SLICKLINE ASSISTANT WORKBOOK

IMPORTANT NOTE:

1. Your point of reference to complete this workbook may be obtained from the following
   - Training Manual and any other training materials provided together with this workbook
   - Your Trainer, Assessor (Slickline Operator), Verifier (FSM) or senior colleagues
   - SOP / Quality Procedures & Processors
2. The completion of this Workbook is a joint effort and responsibility between you and your assessor therefore you have the obligation to request from your assessor to be assessed upon your completion of each topic
3. The completion of this Workbook is part of the MANDATORY requirements which you must fulfill to qualify for a promotion
4. Your training program is mostly self-driven, including this Workbook. It requires individual initiatives, dedication and commitment to complete the process.

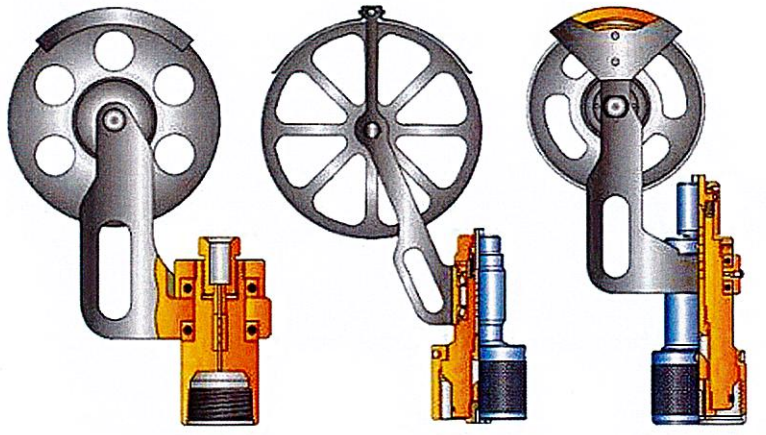
NAME	LARRY DAVID GAU
DATE OF JOIN	24/06/2024
CONTACT NO.	014-5442993
RECEIVED DATE	02/09/2024
DATE COMPLETED	20/03/2025

GAZALI MELIKY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

20/3/25

B. SURFACE EQUIPMENT

B.1. STUFFING BOX



What is Stuffing Box

Stuffing box is a primary barrier that positioned at the uppermost point of the PCE string. ✓

What is the purpose of stuffing Box

To ensure sealing off around moving or solid wireline at the upper end of the lubricator during wireline operations. ✓

How to operate Stuffing Box

Stuffing box can be operated either manually or hydraulically which when hydraulic pressure is applied to area above piston, piston is forced downward against force of spring. ✓

GAZALI MEHRY
Operations Manager
Dimension Bid (M) Sdn
Warehouse
Subsea Services

24/3/25

What is maintenance required for Stuffing Box

Packings - not worn out
Sheave - use the correct size for the line
Upper and lower packing gland - check for wear
BOP plunger - check for wear and freedom of vertical movement
Sheave bearings - check for free spinning
Sheave staff - check for freedom of swivel movement
Sheave guard - tight and adjust close to the sheave to ensure it will trap the line

What is safety precaution required for Stuffing Box

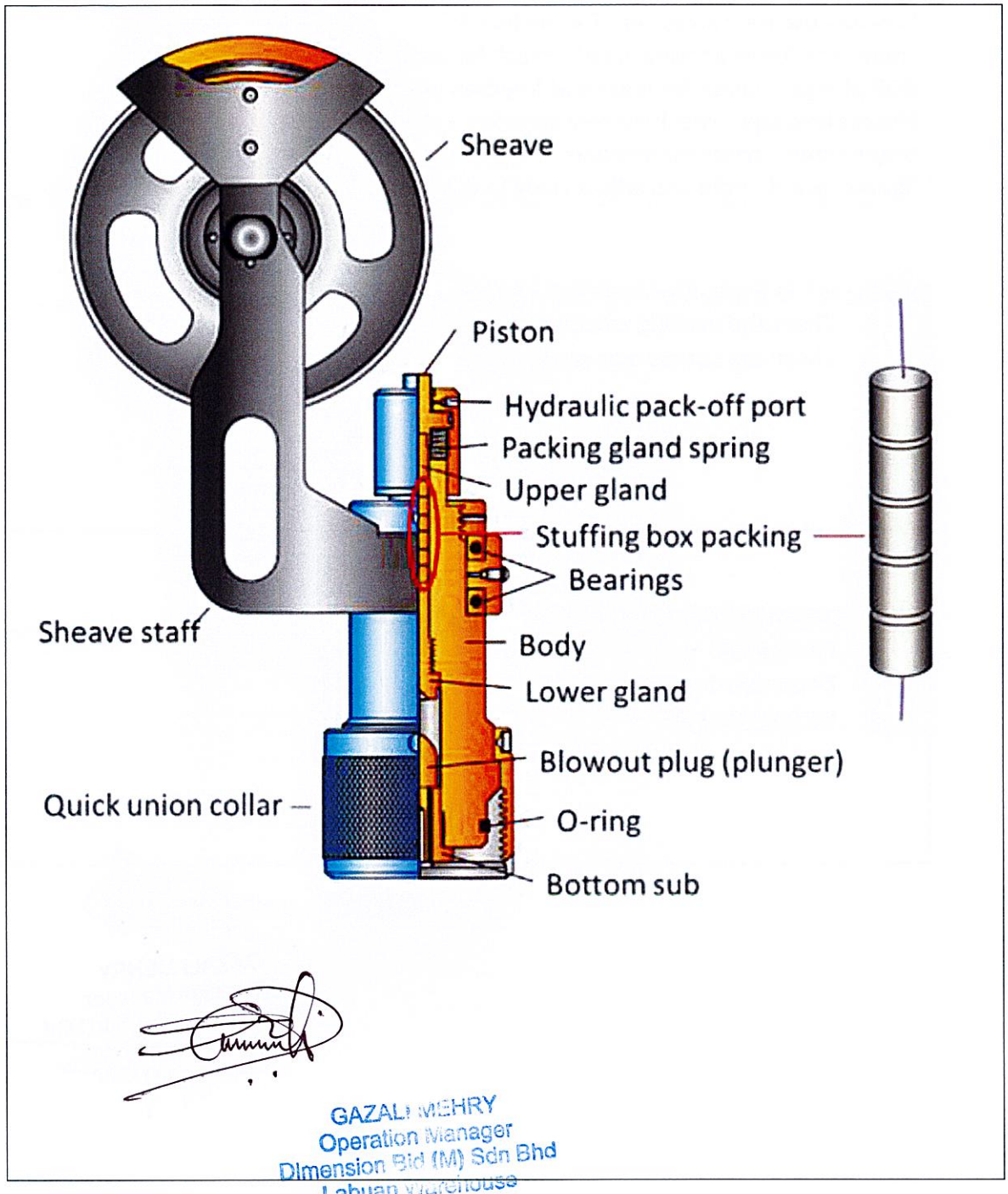
- Check the packing whether worn out or not
- Check the correct size of sheeve

What is potential hazard during handling Stuffing Box

- Pinch point
- Drop object
- Back injury

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
29/3/25

Draw & name each part of stuffing box



GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

20/3/25

B.2. LUBRICATOR

What is Lubricator

Lubricator are a series of interconnected length of pipe and also known as risers.

