, founded by a group of people who are highly passionate, innovative, committed and backed with years of experience involved in the construction industry. With the objective in mind to go further and evolving this company, AXIANERGY (M) SDN. BHD. Has since amassed the technological know-how and skills necessary to offers its customers high-calibre services at competitive prices. The company’s workers are dedicated to comprehend and especially meeting the needs of their clients while maintaining the high-calibre of output.

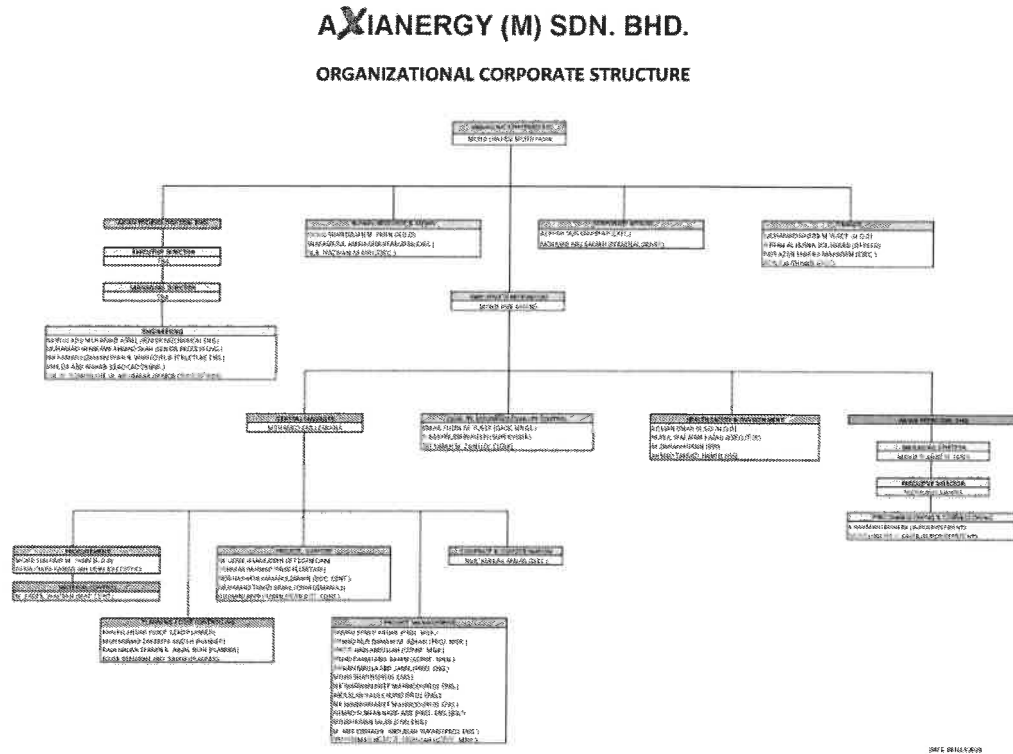
2.3 Company Vision

It is with this vision that AXIANERGY (M) SDN. BHD has since acquired technical expertise and capabilities, which equips it to provide quality, affordable services to its clients. We are committed to understanding and specifically cater to our client’s requirements without compromising on the quality of its deliverables, thus our tagline “Diversified Services, Unvarying Quality”.

Companies Mission

We guarantee that whatever jobs undertaken by AXIANERGY, we will continuously strive to meet client’s outmost satisfaction. We will endlessly keep challenging ourselves to grow and we remain inspired by the potential for what we may create tomorrow.

2.4 Organisation Chart



2.5 Service Provided to Client

- Civil work for industrial and petrochemical plants.**
 AXIANERGY (M) SDN. BHD. will provide professional and experience manpower, for building construction service for various facilities such as electrical sub-station, temporary offices and warehouse, that is clearly understands the safety and quality expectation in the plant environment.
- Fabrication and erection of steel structure and field storage tanks**
 AXIANERGY (M) SDN. BHD. has experienced staff to manage the fabrication and erection project from start to finish and providing all support that will enable safe, reliable and cost-effective operation.
- Supply of skilled manpower and qualified professional on all areas**
 AXIANERGY (M) SDN. BHD. provide skilled workers to deliver a job well done and keep their customers satisfied.
- EPCC and maintenance of pipeline and station**
 AXIANERGY (M) SDN. BHD. provide Engineering, Procurement, Construction and Commissioning (EPCC) to the company of oil and gas in Malaysia and also provide maintenance to the installed pipe.
- Fabrication and installation of piping**
 AXIANERGY (M) SDN. BHD. provide proper piping installation and coating to make sure the safety of fluid transfer

3.0 Overview of Industrial Training

3.1 Introduction

Each university student must complete an industrial training programme for a specific amount of time, depending on the institution, in order to graduate. One efficient way for exposing students to the realities of the workplace and providing them with the essential knowledge and skills is industrial training. In order to make sure that their students are prepared and ready for the work, many institutions employed this strategy. The Institute of Higher Learning (Ipt) in Malaysia requires all students enrolled in specific programmes at all levels of higher education (diploma, degree, etc.) to complete their industrial training before they can graduate. The students will gain greater exposure and experience in this course regarding the workplace, communication, teamwork, protocol and rules, reporting, and other areas. The advantages of occupational training for students are numerous. The University Teknologi Mara (Uitm) Kampus Pasir Gudang's chemical engineering department requires all of its students to complete a twenty-four-week industrial training programme. Students can select their employer based on their preferences, whether it be in the public or private sector. Before deciding on a company, a student should research it and make sure that the job description it is offering is relevant to their education or to chemical engineering in general. This helps to facilitate the advancement of industrial training while also preventing any issues or problems in the future. Additionally, industrial training tends to focus more on technical topics. pupils must therefore have at least a rudimentary understanding of it.

3.2 Summary of Training

Task1: Daily Progress Report (DPR) for overall activity

Daily progress report or DPR for short, is very important to record the daily activity at every site. Every action, every development and every problem at site will be recorded in DPR. DPR is used to track the numbers of manpower that is currently working on site and track either the manpower on site is enough or needed to be added. DPR is also used to record the number of permit that the workers uses so that they did not break the ZeTo Rules of Petronas.

Task2: Daily Site Visiting and Reporting

To ensure that the workers on site are safe, each site will be given careful attention. Every day, one site will be visit to analyse any harmful or unsafe situation in the workplace and will be recorded in order to maintain the safety environment workplace for workers. Site visit is also to record any shortcoming or disadvantages and problem that workers have while working at each site so that the management can handle the situation. This will create a friendly work system and make workers feel more comfortable working with us.

Task3: Inspection of Machinery and Equipment

Machinery such as excavator, side boom, crane, and backhoe require both competent operator and good maintenance to ensure the safety of other workers and the operator himself so that no unwanted incident happen. Therefore, almost everyday these machinery and equipment will be inspected by our officer and the machinery and equipment will be record either it can be used or will be replaced. On site, every equipment and machinery must be in good condition as this play a big role in maintaining safety at workplace.

Task4: Scheduling and Rain Chart

In this project, rain is a major issue as it will delay the progress at site. Therefore, a rain chart will be constructed to record the downtime of this project. Furthermore, delay in the progress will make the project finish not accord to the planning. Therefore, scheduling will be done to counter the downtime at site and plan for further progress.

