

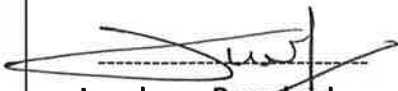




DIMENSION BID

WIRELINE INTERVENTION | PERFORATION SERVICES

MAINTENANCE DBSB-HSE-07

ORIGINAL ISSUE : 25/06/2012
REVISION NUMBER : 02
REVISION DATE : 01/12/2014

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HSE-MS	MAINTENANCE	DBSB-HSE-07-00	
		Rev.02	2014

AMENDMENT RECORDS

This sheet will record all amendment of this Procedure. All particulars of the amendment shall be stated clearly. The HSE Department of Dimension Bid (M) Sdn. Bhd. (DBSB) shall be responsible for the maintenance and update of this record sheet.

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HSE-MS	MAINTENANCE Maintenance Activities Safety Guide	DBSB-HSE-07-01	
		Rev.02	2014

Subject **General Guide for Maintenance Activities**

Purpose This procedure is to provide guidelines on safety precaution during working in all process or activities involved either at warehouse or offshore.

Scope This procedure covers all activities at Warehouse and Offshore with potential hazard to safety and health of employees at place of work or person other than our employees at place of work (supplier or visitors).

References 1. Occupational Safety and Health Act 1994, Act 514
2. Factories and Machinery Act 1967, Act 139

Coordination Meeting Warehouse crew or wire line crew on location must attend the daily coordination meeting. The primary objective of the meeting is to discuss activities for the day to ensure safe execution of jobs without any conflicting activities

Work permit relevant to the job assigned to DB shall be presented during the meeting and planned activities be discussed. Officer In-charge (OIC) may clarify issues, which can affect the planned job in areas of safety or operational issues and to agree on solution or precautions needed be taken.

Refer to Client's Regulations/Rules/ Requirements for details.

Permit to Work (PTW) Permit to work must be obtained and duly authorized by OIC responsible for site before any work can proceed.

DB site representative has to discuss with the supervisor regarding next job plan and prepare the JSA and work permit application. He has to submit a completed work permit form to the line supervisor and make sure it is ready for presentation during the daily coordination meeting. Permit to work application form is obtained from the client.

Refer to Client's requirement for applying PTW.

Pre-job Meeting & Job Safety Analysis (JSA) Prior to commencement of any non-routine work, Job Safety Analysis (JSA) followed by a pre job meeting shall be conducted at work site. Its objective is to make sure everyone involved in the operation understands the work program details and their respective responsibilities. All relevant personnel are to attend this meeting where safety is discussed along with operational matters.

HSE-MS	MAINTENANCE Maintenance Activities Safety Guide	DBSB-HSE-07-01	
		Rev.02	2014

**Personal
Protective
Equipment's (PPE)**

Appropriate PPE must be worn at all times while at work. They are meant for your personal protection. Therefore it is important that all personnel be self-disciplined and complies with this requirement or other regulations as may be dictated on notices in certain work areas on the use of safety equipment.

Refer to DBSB-HSE-01 (Personal Safety) & DBSB-HSE-02 (Personal Protective Equipment) for details.

Refer to Client's Regulations/Rules/Requirements for details.

HSE-MS	MAINTENANCE Non-Destructive Test (NDT)	DBSB-HSE-07-02	
		Rev.02	2014

Subject **Non - Destructive Test (NDT) Basic Guide**

Overview of NDT Non Destructive Tests are carried out to detect flaws or imperfection during manufacture or those develop during servicing.

Visual inspections for surface defects are assisted by penetrant or magnetic crack detection to find the presence and full extent of hairline cracks. Where internal flaws are suspected, use is made X-ray or ultrasonic testing.

Liquid penetrant precautions It is essential to wear correct appropriate PPE when using aerosol cans with dyes. The liquid dye must not be allowed to come into contact with bare skin and respiratory protection must be worn if the work is being carried out in a confined area where the air circulation is limited.