What is the purpose of Lubricator

To provide a space for the tool to be contained in under pressure, when opening and closing the wellhead.

How to operate Lubricator

Connect lubricator section using chain block, wireline mast, crane or gin pole.

What is maintenance required for Lubricator

- Check for general damage and corrosion
- Visual inspection of the internal bore for corrosion and 'wire tracking' near grooves
- Check all the O-ring and make sure it did not worn out

What is safety precaution required for Lubricator

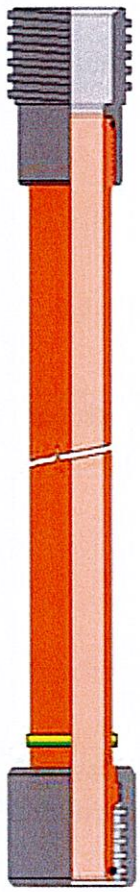
- Lubricator should be x-rayed
- One of the lubricator must have a port to bleed of pressure

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
24/3/25

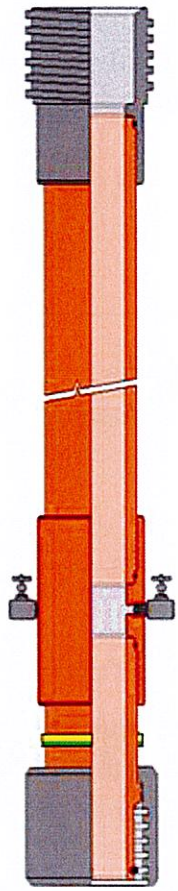
What is potential hazard during handling Lubricator

- Drop object ✓
- Pinch point ✓
- Back injury ✓

Draw & name each part of Lubricator



Top Section

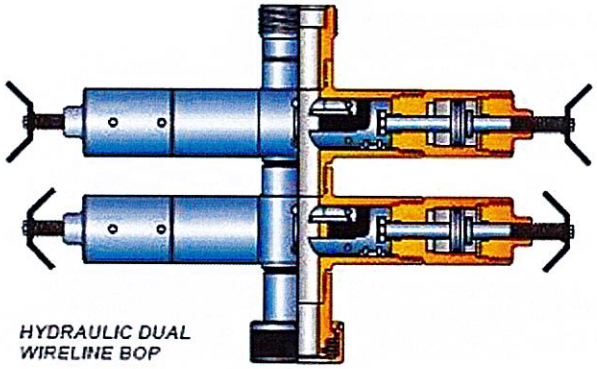


Bottom Section

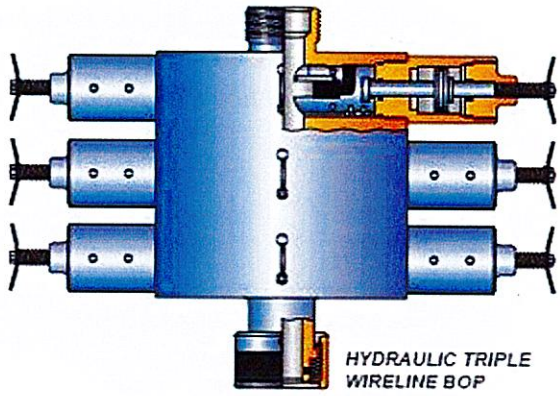
GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

29/3/25

B.3. BLOWOUT PREVENTER (BOP)



HYDRAULIC DUAL WIRELINE BOP



HYDRAULIC TRIPLE WIRELINE BOP

What is BOP

Blow out preventer or BOP is known as wireline valve which installed between the tree connection and lower lubricator section.

What is the purpose of BOP

- To enable the well pressure to be isolated without cutting the wire by closing the master valve
- Permit the assembly of the wireline cutter above the BOP rams and dropping it if the toolstring stuck in the well
- Allow slickline work to be conducted while containing the well pressure on surface with wire in the wellbore

How to operate BOP

- Hydraulically
- Using RSU, control panel

Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
20/3/25

What is maintenance required for BOP

Must be service and need to be pressure tested
Level 1 Service - To be carried out after every job
Level 2 Service - To be carried out once a year
Level 3 Service - To be carried out every 5 years

What is safety precaution required for BOP

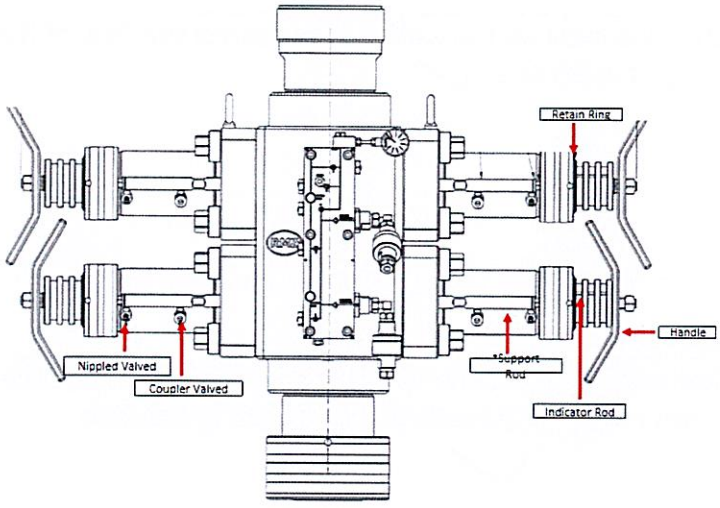
Ensure the rod has enlarged diameter below the ram to prevent it being blown out during testing.

What is potential hazard during handling BOP

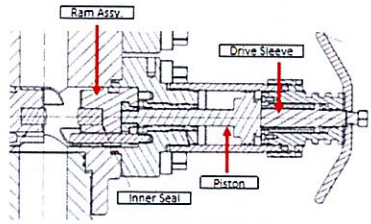
- High pressure
- Back injury
- Horse burst
- Hand injury

Operation M
Dimension Bid (
Labuan War
Slickline Services
20/3/25

Draw & name each part of BOP



BOP Body



BOP Cylinder Body

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
29/3/23

B.4. X-MAS TREE

What is x-mas tree

Xmas tree is a series of valves installed on the wellhead to control the flow of fluids from the well. Located on top of wellhead.

What is the purpose of x-mas tree

Christmas trees are a vertical assembly of valves with gauges and chokes that allow for adjustments in flow control as well as injections to stimulate production

How to operate x-mas tree

The valves that comprise some of the decorations on the Christmas tree are opened when the oil or gas well is ready to produce and the processing and storage facilities are ready to receive.