3.2.1 Weekly activity

Week	Activities
Week 1	<ul style="list-style-type: none"> • Self-report duty to the company AXIANERGY(M) SDN. BHD. as an internship student • Given a short brief about the ongoing project (TULIP) • Given a file about the history of AXIANERGY (M) SDN BHD. and job taken by them • Being brief about the job scope of each department in the company <ul style="list-style-type: none"> -Construction -Process -Quality control -Safety department -Planner • Given the task to study about the current project (TULIP) through PnID drawing and pipeline mapping from hot tap (Puchong) to Pulau Indah Power Plant (PIPP) • Register for a CIDB card • Study the design pipeline and valves in this project • Obtain PPE from company
Week 2	<ul style="list-style-type: none"> • Given a fully run through about the duty of a planner engineer • Learn the importance of planning in project • Learn the importance of record report daily, weekly and monthly • Given a task as a planner to write a weekly report of the previous report of the project from report no1 until no11 • Learn how to calculate data for progress measurement • Accompany Mr. Anas, our material controller to see how they do house keeping house at warehouse and how they preserve their equipment • Go through the HAZOP and HAZID report for TULIP project to understand the situation of the current project • Identify Unsafety condition and unsafety act at workplace
Week 3	<ul style="list-style-type: none"> • Construction Manager, Mr. Fahmi handed the internship mapping <ul style="list-style-type: none"> - Mapping contains plan and task which is needed to be done during internship - Every topic in the internship mapping has their own Person in Charge (PIC) - Mapping explains the detail of the PIC that needed to obtain data from • Mr. Fahmi clearly explain on how to follow the internship mapping • Brief about the use and importance of Cathodic Protection (CP) in pipeline construction <ul style="list-style-type: none"> - CP is a method to prevent corrosion toward the main pipeline - Have an anode that act as a sacrifice to make the self-life of the main pipeline became longer - The sacrificial anode will corrode first instead of the main pipeline • Join a meeting discussing on Cathodic Protection (CP) <ul style="list-style-type: none"> - How to install CP - Problem encounter while installing CP - How long can the CP last - Safety precautions while installing CP - Accident that may happen while installing CP • Identify Unsafety condition and unsafety act at workplace

Week	Activities
Week4	<ul style="list-style-type: none"> • Learn about hauling and stringing <ul style="list-style-type: none"> - Hauling is a method of transporting pipe from on place to another (Laydown to each KP) - Stringing is aligning pipe joint along the side of the pipeline trench before start welding • Brief about the type of welding that are used in this project <ul style="list-style-type: none"> - Shield metal arc welding (SMAW) - Tig-gas tungsten arc welding (GTAW) - Mig-gas metal arc welding (GMAW) • Receive task form my new assign supervisor, Mr. Imran to calculate manhour at site and learn the importance of manpower at site • Identify Unsafety condition and unsafety act at workplace
Week 5	<ul style="list-style-type: none"> • Being given a daily routine task <ul style="list-style-type: none"> - Write up Daily Progress Report (DPR) - Record progress Welding, Non-destructive test, FJC, Trenching Lowering & Backfilling. • Mr. Imran guided me on how to do the task given • Petronas ask to rewrite the DPR to follow the template given • Learn about Field Joint Coating (FJC) • Read through file about the control and operation philosophy for the TULIP project while gathering note to ask Mr. Fahmi • Learn about the project operation <ul style="list-style-type: none"> - Start-up operation - Normal operation - Pigging operation - Shut-down operation • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout
Week 6	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Learn about the equipment in the pipeline <ul style="list-style-type: none"> - Safety valve: act as a fail-safe (open when system malfunction) - Relief valve: will automatically open when over pressure - Actuator: convert electrical energy into mechanical motion in hydraulic system - Block valve: isolate the flow in case of maintenance or accident • Join HSE Program – TULIP Ex- Selat <ul style="list-style-type: none"> - Test the effectiveness of safety team when an incident occur - Spread awareness about each responsibility during emergency • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit

Week	Activities
Week 7	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Update welded area on weld map • Learn about how safety relief system operates <ul style="list-style-type: none"> - Emergency system for discharging gas during abnormal condition - Overpressure = max allowable working pressure - Have a set point to release gas into the atmosphere - When the system stabilizes the valve will close • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 8	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Needed to record every abbreviation in TULIP Project <ul style="list-style-type: none"> - Exp: FJC – Field joint coating - HDD – Horizontal Directional Drilling - Dia-in – Diameter in inch • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 9	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 10	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit

Week	Activities
Week 11	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 12	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Site visit to KP13 – Pipe jacking • Site visit to KP17 - HDD • Needed to take the time taken for 1 rotation drill • Safety talk at KP17 by Petronas safety officer • Record activities at KP17 entry point • Record punch out activity at KP17 exit point • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout
Week 13	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 14	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit

Week	Activities
Week 15	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Learn the basic in doing scheduling • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 16	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 17	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 18	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 19	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout

Week	Activities
Week 20	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 21	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 22	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 23	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 24	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit

Details of Experience

4.1 Introduction

Industrial Training refers to the placement of students in an organization to conduct a supervised practical training in the industry sector within the stipulated time before the student can graduate from their studies. Students of Diploma of Chemical Engineering must undergo a 6 month of industrial training before they can be awarded their Diploma. The objective of industrial training is to provide students the feel of the actual working environment and to gain practical knowledge and skills, which in turn will motivate, develop and build their confidence. Therefore, industrial training is significantly beneficial towards students. Students can acquire industrial experiences at the same time familiarize themselves with the real working environment at the industrial training site.

In these 24 weeks of industrial training at AXIANERGY (M) SDN. BHD., I have done a lot of tasks that help to increase my knowledge and skills while gaining working experience in this organisation. The project that is currently ongoing is the EPCC NPS36 PULAU INDAH LATERAL PIPELINE or TULIP for short was assigned as my internship placement. This project was given to AXIANERGY by PETRONAS GAS BERHAD to construct an approximate 42km pipe route for an upcoming power plant that is currently undergoing construction at Pulau Indah. The pipe line will start from Puchong, where we will hot tap an existing pipeline, NPS36, to transport natural gas to the newly constructed power plant in Pulau Indah. As there is 42km long pipe that will be constructed in this project, the work is divided to 42KP (Kilometre Pipe) so that the manpower can be supply sufficiently for each KP.

Aside from each KP work, there are also two station that will be constructed, SL270 Launcher and SR273 Receiver, and there will be two type of crossing, Horizontal Directional Drilling (HDD) and Pipe Jacking, that will be used in this project. All the projects manager for this project have been placed at an office located in Rimbayu, Selangor. This is in order to give them the priority in planning and arranging this project in a systematic way.

4.2 Detail of training and experience gained

1. Daily Progress Report

Daily progress report is used to record activities at each KP, crossing and stations. Daily progress report is also used to record the numbers of machinery used and the number of manpower available at each site. The report is also used to determine whether there is any activity at site. The report was also used to see the progress of each activity by dividing their BQ, bill of quantity and Cumulative actual to see the progress of the activity. The daily progress report is only done by myself and must be submitted on a daily basis.