Controlled area **The area where the radiography is to be carried out must be physically barricaded secured and notices of warning of the presence of radiographic work placed on the barriers.**

Entry into this area will be restricted to:

- 1) Classified radiographic Workers**
- 2) Workers Controlled under PTW**

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Safety precaution needed to contain or eliminate potential hazards associated with each phase of the operation has to be understood and implemented. Issues which may arise in this meeting are to be resolved before actual work can proceed.

Personal Protective Equipment's (PPE) Appropriate PPE must be worn at all times while at work. They are meant for your personal protection. Therefore it is important that all personnel be self-disciplined and complies with this requirement or other regulations as may be dictated on notices in certain work areas on the use of safety equipment.

HSE-MS	MAINTENANCE Non-Destructive Test (NDT)	DBSB-HSE-07-02	
		Rev.02	2014

Refer to DBSB-HSE-01 (Personal Safety) & DBSB-HSE-02 (Personal Protective Equipment) for details.

Refer to Client's or Third party contractor's Regulations/Rules/Requirements for details.

HSE-MS	MAINTENANCE Compress Gas Cylinder, Hoses & Torches	DBSB-HSE-07-03	
		Rev.02	2014

Subject	Compress Gas Cylinder, Hoses & Torches																										
Purpose	To outlines the storage, handling and precautions associated with compressed gas cylinder and the use of equipment.																										
Labels	<p>All compressed gas cylinder must be labeled including the name of the gas and any hazard information necessary.</p> <p>The label should be place on the shoulder of the cylinder to prevent damage from handling.</p>																										
Storage of gas cylinder	<p>Unless in use, compressed gas cylinder must always be stored in the area designated for such use by the warehouse supervisor or manager.</p> <p>When storing gas cylinder, the following precautions shall be observed:</p> <table><tr><td>Storage area</td><td colspan="2">Gas cylinder must be stored in cool and well-ventilated area (preferably open air).</td></tr><tr><td></td><td colspan="2">The gas cylinder should not be stored in enclosed space and hot area.</td></tr><tr><td>Storage temperature</td><td colspan="2">Gas cylinders shall be protected from direct rays of sun or from radian (e.g. flares).</td></tr><tr><td></td><td colspan="2">Weather protection should be provided to prevent corrosion.</td></tr><tr><td>Empty cylinder</td><td colspan="2">Empty cylinder shall be clearly identified and stored apart from the full cylinder.</td></tr><tr><td></td><td colspan="2">Empty cylinder shall be treated as if they are full.</td></tr><tr><td>Corrosive liquids</td><td colspan="2">Gas cylinder must store away from ant corrosive liquid or materials.</td></tr><tr><td>Upright storage</td><td colspan="2">All gas cylinders shall always be stacked vertically and securely.</td></tr></table>			Storage area	Gas cylinder must be stored in cool and well-ventilated area (preferably open air).			The gas cylinder should not be stored in enclosed space and hot area.		Storage temperature	Gas cylinders shall be protected from direct rays of sun or from radian (e.g. flares).			Weather protection should be provided to prevent corrosion.		Empty cylinder	Empty cylinder shall be clearly identified and stored apart from the full cylinder.			Empty cylinder shall be treated as if they are full.		Corrosive liquids	Gas cylinder must store away from ant corrosive liquid or materials.		Upright storage	All gas cylinders shall always be stacked vertically and securely.	
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Corrosive liquids	Gas cylinder must store away from ant corrosive liquid or materials.																										
Upright storage	All gas cylinders shall always be stacked vertically and securely.																										
Handling of gas cylinder	Compressed gas cylinder should always be handled with extreme care to avoid the possibility of uncontrolled release of gasses or explosion. Compressed gas cylinder must never be dropped, thrown or rolled.																										
Removal of regulator and hoses	Gas cylinder should never be moved with regulators and hoses attached unless they are in the carrier or trolley.																										
Precaution when lifting cylinder	Cylinder valve, union nozzles or valve protectors must never be used for lifting or handling purposes.																										
Using gas cylinder	All equipment associated with the use of gas cylinders content must be																										

HSE-MS	MAINTENANCE Compress Gas Cylinder, Hoses & Torches	DBSB-HSE-07-03	
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thoroughly examined before use for any defective parts replacement.