What is maintenance required for x-mas tree

- Inspect and replace any damaged component
- Clean X-mas tree
- Do Critical Device Function Test (CDFT) on X-mas tree (check all valves)

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

What is safety precaution required for x-mas tree

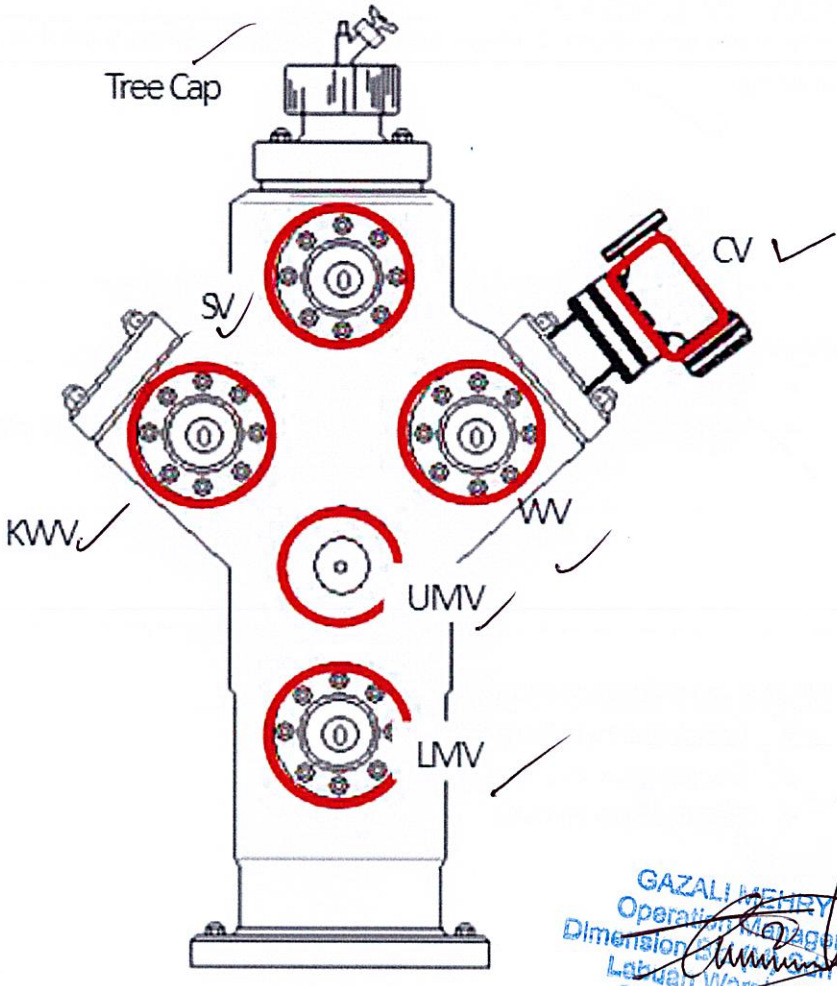
- Make a count during opening and closing the swab valve.
- Do not overtightened the valves during operation and closing.
- Never use master valve to shut in the flowing well, except in an emergency situation. (use swab or wing valve)

30/3/25

What is potential hazard during handling x-mas tree

- Pinch point
- High pressure
- Work under suspended load
- Line of fire

Draw & name each part of x-mas tree



GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

20/3/25

B.5. WIRELINE REEL SKID UNIT (RSU) / WINCH – SINGLE DRUM AND DOUBLE DRUM

What is RSU

RSU is also known as wireline unit or winch which that can control wireline tool strings to go inside the well or pull the tool strings out of the well.

What is the purpose of RSU

To turn the wire drum to lower and rise toolstring in the well that require wireline servicing

How to operate RSU

- By using power pack and winch hydraulic system
- Transmission of hydraulic hole via hole between power pack / RSU

What is maintenance required for RSU

- Check the hand brake system
- Ensure gear in a neutral position
- Check chain tension

What is safety precaution required for RSU

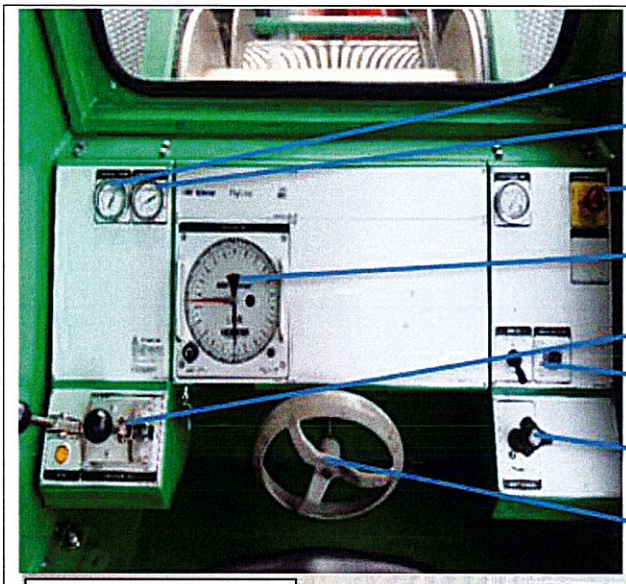
Be careful with the wire / rotating drum winch when running because it might break and may cause injury

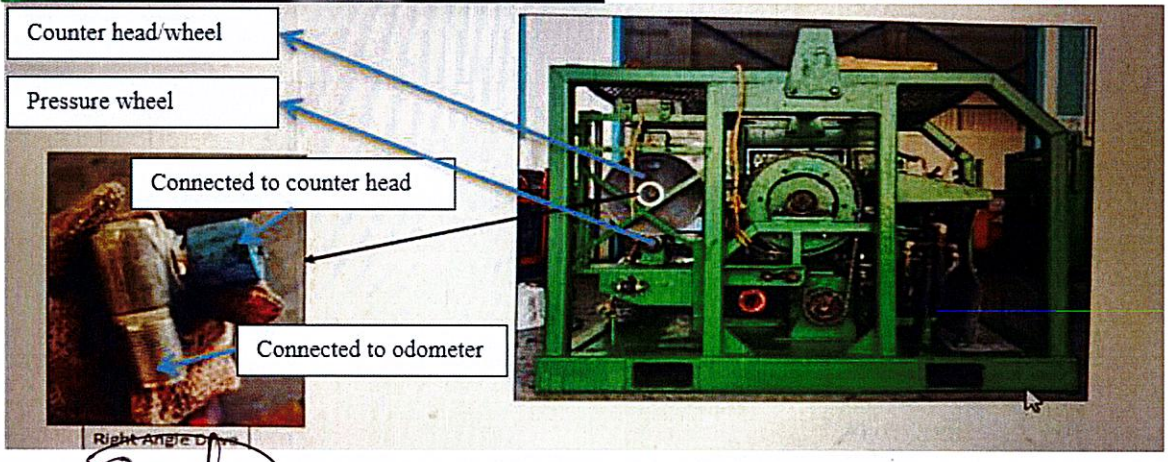
GAZALI MEHRY
Manager
Dimension Bid Sdn Bhd
Labuan Warehouse
Slickline Services
24/3/25

What is potential hazard during handling RSU

- Wire breaks off ✓
- Pinch point ✓
- Rotating drum winch ✓

Draw & name each part of RSU





GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/3/25

B.6. ODOMETER

What is Odometer

Odometer is a depth measuring device and also known as depth counter

What is the purpose of Odometer

To indicate the depth of slickline toolstring hanging in a tubing string in feet or meters.

How to operate Odometer

- Prior to operation, this device should be manually set to zero and start reading from tubing hanger.
- Connect hose to right angle drive and put odometer to RSU for monitoring puposes.