PETRONAS GAS BERHAD		DAILY PROGRESS REPORT					AXIANERGY (M) SDN. BHD.			
EPCC OF NPS 36 PULAU INDAH LATERAL PIPELINE (TULIP) PROJECT FOR PETRONAS GAS BERHAD										
OWNER:	PETRONAS GAS BERHAD	TULIP PROJECT			DATE: 27/07/2022			MANPOWER		
CLIENT:	PDAT/PGB	Description	BQ	Daily Gain	Cumm. Plan	Cumm. Actual	Variance	PTW No		
CONTRACTOR:	AXIANERGY SDN BHD	PIPELINE								
APPROVING AUTHORITY:	EN. HAFIZULLAH	MANPOWER								
CONTRACTOR:	AXIANERGY SDN BHD	Cleaning & Grading	38,194 m		38,194 m	39,890 m			TEAM	
		Stringing	3,458 lgh		3,458 lgh	1,859 lgh		138373	CLEARING & GRADING	
		Trenching	38,194 m		6,368 m	6,345 m			5	
		Pipeline Main Construction	Welding	3,458 jts		3,260 jts	1,845 jts		137847, 138366 137933, 136276, 136233	STRINGING
			NDT	3,458 jts		1,749 jts	1,821 jts			TRENCHING
			FJC	3,458 jts		1,293 jts	1,095 jts		137993	HAULING
			Lowering	38,194 m			1,859 m			WELDING
			Backfilling	38,194 m						122
			Field Bending			173	22			NDT
		DPR NO.:	00322	HDD KP11-Sg, Longst	470.83 lgh		470.83 lgh	470.83 lgh		
HDD KP40-Debat Lunat	1526.30 lgh				1526.30 lgh	1526.30 lgh			9	
HDD KP22-Combine	1,050.00 lgh				2 jts	2 jts			22	
Jacking Tambora	2 jts				2 jts	2 jts			2	
Jacking Waiman	3 jts				3 jts	3 jts			CP INSTALLATION	
Jacking Aangjirik	4 jts									
Jacking Pulau Casy	6 jts									
DATE:	27-Jul-22	Crossing	Anode	42 nos		6 nos			PIPE JACKING	
				Test Point	NOT YET STARTED				19	
LOCATION KP: C&G		Cathodic Protection	Test Point						42	
LOCATION KP: WELDING	KP1 - KP4 KP14-500 KP 23+000 - KP 31+000 KP32 - KP35 KP37 - KP40									

Daily progress report

The data for each of this activity is acquired through WhatsApp application and every activity has to be approved by the inspection team before it is recorded as complete. The inspection team will usually send a summary report through WhatsApp for each KP for easy recording and data transfer.

TULIP DPR WELDING TEAM 2
Loc: SIME DARBY WEST
Area: KP 23+000 TO KP27+000
Date: 28 JULY 2022
Day: THURSDAY
Weather: SUNNY, CLOUDY
Working Hours: 0800-2200

ePTW No:

140427-hauling stringing kp23
 140447-fittup welding kp23

Manpower (PGB):

- AMIRAN - AA
 - MAHARIP - HSE

Manpower (AXN):

1. R.A - NIK
 2. R.A.R -
 3. MACHINE OPERATOR:
 2 PAX
 -ZARIN (Sideboom)
 -RAZA (Excavator Sumitomo)

Manpower (SAT)

FOREMAN - EIDZZAM

EPCC OF NPS 36 PULAU INDAH LATERAL PIPELINE (TULIP) KP42
 DATE: 28.07.2022
 Permit no: 140304 & 140305

Manpower:
 PMT : 2 pax
 SSS : 2 pax
 WL : 1 pax
 FW : 0 Pax
 QC: 1 pax
 Lifting spv: 0 pax
 Civil spv: 1 pax
 Civil worker: 16 pax
 Mechanical worker: 0pax

Total: 23 pax
 Work duration:
 0800hrs -0400hrs

Machinery:
 1) Backhoe - 1 nos

Equipment:
 1) Rebar cutting machine - 1 nos
 2) Rebar bending machine - 1 nos
 3) Compressor - 1 nos
 4) Genset - 1 nos
 5) Tower light - 3-nos

Forwarded

27/07/2022

WELDING PROGRESS KP41

Cumulative 49 jts

Outstanding RT 0 joint

Rt Acc 42 jts

Rt Rej 7 jts

Repair 0 jts

Outstanding-R1 RT 0 joint

Rt Acc R1 6 jts

Rt Rej R1 1 jts

Outstanding-R2 RT 0 joint

Rt Acc R2 0 jts

Rt Rej R2 1 jts

Outstanding-CO RT 0 joint

Rt Acc R1 1 jts

Rt Rej R1 0 jts

WELDING PROGRESS KP40

Cumulative 79 jts

Outstanding RT 0 joint

Rt Acc 71 jts

Rt Rej 8 jts

Repair 0 jts

Outstanding-R1 RT 0 joint

Rt Acc R1 8 jts

Rt Rej R1 0 jts

After the data has been collected from the inspection, these data will then be transfer into the daily progress report as a daily gain or that day. The DPR from each team at site is also important as it recorded how many manpower available and the permit they have. It also recorded for how long they work for that day and stated the hurdle they had while working. The daily progress is used to record all activity at site such as pipe jacking, horizontal directional drilling (HDD), field joint coating (FJC), cathodic protection (CP), welding, non-destructive test (NDT) and trenching, lowering and

backfilling (TLB). The report also separate work for each KP and station. This is because the work at station requires more machinery and manpower and the work are also more complex then other KP. Last but not least, the report also records the downtime or the time that work cannot be proceeded in this project. The report also contains a rain chart of each day as rain is one of the main reasons of a downtime at site.

2. Daily site visit

Every day I am required to site visit a KP to see whether there are working and to record the number of manpower and machinery available there. Site visit has a motif to make sure that worker are doing their work and make sure that they are working with a permit available. This is to prevent any dispute between workers and the higher up. Site visit is needed to record the condition of site and the safety that the workers applied at site. For example, is the soil is muddy needed to remind the worker to wear safety rubber boot and ensuring all worker at site are wearing their personal protective equipment, either their rest is safe from line of fire (will usually be determine by safety officer at site), check either the method of preservation of the equipment is applied by workers and check either the worker are having trouble with the environment of work.



After the site visit is done every activity at site will be recorded. The data will be recorded by activity and station.