Securing of gas cylinder

Gas cylinder in use must never be free standing, but should be firmly secured in the upright position to prevent them being pushed or pulled over.

PPE

Personnel must wear correct appropriate PPE when handling or using compressed gas cylinder and its associated equipment.

Refer to DBSB-HSE-01 (Personal Safety) & DBSB-HSE-02 (Personal Protective Equipment) for details.

Refer to Client's Regulations/Rules/Requirements for details.

Hose check valve

Hose check valve must be fitted directly upstream of the torch.

Prohibited Oxygen use

Oxygen is not air. In no circumstances shall compressed oxygen be used for ventilation purposes and must never be used to sweeten the air in a confined area.

Fire precaution

In the event of gas cylinders being involve in fire, they must be kept cool with water spray and possible, remove to safe area. Such cylinder must be returned to manufacturer for checking.

Care of hoses

Hoses shall be kept from becoming kinked during service and shall not allowed to run through oil pools when being used.

They must be coiled up and stored in designated safe area.

Care of gas torches

Torches shall be kept in good condition and the nozzle shall be cleaned.

If any leaks on the torch fittings it shall be changed out and repaired before being use again.

HSE-MS	MAINTENANCE Painting	DBSB-HSE-07-04	
		Rev.02	2014

Subject Painting Guide

Hazards of painting Painting can be hazardous activity due to chemical and physical properties of the paint as well as inherent hazards of the equipment used in its application.

Some hazard are:

- Paint may be flammable
- Solvent are flammable
- Fixing agents when mix with some type of pain and coating may cause chemical reactions.
- Solvent and paint fume may be toxic.

MSDS MSDS must be available and provided to references.

Refer to DBSB-HSE-05-04 (Material Safety Data Sheet) and Chemical MSDS/CSDS for details.

Refer to OSHA Regulation 1997 (Classification, Packaging and Labeling of Hazardous Chemicals) for chemical details of flammable/reactivity/hazard rating/etc.

Ventilation Ventilation is a good way of eliminating low levels of paint and solvent fumes.

Flammability Pints solvents, paints and fixing agents may be extremely flammable.

It is critical that all ignition sources in the area affected are secured or eliminated.

Injury If the paint or solvent penetrate the skin, medical attention should be sought immediately.

Spillage of paint All spillage of paint must be cleared immediately. Paint must be stores and handled according to the requirements for flammable substances.

Plastic containers Plastic containers must not be applied when mixing or thinning paints.

Waste disposal Paints and solvent containers must be properly disposed. The chemical reaction cause by fixing agents may produce enough heat to cause ignition of other waste.

HSE-MS	MAINTENANCE Machinery Safety at Warehouse	DBSB-HSE-07-05	
		Rev.02	2014

Subject **Machinery Safety at Warehouse**

Scope

To ensure that Dimension Bid employees, who are required to use dangerous machinery, receive the appropriate training and are adequately supervised during their working with any machinery

To ensure there are procedures in place to maintain the machinery and safety features to a suitably high standard.

Responsibilities

That employees use safe working procedures when working with machinery - Senior Technician, Line Managers.

To ensure that machinery gets regular statutory checks and maintenance - Mechanic.

To ensure contractors are aware of any hazards that may exist concerning machinery – supervisor, safety officer

For ensuring that operators and technician have appropriate training and qualifications – Supervisor, Line Managers.