What is maintenance required for Odometer

Check if counter head is free to rotate

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Lebuhan Warehouse
Slickline Services

25/3/25

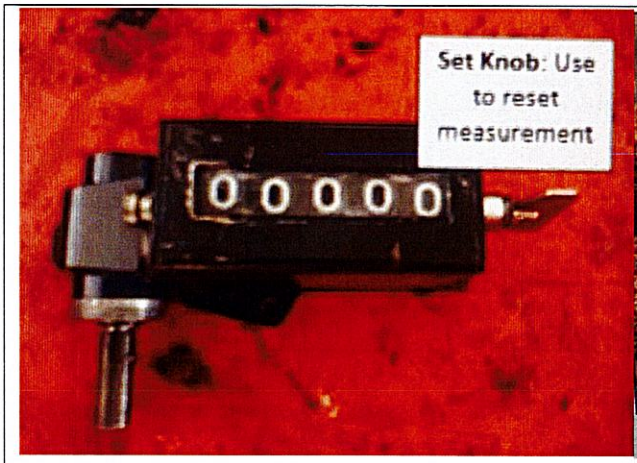
What is safety precaution required for Odometer

Wear appropriate PPE ✓

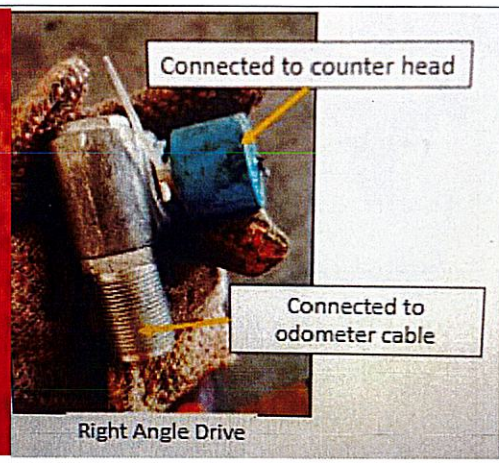
What is potential hazard during handling Odometer

- Sharp edges ✓
- Pinch point ✓

Draw & name each part of Odometer



Odometer



Right Angle Drive

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
25/8/22

B.7. WEIGHT INDICATOR (200 LBS AND 4000 LBS)

What is Weight Indicator

Weight indicator is a device to measure weight of tools in tubing string. The device is connected to load cell using a rubber hose filled with hydraulic hose.

What is the purpose of Weight Indicator

To determine the total weight of tools hung in tubing string

How to operate Weight Indicator

- The weight indicator (located at RSU) is connected to the load cell using a rubber hose filled with hydraulic oil. Load cell is attached to heavy-duty hose carries the pressure generated to the weight indicator gauge calibrated in lbs.
- It is using hydraulic system

What is maintenance required for Weight Indicator

- It is necessary to completely flush and re-charge the unit at least once per month. Having recharged the unit, a specific gap should be set between load plate and load cell retaining ring.
- Check for leaks around the hose and priming check valve assembly.
- If additional "W-15" fluid is required, fill through the small port on the upper side of the gauge housing.

What is safety precaution required for Weight Indicator

- Do not crash the hose
- Secure guage and fittings because the load cell is made of aluminum alloy and reasonably strong rough handling can damage it.

GAZALI ... Operations Manager Dimension Bid (M) Sdn Bhd Labuan Warehouse Slickline Services

25/3/25

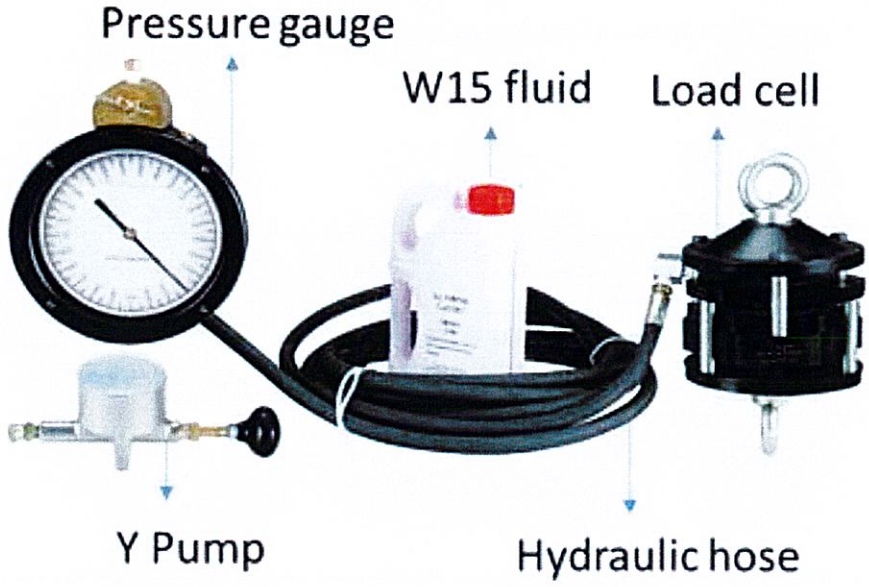
CONTROLLED COPY

What is potential hazard during handling Weight Indicator

- Drop object

If not give attention to weight indicator during operation, might be resulted tension and will cause wireline to break.

Draw & name each part of Weight Indicator



GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
25/8/25

B.8. SPOOLING DEVICE

What is Spooling Device

Generally, one configured with removable drum that allow transport spools to be inserted, allowing the new string to be spooled into reel

What is the purpose of Spooling Device

- To hold the reel drum during spooling process
- Control the tension of the line as it is spooled

How to operate Spooling Device

- Assemble the reel. The setup is almost the same with normal operation, which weight indicator and hay pulley are needed
- Brake level will help to control the line tension.

What is maintenance required for Spooling Device

- Brake maintenance
- Always check the hydraulic system

What is safety precaution required for Spooling Device

- Make sure to check the glass in good condition before start the job
- Bolts and nuts (shaft) are in good condition

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/3/25

What is potential hazard during handling Spooling Device

- Pinch point ✓
- Rotating device ✓

Draw & name each part of Spooling Device

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/8/25

B.9. CONTROL PANEL

What is Control Panel

Control panel are used to operate a number of valves normally operated in slickline operations.

What is the purpose of Control Panel

Control Panels are used to operate a number of valves normally operated in slickline operations. Their types and its functions are:

- Control Panel (CP) – To operate BOP rams
- Single Well Control Panel (SWCP) – To operate Master Valve and SCSSV
- Well Control Panel (WCP) – An integrated CP that can operate BOP, Stuffing Box, MV & SCSSV

How to operate Control Panel

- Connect the control line to the equipment
- Open air supply, use regulator to control pump out pressurized the line.

What is maintenance required for Control Panel

- Check the fluid level of hydraulic oil
- Check the hydraulic hoses for any sign of leakage or damage.