TODAY'S PROGRESS			
CRG	On-going at KP 0 - KP 4		
PIPELINE WELDING	On-going at KP1 - KP4, KP14-500, KP28+000 - KP31+000, KP32 - KP35, KP37 - KP40		
PIPE JACKING	<ul style="list-style-type: none"> On-going at KP1 - Jobs A-anggrik - Pushing cutter head - Completed - Lowering production pipes - 100% 		
HDD	<ul style="list-style-type: none"> KP22 (1,050 m) - Reopening access road 		
STRINGING	On-going at KP20 - KP31		
FAJ	On-going at KP1, KP26 & KP37		
Trenching & Lowering Backfills	Lowering pipe wall at KP24, KP37, KP06		
Station SL270	<ul style="list-style-type: none"> 1. Pile cap pipe support -Lean Concrete 100% (27/27) -Cut of pile 100% (23/23) -Holding pile 100% (23/23) -Reinforcement formwork 100% (27/27) -Reinforcement rebar 100% (27/27) -Install formwork 100% (27/27) -Install rebar 100% (27/27) -Install rebar stamp 30% (25/27) -Concrete pile cap 100% (27/27) -Install formwork stamp 30% (25/27) -Install bolt 30% (25/27) -Concrete stamp pipe support 30% (25/27) -Remove formwork pile cap 	<ul style="list-style-type: none"> 2. SCADA BUILDING A) Pile cap -Rebar 80% -Formwork 80% -Reinforcement rebar 100% (6/6) -Lean Concrete 100% (6/6) -GB Formwork 100% (6/6) -Cut of pile 100% (27/27) -Holding pile 100% (12/12) -Install formwork 100% (6/6) -Install rebar 100% (6/6) -Concrete pile cap 100% (6/6) -Band slab R10 (23/23) -Install stamp formwork 100% (6/6) -Concrete stamp 100% (6/6) -Reinforcement column 35% (2/6) -Remove formwork stamp 	<ul style="list-style-type: none"> 3. Hot top pipe support -Reinforcement formwork 100% (4/4) -Reinforcement rebar 100% (4/4) -Reinforcement Formwork 100% (4/4) -Concrete pipe support 100% (4/4) -Mob sheet pile 4. RC slab -Rebar 80% -Excavation 100% (11/11) - Pole -Reinforcement formwork 80% (16/20) -Concrete 40% (8/20) -Remove formwork 5. Rubber wall -Prepared Base: BRC 100%
Station SR273	<ul style="list-style-type: none"> Control Building Zone #1 - Slab Lean Con Instrument Room : 100% - Slab Rebar Instrument Room : 100% - Slab Lean Con Electrical Room/Toilet/Walkway : 100% - Cable Trench Concrete work : 100% - Slab Rebar Fabrication Work : 100% - Pre Cast Manhole, Cable Space : 100% - Concrete Slab Control Building : 100% - Column Rebar Fabrication : 3% - Column Rebar Installation : 0% Pipe Support/Sleeper Zone #2 	<ul style="list-style-type: none"> Metering Building (Slab) Zone #3 - Concrete Ground Beam Grid D to I : 100% - Formwork Install Ground Beam A to D : 100% - Concrete Ground Beam Grid A to D : 100% - Backfill and Lean Con Slab : 100% - Rebar Slab Installation : 100% - Concrete Slab Grid A to I : 100% Pipe Sleeper Zone #4 - Completed Concrete Stamp Padestal : 10/10 - Install Pipe Support : 7/10 	<ul style="list-style-type: none"> BRC Installation For Precast Slab Maintenance Platform : A - 8/8 B - 0/1 C - 0/2 D - 0/3 E - 0/2 F - 0/1 Concrete Maintenance Slab : A - 8/8 B - 0/1 C - 0/2

4.3 Problem encountered and approach adopted for solving problem

4.3.1 There is not much work during internship

During my first 3 week of 6-month industrial training, there is no work assigned to me. During that time, I was in bored as there was nothing to do as I was new there and tempted to open my phone to release my boresome.

As there was nothing else to do during that time, I do my own research for a better understanding about the project and study the current situation of the company. Therefore, I scroll through document about the current project and try to understand what I am going to do for the upcoming day. Furthermore, if there is something that I did not quite understand, I will ask my seniors and others employees during their free time, about the current project and ask the employee of the same department about their scope of work in the company.

4.3.2 New lifestyle

The environment while studying in university is not the same while working. As I have been living the lifestyle of a student, waking up at morning to attend a few classes a day and rest the whole day for almost 3 years, I have to adapt to a new lifestyle that require me to socialize with people more and handle a lot of pressure of work. Even though it is hard for me at first to adapt myself in this company, as time goes on, I become more and more comfortable with the environment at work.

4.3.3 Transportation problem

As I am working at a 42km pipeline project, I am required to visit site once a day to record workers daily activities and working condition. However, as this project is currently under construction and require a lot of manpower and machinery, almost all of the transportation are not available as there are used to mobilize manpower and machinery at site. Therefore, there was no available transportation for me to use. Travelling to site using my personal vehicle is not an option as the road condition of site is very dangerous. Therefore, to solve my transportation problem, I have to ask either the person in charge of the site or available driver to give me a lift a day before the day I needed to be there. By doing this, I can manage my schedule and get my job done without disturbing anyone work.

4.4 Professional and ethical issues

During my 24 weeks of industrial training, the professional and ethical issue that I have encountered is dealing with non-cooperative workers. On a daily basis, the person in charge of the site was required to hand in their daily report to me as I need to record the progress at each site. The daily report of each site contains the information such as total manpower at site, permit number that they are using to work and whether there was any progress at site or not. Therefore, the report from each site is very important for me who task is to record progress at each site. But the problem arises when the people at site take lightly of me just because I am an intern student and does not have real power or standing in the organisation. Thus, making my work much harder as the information and source are lacking. The view of the worker to me as only an intern in the organisation and cannot do anything towards them hurdled my work. As my supervisor that time was struggling with his workload, to solve this problem that I am having, I went and consult the issue with the top chain of command in the organisation, Mr. Asri the boss of AXIANERY SDN BHD. He voiced out to all of the worker in the organisation to be more cooperative toward me and others intern in the organisation. Since then, the issue of non-cooperative worker has been permanently solved.

4.5 Health and environmental issues

During my 24 week of industrial training, heath issue is not a concern for me as at AXIANERGY SDN BHD every one is working in a clean environment and following SOP as the government wanted. Every Friday morning, every worker will be check for COVID-19 to make sure that no one was infected while working at site. However, environmental issue is the most concern for me and all the others worker. As this is a pipeline project the worker environment is not to friendly and can be very rough and dangerous. Sometime, when it raining heavily there will be a big puddle of mud that we must cross and the smell at site is not quite pleasing to the nose. The access road there is also not very good, there are hole every where and something u can get lost as there has no line inside the site. As the site is inside the forest, they are also wild and dangerous animal. So, every time I went to site visit, I will watch my surrounding and stick together with the group I cam with.

Conclusion

5.1 Conclusion

In conclusion, this industrial training has been a great and rewarding experience for me. I can conclude that there have been a lot I have learnt from my days working at AXIANERGY SDN. BHD. Needless to say, the technical aspect of the work that I have done here are no perfect and can be improved by providing more time. One thing that I have learned in during my internship is to always be skilled in time-management. As someone who has no prior experience in working in the oil and gas industry, I believe that my time spent here while doing my research and work is well worth it and very much contributed to build an efficient chemical engineer.

5.2 Suggestion and Recommendation

I discovered that AXIANERGY SDN BHD and UiTM both have room for growth in a number of areas throughout my industrial training there. In order to improve the firm and UiTM, I would like to provide some suggestions and recommendations.

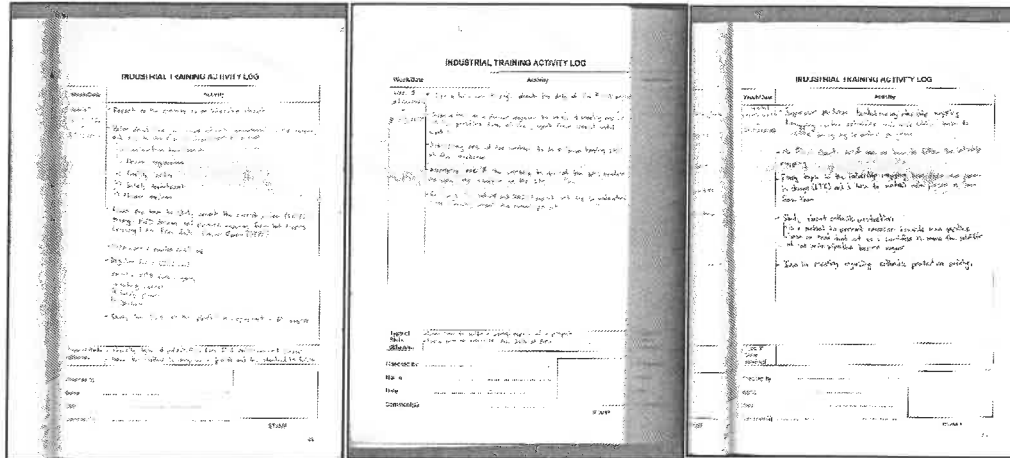
In the beginning, it would be better if the business was willing to develop more structured training programmes. I am aware that it is a difficult duty because the person in charge of supervising the practical students is frequently overwhelmed by their workload, and this recommendation might add to that stress. However, if they organise it well, I don't think it will have a negative impact on them. They might invest some time in planning so that the instruction for the practical students is more thorough, structured, and organised. The responsible supervisor can list and organise the training tasks that the trainees will do in order to achieve this. Because the trainee will complete the duty in accordance with the list and instructions, the supervisor's job will be made simpler. A proper training programme is crucial since it can make the most of the training time. Additionally, if the supervisor is overworked, they can delegate training schedule guidance to their fellow employees. When he is busy, my boss uses this as practise.

In addition, I need to set up the complete equipment for those who start their jobs tomorrow. Despite not having my own table, I can still clearly recall my first day of employment. I therefore needed the assistance of other employees to locate an open table for me. In my opinion, the company should prepare all the equipment and ensure that it is in good working order prior to the entry of new employees, as opposed to doing so because it already knows the day I registered myself with the company. Therefore, they should have everything ready before I arrive. That can help you save a tonne of time. I won't have to waste time looking for a workspace because I can get to work as soon as I arrive.

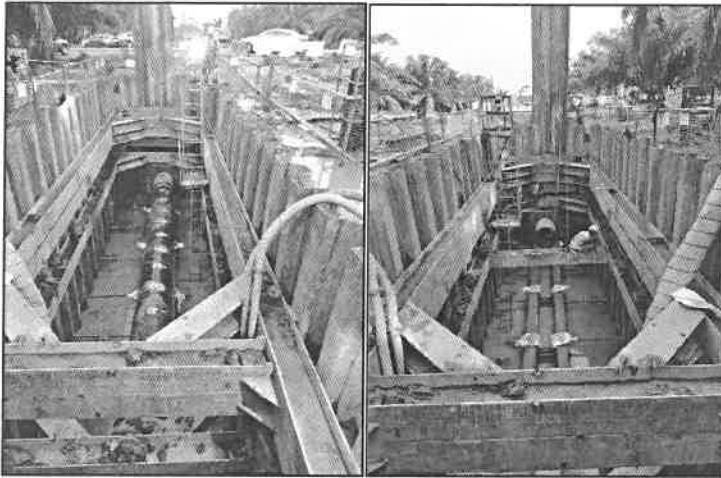
I also discovered that several of the files were not properly labelled, which was a concern. Even though the current employees are accustomed to it, new hires like myself might not be able to locate the desired or right file. Therefore, I would like to recommend that the file be properly labelled because it will be more convenient for all of the staff and save time when they need to refer to it again.

In addition, I discovered that several of the documents were not organised well. To make it simpler for the employees to refer to a document later, they should arrange it according to the date. The staff doesn't have to spend a lot of time looking for the documents.

Appendixes



Sample of internship log book



Pipe jacking



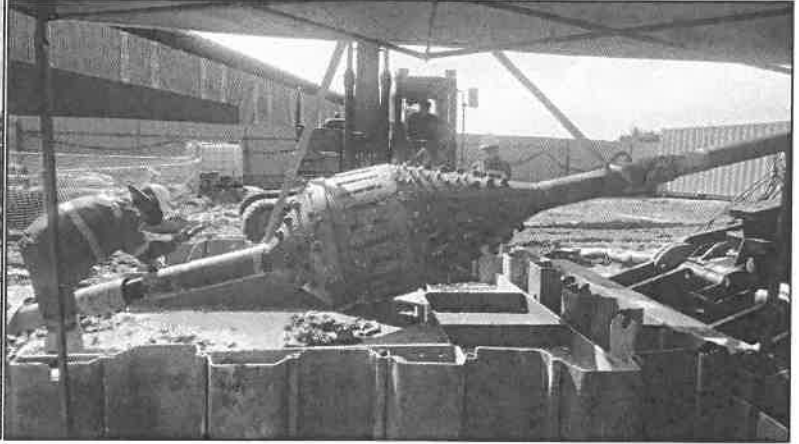
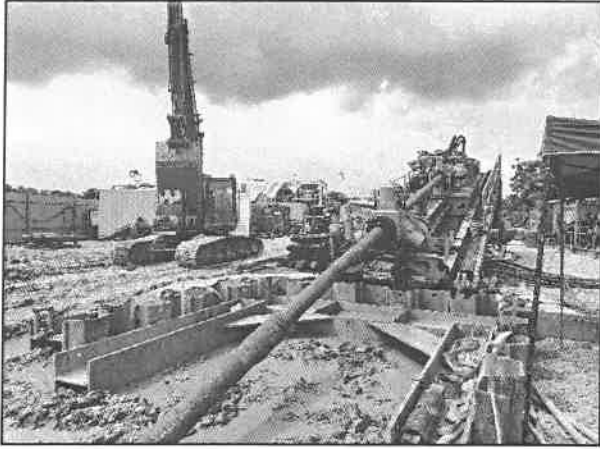
Piling



Non-destructive Test (NDT)



Field Joint Coating (FJC)



Horizontal Directional Drilling (HDD)



Fit up welding



Stringing

Week	Activities
Week 20	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 21	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 22	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 23	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit
Week 24	<ul style="list-style-type: none"> • Updating Daily Progress Report • Record progress at site • Identify Unsafety condition and unsafety act at workplace • Record manpower at each site • Record machinery used at each site • Check to make sure the workers are working with the permit provided • Record site downtime/ Rain chart • Join in Safety Walkabout • Join in Quality Walkabout • Site visit

Details of Experience

4.1 Introduction

Industrial Training refers to the placement of students in an organization to conduct a supervised practical training in the industry sector within the stipulated time before the student can graduate from their studies. Students of Diploma of Chemical Engineering must undergo a 6 month of industrial training before they can be awarded their Diploma. The objective of industrial training is to provide students the feel of the actual working environment and to gain practical knowledge and skills, which in turn will motivate, develop and build their confidence. Therefore, industrial training is significantly beneficial towards students. Students can acquire industrial experiences at the same time familiarize themselves with the real working environment at the industrial training site.

In these 24 weeks of industrial training at AXIANERGY (M) SDN. BHD., I have done a lot of tasks that help to increase my knowledge and skills while gaining working experience in this organisation. The project that is currently ongoing is the EPCC NPS36 PULAU INDAH LATERAL PIPELINE or TULIP for short was assigned as my internship placement. This project was given to AXIANERGY by PETRONAS GAS BERHAD to construct an approximate 42km pipe route for an upcoming power plant that is currently undergoing construction at Pulau Indah. The pipe line will start from Puchong, where we will hot tap an existing pipeline, NPS36, to transport natural gas to the newly constructed power plant in Pulau Indah. As there is 42km long pipe that will be constructed in this project, the work is divided to 42KP (Kilometre Pipe) so that the manpower can be supply sufficiently for each KP.