What is safety precaution required for Control Panel

- Do not tighten or loose the connection when under pressure
- Beware of trapped pressure by bleed off fully before open connection

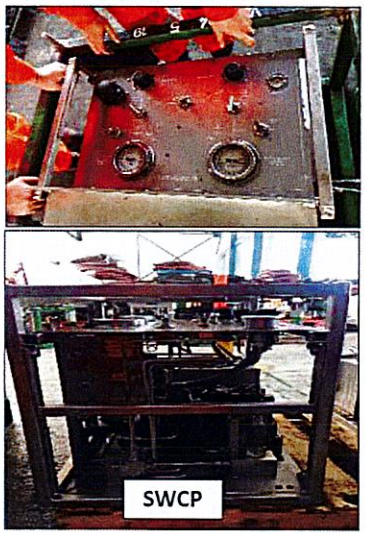
25/8/25

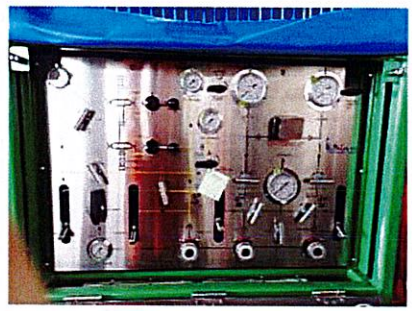
GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

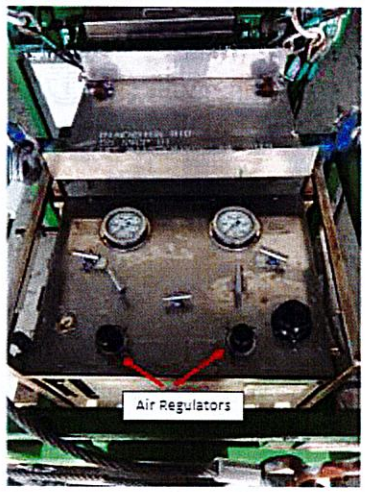
What is potential hazard during handling Control Panel

- Connection loosens
- Hose burst by high pressure

Draw & name each part of Control Panel







25/3/25

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

B.10. HUSKEL DRUM

What is Huskel Drum

Is an air driver pump

What is the purpose of Huskel Drum

To drive the hydraulic or water in control panel or test pump

How to operate Huskel Drum

Operate from the knob or regulator of the panel

What is maintenance required for Huskel Drum

- Check the condition of the O-ring
- Service haskel pump
- Hydraulic check valve and liquid seal repair

What is safety precaution required for Huskel Drum

- Check O-ring condition
- Make sure connection tubing is in good condition

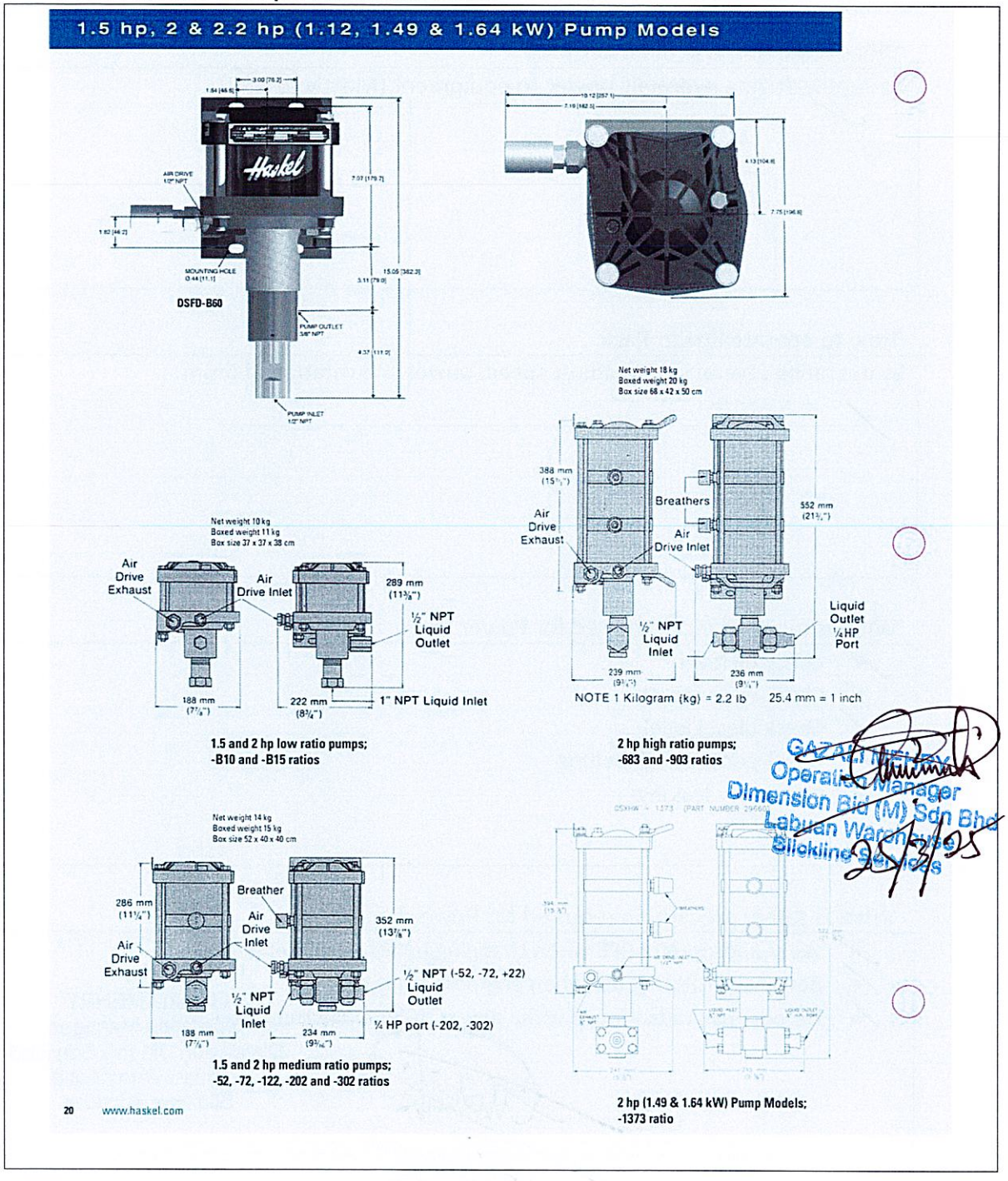
GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/8/25

What is potential hazard during handling Huskel Drum

- Pinch point
- Tubing burst

Draw & name each part of Huskel Drum



GAZALI MEHAT
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services
25/3/25

B.11. POWER PACK (ELECTRICAL & DIESEL)

What is Power Pack

- Power pack is hydraulically drive unit powered by diesel engine
- Certified with zone 2 equipment

What is the purpose of Power Pack

To supply driving hydraulic power to equipment (Mast and RSU)

How to operate Power Pack

By operating several valves, adjust speed, power and rotation of drum

What is maintenance required for Power Pack

- Check oil level
- Check water level
- Check diesel level
- Check condition of belting
- Check any leaking

What is safety precaution required for Power Pack

- Wear appropriate PPE when changing hydraulic oil/ engine oil
- Beware of rotating fan when engine is running
- Do not open radiator cap while power pack is still running