Aside from each KP work, there are also two station that will be constructed, SL270 Launcher and SR273 Receiver, and there will be two type of crossing, Horizontal Directional Drilling (HDD) and Pipe Jacking, that will be used in this project. All the projects manager for this project have been placed at an office located in Rimbayu, Selangor. This is in order to give them the priority in planning and arranging this project in a systematic way.

4.2 Detail of training and experience gained

1. Daily Progress Report

Daily progress report is used to record activities at each KP, crossing and stations. Daily progress report is also used to record the numbers of machinery used and the number of manpower available at each site. The report is also used to determine whether there is any activity at site. The report was also used to see the progress of each activity by dividing their BQ, bill of quantity and Cumulative actual to see the progress of the activity. The daily progress report is only done by myself and must be submitted on a daily basis.

PETRONAS GAS BERHAD		DAILY PROGRESS REPORT					AXIANERGY (M) SDN. BHD.			
EPCC OF NPS 36 PULAU INDAH LATERAL PIPELINE (TULIP) PROJECT FOR PETRONAS GAS BERHAD		DAILY PROGRESS		DATE: 27/07/2022			MANPOWER			
OWNER:	PETRONAS GAS BERHAD	Description	EO	Daily Gain	Cumm. Plan	Cumm. Actual	Variance	PTW No	TEAM	QTY
CLIENT:	PDAT/PGB	PIPELINE								
CONTRACTOR:	AXIANERGY SDN BHD	Clearing & Grading	38,134 m		38,134 m	31,830 m			CLEARING & GRADING	0
		Stringing	3,458 lgth		3,458 lgth	1,855 lgth		137370	TRENCHING	
		Trenching	38,134 m		6,368 m	6,345 m			HAULING	
									WELDING	122
APPROVING AUTHORITY:	EN. HAFIZULLAH	Welding	3,458 jts		3,260 jts	1,945 jts		137847, 138266, 137933, 136276, 136233	NDT	8
		NDT	3,458 jts		1,749 jts	1,821 jts			FIELD BENDING	3
		FJC	3,458 jts		1,233 jts	1,005 jts		137333	HDD	22
		Lowering	38,134 m			1,856 m			CP INSTALLATION	2
		Backfilling	38,134 m							
		Field Bending			173	22			PIPE JACKING	19
DPR NO:	00322	HDD KP17-3q. Longst	470.83 lgth	-	470.83 lgth	470.83 lgth			STATION CONSTRUCTION	42
		HDD KP40-Setat Lumut	1,526.30 lgth		1,526.30 lgth	1,526.30 lgth				
		HDD KP22-Combine	1,050.00 lgth							
		Jacking Telespin	2 jts	-	2 jts	2 jts				
		Jacking N/Spin	3 jts	-	3 jts	3 jts				
		Jacking Anggork	4 jts							
		Jacking Pulw Catty	6 jts							
DATE:	27-Jul-22									
LOCATION KP: CAG		Anode	42 nos			6 nos				
LOCATION KP: WELDING	KP1 - KP4 KP14-308 KP 28+000 - KP 31-000 KP32 - KP35 KP37 - KP40	Cathodic Protection	Test Point	NOT YET STARTED						

Daily progress report

The data for each of this activity is acquired through WhatsApp application and every activity has to be approved by the inspection team before it is recorded as complete. The inspection team will usually send a summary report through WhatsApp for each KP for easy recording and data transfer.

TULIP DPR WELDING TEAM 2

Loc: SIME DARBY WEST
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Working Hours: 0800-2200

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140447-fittup welding kp23

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Manpower (AXN):

1. R.A - NIK
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3. MACHINE OPERATOR:
2 PAX
-ZARIN (Sideboom)
-RAZA (Excavator Sumitomo)

Manpower (SAT)

FOREMAN - EIDZZAM

EPCC OF NPS 36 PULAU INDAH LATERAL PIPELINE (TULIP) KP42
DATE: 28.07.2022
Permit no: 140304 & 140305

Manpower:
PMT : 2 pax
SSS : 2 pax
WL : 1 pax
FW : 0 Pax
QC: 1 pax
Lifting spv: 0 pax
Civil spv: 1 pax
Civil worker: 16 pax
Mechanical worker: 0pax

Total: 23 pax
Work duration:
0800hrs -0400hrs

Machinery:
1) Backhoe - 1 nos

Equipment:
1) Rebar cutting machine - 1 nos
2) Rebar bending machine - 1 nos
3) Compressor - 1 nos
4) Genset - 1 nos
5) Tower light - 3-nos

Forwarded

27/07/2022

WELDING PROGRESS KP41

Cumulative 49 jts

Outstanding RT 0 joint

Rt Acc 42 jts

Rt Rej 7 jts

Repair 0 jts

Outstanding-R1 RT 0 joint

Rt Acc R1 6 jts

Rt Rej R1 1 jts

Outstanding-R2 RT 0 joint

Rt Acc R2 0 jts

Rt Rej R2 1 jts

Outstanding-CO RT 0 joint

Rt Acc R1 1 jts

Rt Rej R1 0 jts

WELDING PROGRESS KP40

Cumulative 79 jts

Outstanding RT 0 joint

Rt Acc 71 jts

Rt Rej 8 jts

Repair 0 jts

Outstanding-R1 RT 0 joint

Rt Acc R1 8 jts

Rt Rej R1 0 jts

backfilling (TLB). The report also separate work for each KP and station. This is because the work at station requires more machinery and manpower and the work are also more complex then other KP. Last but not least, the report also records the downtime or the time that work cannot be proceeded in this project. The report also contains a rain chart of each day as rain is one of the main reasons of a downtime at site.

2. Daily site visit

Every day I am required to site visit a KP to see whether there are working and to record the number of manpower and machinery available there. Site visit has a motif to make sure that worker are doing their work and make sure that they are working with a permit available. This is to prevent any dispute between workers and the higher up. Site visit is needed to record the condition of site and the safety that the workers applied at site. For example, is the soil is muddy needed to remind the worker to wear safety rubber boot and ensuring all worker at site are wearing their personal protective equipment, either their rest is safe from line of fire (will usually be determine by safety officer at site), check either the method of preservation of the equipment is applied by workers and check either the worker are having trouble with the environment of work.



After the site visit is done every activity at site will be recorded. The data will be recorded by activity and station.