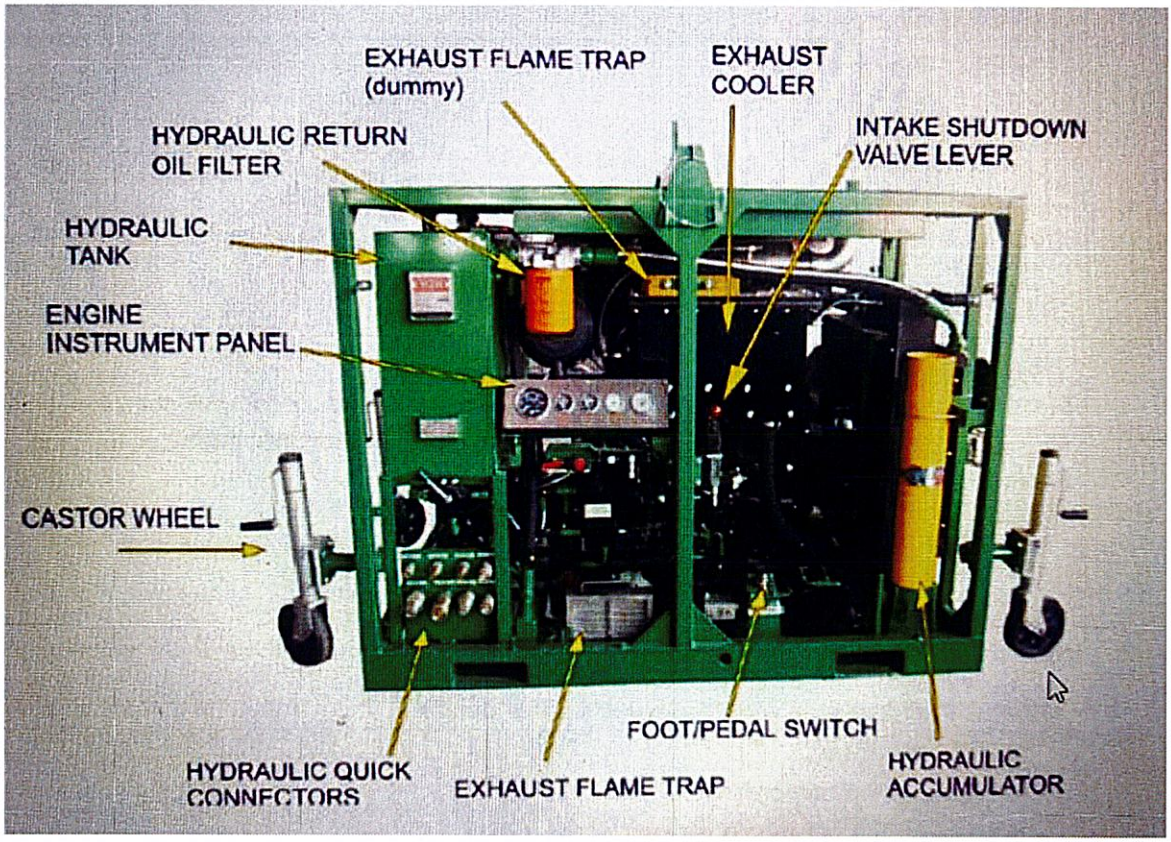
GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/8/25

What is potential hazard during handling Power Pack

- Hose burst ✓
- Hand injury ✓
- Rotating fan ✓

Draw & name each part of Power Pack



25/3/25

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

B.12. AIR COMPRESSOR

What is Air Compressor

A machine that air being compressed driven by diesel engine

What is the purpose of Air Compressor

To supply compressed air for control panel, test pump and air starter engine

How to operate Air Compressor

Starting procedure is almost the same with power pack. The air compressor usually use spring starter. To crank the starter, rotate the shaft clockwise until indicator turn red. Replace spring to start the engine

What is maintenance required for Air Compressor

- Change filters
- Change oil compressor
- Check fan belting condition

What is safety precaution required for Air Compressor

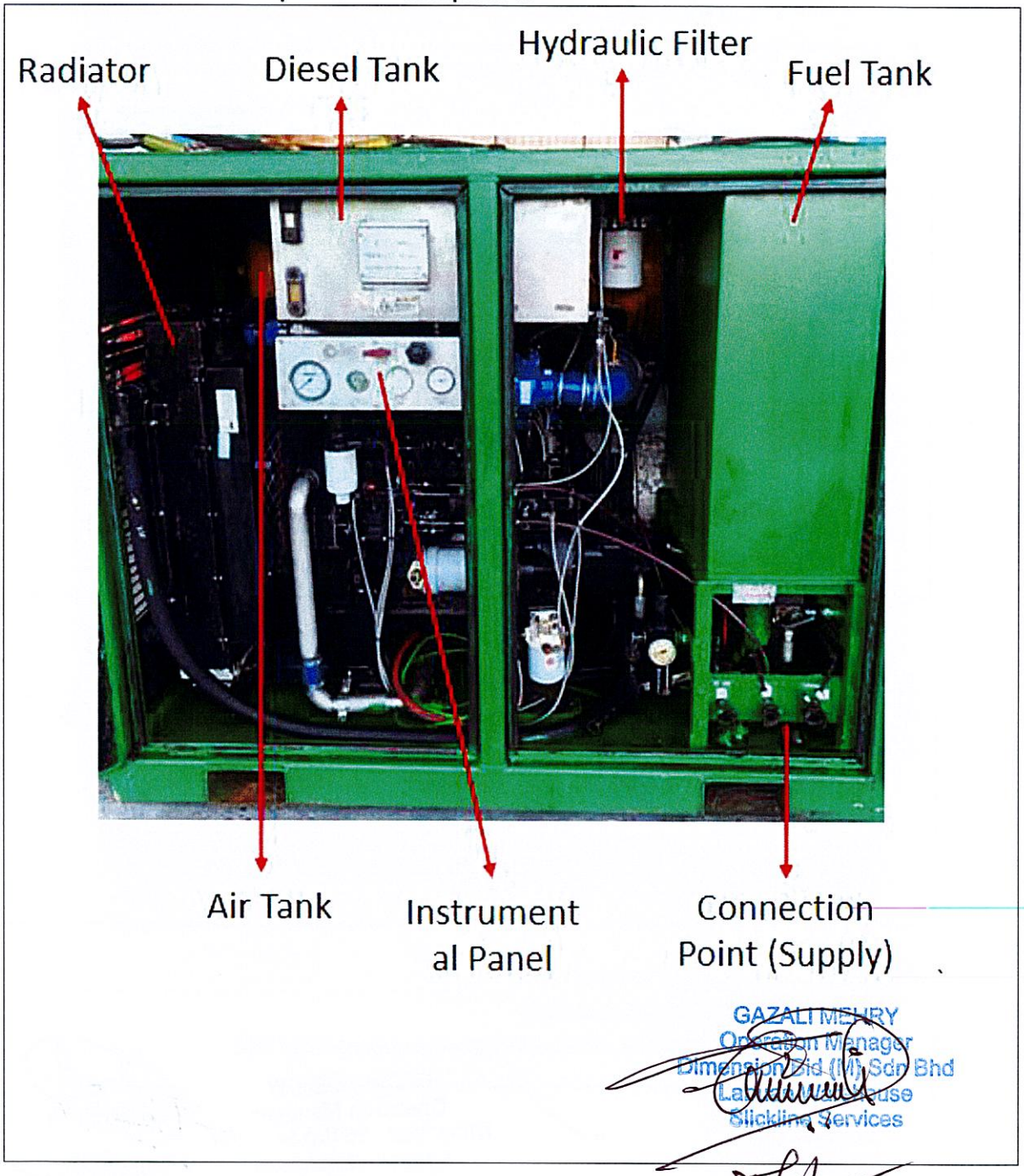
- Make sure all hoses connection no leaking
- Make sure fan is covered

GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Stokline Services
25/8/25

What is potential hazard during handling Air Compressor

- Hose burst ✓
- Pinch point ✓
- Hot surface ✓

Draw & name each part of Air Compressor



GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Lab / Warehouse
Slickline Services

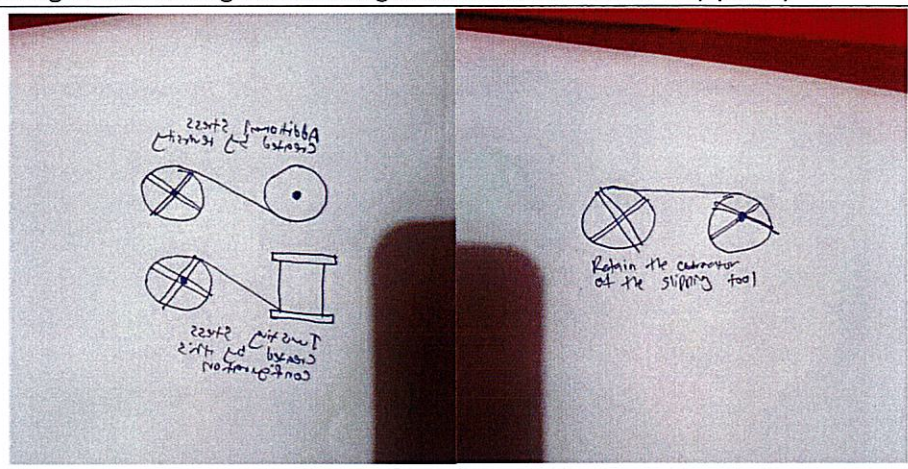
25/3/25

B.13. DRUM

What is the purpose of Drum

To spool the wireline wire

Draw the right and wrong wire arrangement from drum to hay pulley



Wrong Method

Right method

What is maintenance required for Drum

Make sure to service and always check the drum bearing, change if there have any broken or damage

What is safety precaution required for Drum

- Use tag line or push pull stick
- Make sure using the safety glasses and appropriate PPE
- Good communication during lifting/changing drum

CHONG MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services

25/3/25

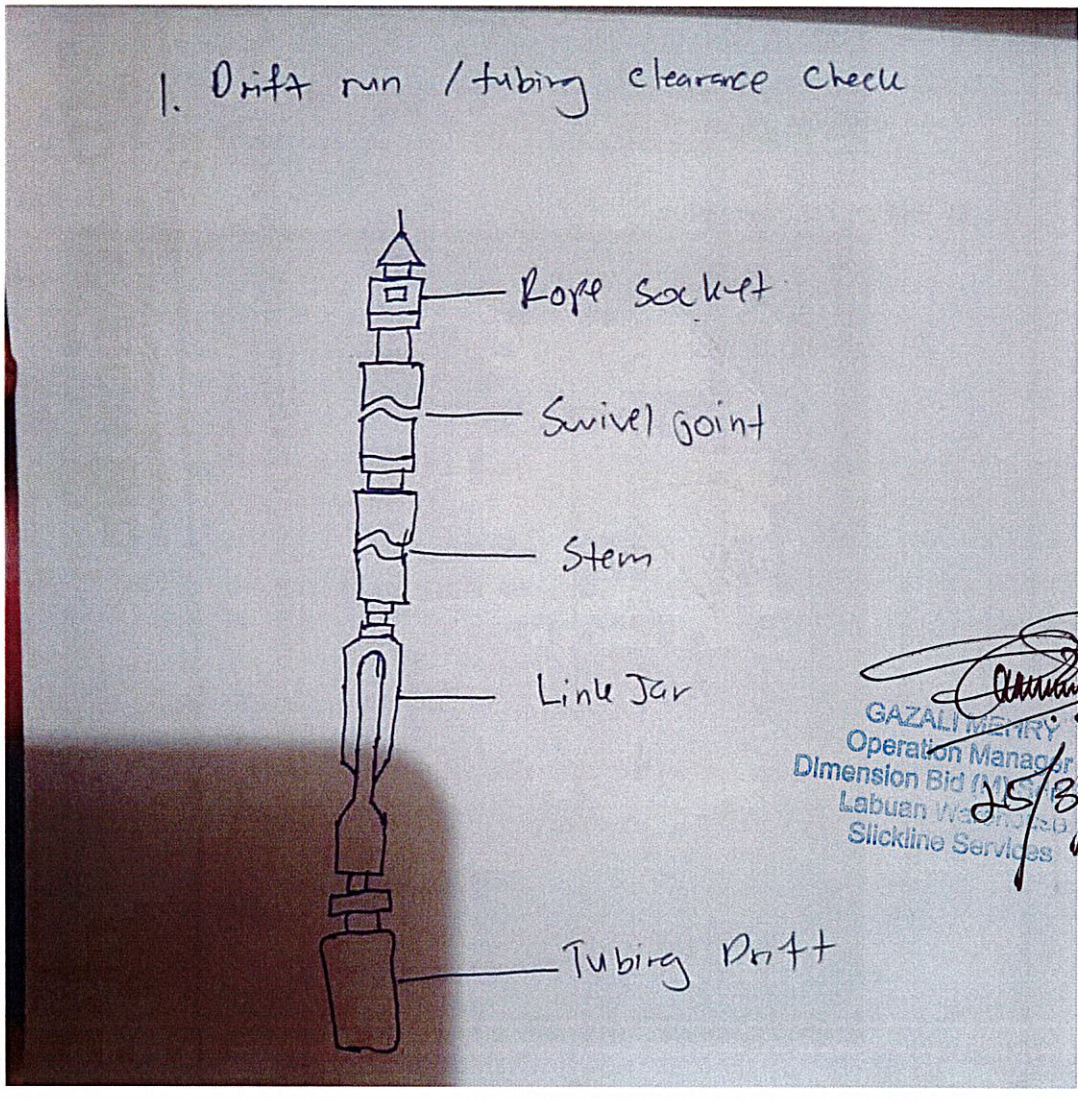
What is potential hazard during handling Drum

- Rotating device
- Pinch point
- Back injury

Please draw/sketch the toolstring configuration for:

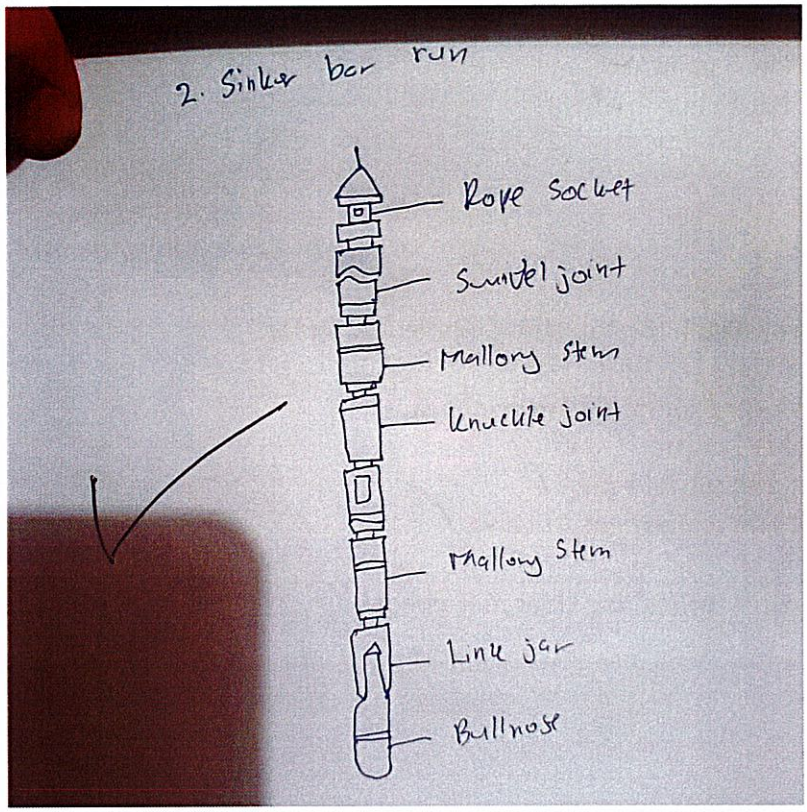
1) Drift run/tubing clearance check
2) Sinker bar run
3) Set and retrieve plug
4) Set and retrieve insert valve

1) Drift run/tubing clearance check

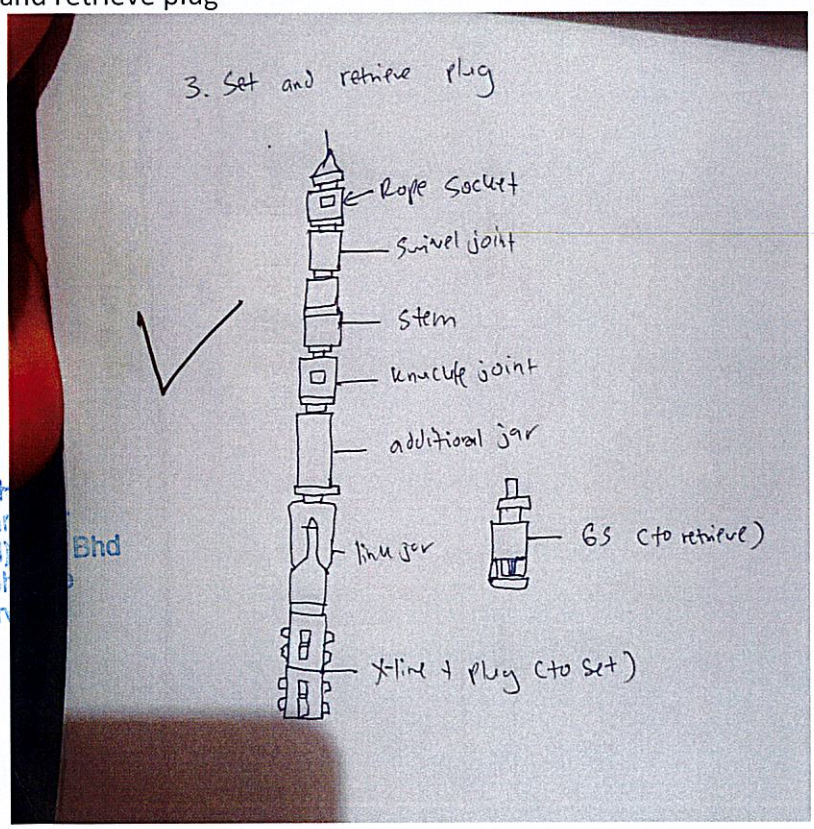


GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Wireline
Slickline Services
25/8/25

2) Sinker bar run

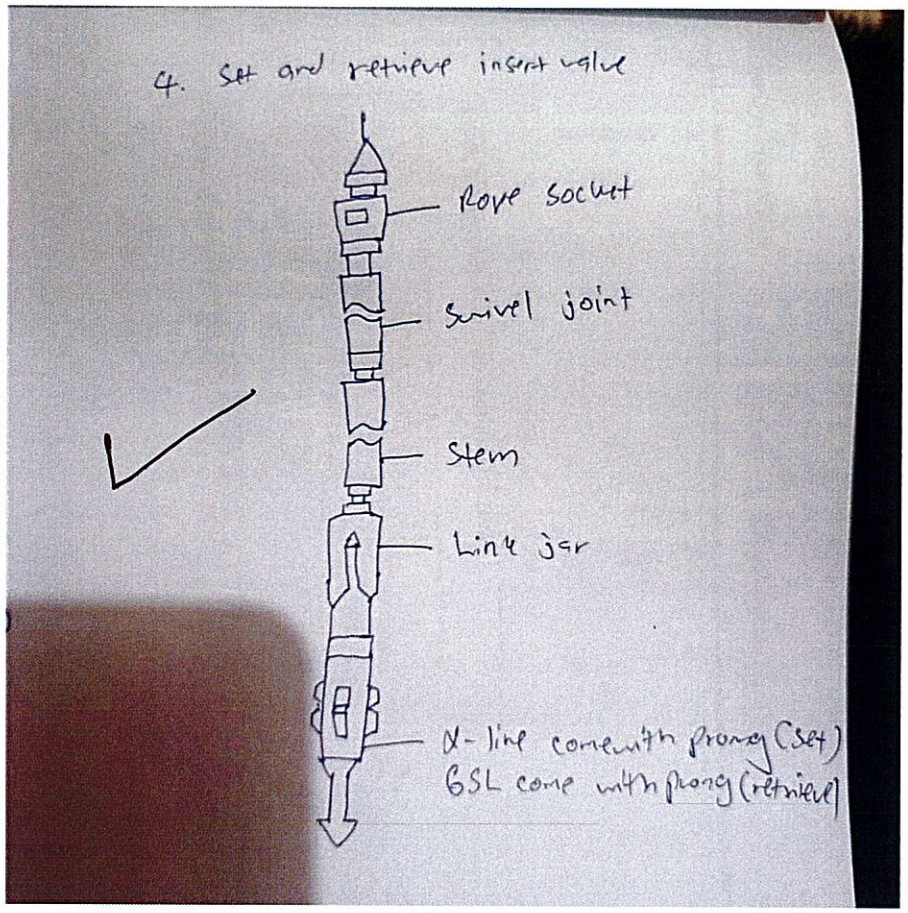


3) Set and retrieve plug



GAZALI MEH
Operation Mar
Dimension Bid (M)
Labuan Wareh
Slickline Serv
Bhd

4) Set and retrieve insert valve



GAZALI MEHRY
Operation Manager
Dimension Bid (M) Sdn Bhd
Labuan Warehouse
Slickline Services