TODAY'S PROGRESS			
C&G	Outgoing at KP 0 - KP 4		
PIPELINE WELDING	Outgoing at KP1, KP4, KP14-500, KP26-000 - KP31-000, KP32 - KP35, KP37 - KP40		
PIPE JACKING	KP14-500 - Jalan Angsarik - Pushing cutter head - Completed - Lowering production pipe - Inss		
HDD	KP26 (1,050 m)		
STRINGING	Outgoing at KP20 - KP31		
F&C	Outgoing at KP7, KP36 & KP37		
Tracking & Lowering	Lowering pipe at KP24, KP37, KP38		
Backfilling			
Station SL270	1. Pile cap pipe support -Lean Concrete 100% (27/27) -Cut of pile 100% (33/33) -Hacking pile 100% (33/33) -Reinforcement formwork 100% (27/27) -Reinforcement rebar 100% (27/27) -Install formwork 100% (27/27) -Install rebar 100% (27/27) -Install rebar stump 30% (25/27) -Concrete pile cap 100% (27/27) -Install formwork stump 30% (25/27) -Install bulk 30% (25/27) -Concrete stump pipe support 30% (25/27) -Remove formwork pile cap	2. SCADA BUILDING A) Pile cap -Rebar 90% -Formwork 50% -Reinforcement rebar 100% (6/6) -Lean Concrete 100% (6/6) -GB Formwork 100% (6/6) -Cut of pile 100% (12/12) -Hacking pile 100% (12/12) -Install formwork 100% (6/6) -Install rebar 100% (6/6) -Concrete pile cap 100% (6/6) -Band link R10 GB 100% (6/6) -Install stump formwork 100% (6/6) -Concrete stump 100% (6/6) -Reinforcement column 35% (2/6) -Remove formwork stump	3. Hot tap pipe support -Reinforcement formwork 100% (4/4) -Reinforcement rebar 100% (4/4) -Reinforcement Formwork 100% (4/4) -Concrete pipe support 100% (4/4) -Mob sheet pile
Station SR273	Control Building Zone #1 - Slab Lean Con Instrument Room : 100% - Slab Rebar Instrument Room : 100% - Slab Lean Con Electrical Room/Ticker/Walkway : 100% - Cable Trench Concrete work : 100% - Slab Rebar Fabrication Work : 100% - Pre Cast Manhole Cable 2 nos : 100% - Concrete Slab Control Building : 100% - Column Rebar Fabrication : 35% - Column Rebar Installation : 0% Pipe Support/Skipper Zone #2	Metering Building (Slab) Zone #3 - Concrete Ground Beam Grid D to I : 100% - Formwork Install Ground Beam A to D : 100% - Concrete Ground Beam Grid A to D : 100% - Backfill and Lean Con Slab : 100% - Rebar Slab Installation : 100% - Concrete Slab Grid A to I : 100% Pipe Skipper Zone #4 - Completed Concrete Stump Padestal : 10/10 - Install Pipe Support : 7/10	4. RC slab Rebar 80% -Excavation 100% (11/11)- Pole -Reinforcement formwork 80% (16/20) -Concrete 40% (8/20) -Remove formwork 5. Rebar wall -Prepared Base BRC 100%
		BRC Installation for Precast Slab Maintenance Platform : A - 8/8 B - 0/1 C - 0/2 D - 0/3 E - 0/2 F - 0/1 Concrete Maintenance Slab : A - 8/8 B - 0/1 C - 0/2	

4.3 Problem encountered and approach adopted for solving problem

4.3.1 There is not much work during internship

During my first 3 week of 6-month industrial training, there is no work assigned to me. During that time, I was in bored as there was nothing to do as I was new there and tempted to open my phone to release my boresome.

As there was nothing else to do during that time, I do my own research for a better understanding about the project and study the current situation of the company. Therefore, I scroll through document about the current project and try to understand what I am going to do for the upcoming day. Furthermore, if there is something that I did not quite understand, I will ask my seniors and others employees during their free time, about the current project and ask the employee of the same department about their scope of work in the company.

4.3.2 New lifestyle

The environment while studying in university is not the same while working. As I have been living the lifestyle of a student, waking up at morning to attend a few classes a day and rest the whole day for almost 3 years, I have to adapt to a new lifestyle that require me to socialize with people more and handle a lot of pressure of work. Even though it is hard for me at first to adapt myself in this company, as time goes on, I become more and more comfortable with the environment at work.

4.3.3 Transportation problem

As I am working at a 42km pipeline project, I am required to visit site once a day to record workers daily activities and working condition. However, as this project is currently under construction and require a lot of manpower and machinery, almost all of the transportation are not available as there are used to mobilize manpower and machinery at site. Therefore, there was no available transportation for me to use. Travelling to site using my personal vehicle is not an option as the road condition of site is very dangerous. Therefore, to solve my transportation problem, I have to ask either the person in charge of the site or available driver to give me a lift a day before the day I needed to be there. By doing this, I can manage my schedule and get my job done without disturbing anyone work.

4.4 Professional and ethical issues

During my 24 weeks of industrial training, the professional and ethical issue that I have encountered is dealing with non-cooperative workers. On a daily basis, the person in charge of the site was required to hand in their daily report to me as I need to record the progress at each site. The daily report of each site contains the information such as total manpower at site, permit number that they are using to work and whether there was any progress at site or not. Therefore, the report from each site is very important for me who task is to record progress at each site. But the problem arises when the people at site take lightly of me just because I am an intern student and does not have real power or standing in the organisation. Thus, making my work much harder as the information and source are lacking. The view of the worker to me as only an intern in the organisation and cannot do anything towards them hurdled my work. As my supervisor that time was struggling with his workload, to solve this problem that I am having, I went and consult the issue with the top chain of command in the organisation, Mr. Asri the boss of AXIANERY SDN BHD. He voiced out to all of the worker in the organisation to be more cooperative toward me and others intern in the organisation. Since then, the issue of non-cooperative worker has been permanently solved.

4.5 Health and environmental issues

During my 24 week of industrial training, heath issue is not a concern for me as at AXIANERGY SDN BHD every one is working in a clean environment and following SOP as the government wanted. Every Friday morning, every worker will be check for COVID-19 to make sure that no one was infected while working at site. However, environmental issue is the most concern for me and all the others worker. As this is a pipeline project the worker environment is not to friendly and can be very rough and dangerous. Sometime, when it raining heavily there will be a big puddle of mud that we must cross and the smell at site is not quite pleasing to the nose. The access road there is also not very good, there are hole every where and something u can get lost as there has no line inside the site. As the site is inside the forest, they are also wild and dangerous animal. So, every time I went to site visit, I will watch my surrounding and stick together with the group I cam with.

Conclusion

5.1 Conclusion

In conclusion, this industrial training has been a great and rewarding experience for me. I can conclude that there have been a lot I have learnt from my days working at AXIANERGY SDN. BHD. Needless to say, the technical aspect of the work that I have done here are no perfect and can be improved by providing more time. One thing that I have learned in during my internship is to always be skilled in time-management. As someone who has no prior experience in working in the oil and gas industry, I believe that my time spent here while doing my research and work is well worth it and very much contributed to build an efficient chemical engineer.

5.2 Suggestion and Recommendation

I discovered that AXIANERGY SDN BHD and UiTM both have room for growth in a number of areas throughout my industrial training there. In order to improve the firm and UiTM, I would like to provide some suggestions and recommendations.

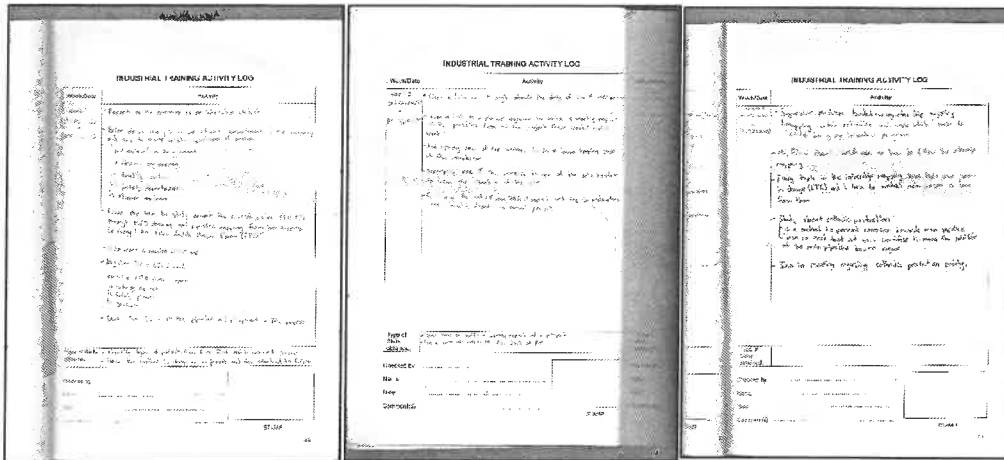
In the beginning, it would be better if the business was willing to develop more structured training programmes. I am aware that it is a difficult duty because the person in charge of supervising the practical students is frequently overwhelmed by their workload, and this recommendation might add to that stress. However, if they organise it well, I don't think it will have a negative impact on them. They might invest some time in planning so that the instruction for the practical students is more thorough, structured, and organised. The responsible supervisor can list and organise the training tasks that the trainees will do in order to achieve this. Because the trainee will complete the duty in accordance with the list and instructions, the supervisor's job will be made simpler. A proper training programme is crucial since it can make the most of the training time. Additionally, if the supervisor is overworked, they can delegate training schedule guidance to their fellow employees. When he is busy, my boss uses this as practise.

In addition, I need to set up the complete equipment for those who start their jobs tomorrow. Despite not having my own table, I can still clearly recall my first day of employment. I therefore needed the assistance of other employees to locate an open table for me. In my opinion, the company should prepare all the equipment and ensure that it is in good working order prior to the entry of new employees, as opposed to doing so because it already knows the day I registered myself with the company. Therefore, they should have everything ready before I arrive. That can help you save a tonne of time. I won't have to waste time looking for a workspace because I can get to work as soon as I arrive.

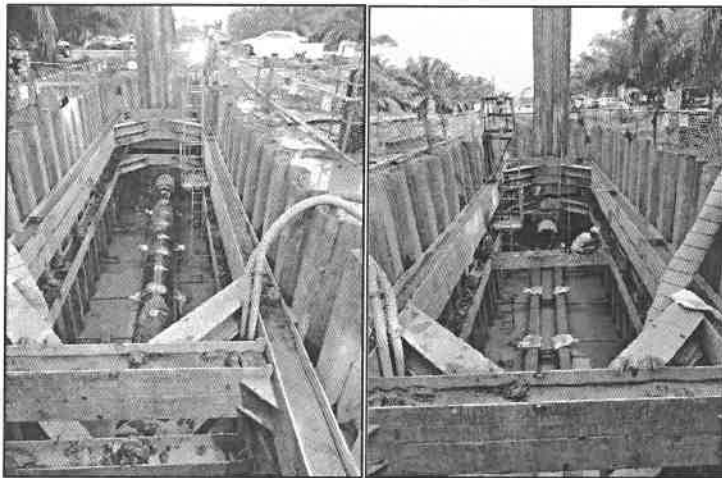
I also discovered that several of the files were not properly labelled, which was a concern. Even though the current employees are accustomed to it, new hires like myself might not be able to locate the desired or right file. Therefore, I would like to recommend that the file be properly labelled because it will be more convenient for all of the staff and save time when they need to refer to it again.

In addition, I discovered that several of the documents were not organised well. To make it simpler for the employees to refer to a document later, they should arrange it according to the date. The staff doesn't have to spend a lot of time looking for the documents.

Appendixes



Sample of internship log book



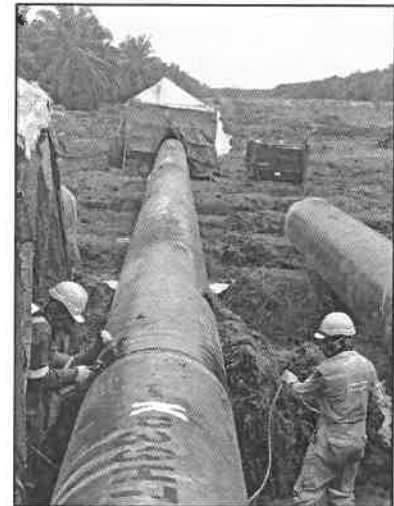
Pipe jacking



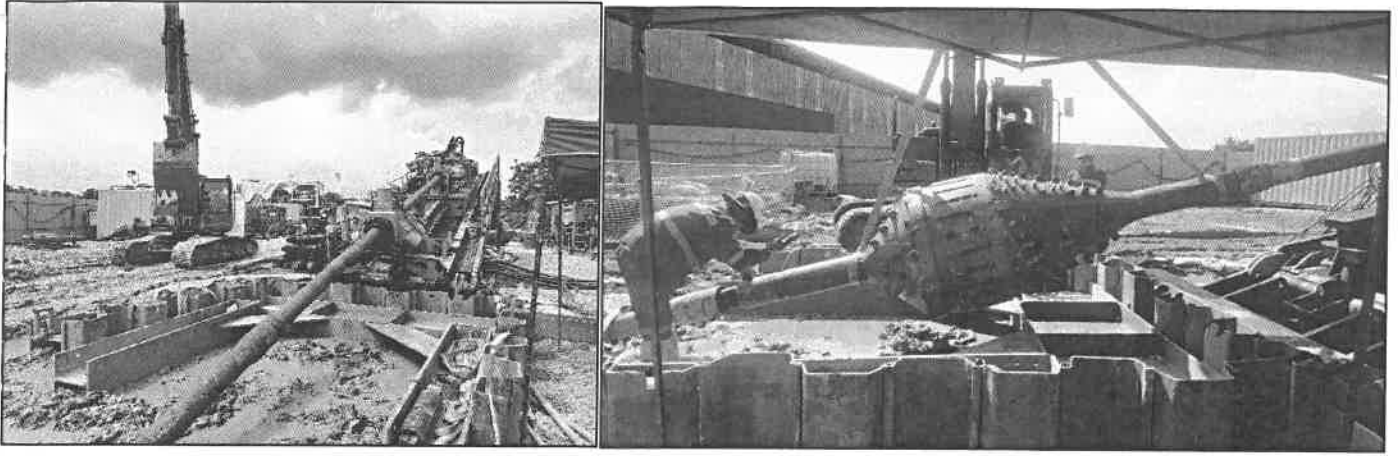
Piling



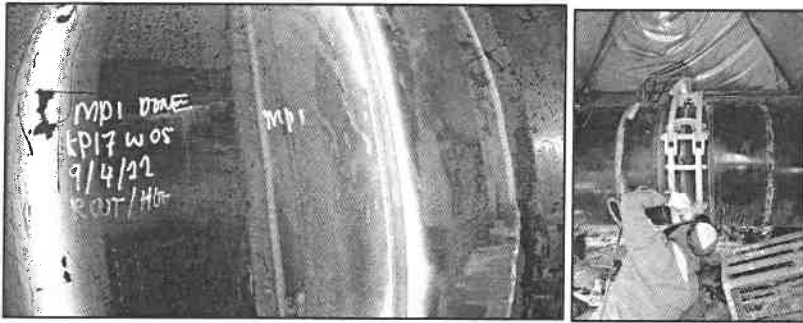
Non-destructive Test (NDT)



Field Joint Coating (FJC)



Horizontal Directional Drilling (HDD)



Fit up welding



Stringing