General

1. Part of any installation of machines will be to ensure that the layout of any cables or pipelines will not present a tripping hazard and will provide overhead clearance.
2. The lighting, natural or artificial, will be sufficient to allow safe working of the machine.
3. All machines should be arranged in the workplace in a safe layout including storage of hand held equipment.
4. Part of any installation of machines will be to ensure that the layout of any cables or pipelines will not present a tripping hazard and will provide overhead clearance.

HSE-MS	MAINTENANCE Machinery Safety at Warehouse	DBSB-HSE-07-05	
		Rev.02	2014

**Workplace
Machinery**

(a) GUARDING

- 1.1 All "prime movers" and "transmission machinery" are assumed at law to be dangerous and as such must be securely guarded.
- 1.2 Fixed guards should be of robust construction, securely attached, not removable without the use of tools and allowing a clear view of the work area.
- 1.3 Movable guards should have an interlocking device to prevent moving parts starting up while the guard is out of position, with no moving parts accessible to the operator while the guard is in position.
- 1.4 The guards must be checked and regularly maintained.
- 1.5 No such machine should be operated without the guards in place or where the guards are insecurely fixed.

(b) TRAINING AND SUPERVISION

- 1.1 Operating procedures for all machines will cover aspects of safe working.
- 1.2 Copies of safe working practices for all machines will be available within the department / beside each machine.
- 1.3 No untrained person will be allowed to set a machine.
- 1.4 No unauthorised person will interfere with any machine guard.

(c) MAINTENANCE AND REPAIR

- 1.5 The manager responsible will ensure that machines will be maintained in a safe working condition and that any breakdowns will be reported and attended as soon as possible.

HSE-MS	MAINTENANCE Pressure Testing	DBSB-HSE-07-06	
		Rev.02	2014

Subject Pressure Testing

Reason for testing The reason for testing must be clear in order that a proper test can be completed. Technical data such as operating pressure, maximum allowable pressure, equipment wall thickness and etc must clearly define beforehand.

Function test Function testing is to ensure the equipment function as designed or set.

Method of pressure testing There are two methods of pressure testing:

Hydrostatic testing Hydrostatic testing is the use of water as test medium. Generally water is considered to be incompressible but in long section of lubricators / pipe line / BOP, the compressibility of water needs to be taken into account. Water is the safest medium for pressure testing so long as the added weight of the water does not exceed the strength of the equipment structure.

Pneumatic pressure testing Pneumatic testing is by far the more dangerous due to the energies contained within the compressed gas and should be avoided whenever possible. Should the equipment fail during the test, the energy stored in the compressed gas will hurl parts of the equipment outwards with explosive force.

Pressure testing consideration There are several general or basic consideration while conducting pressure testing:

General guide Pressure testing for equipment within workshop or warehouse should be conducted in an enclosed walled testing bay.

Engineering calculation Stress calculation must be done and completed by a competent or authorized person to ensure that the burst pressure of equipment is not exceed during the pressure test.

Maximum allowable operating pressure Maximum allowable operating pressure differs from equipment to another.
Please refer to equipment rating before conducting any pressure test.

Recording the test A chart type recorder must be used to record the pressure test.

Duration of the test The duration of pressure test can be vary as required by standards.

HSE-MS	MAINTENANCE Pressure Testing	DBSB-HSE-07-06	
		Rev.02	2014

PPE Personnel must wear complete and correct appropriate PPE when handling or using compressed gas cylinder and its associated equipment.

Refer to DBSB-HSE-01 (Personal Safety) & DBSB-HSE-02 (Personal Protective Equipment) for details.

Refer to Client's Regulations/Rules/Requirements for details.

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Safety precaution needed to contain or eliminate potential hazards associated with each phase of the operation has to be understood and implemented. Issues which may arise in this meeting are to be resolved before actual work can proceed.

Refer to DBSB-HSE-03-01(Job Safety Analysis) for details.

Permit to Work (PTW) Permit to work must be obtained and duly authorized by OIC responsible for site before any work can proceed.

DB site representative has to discuss with client's supervisor regarding next job plan and prepare the work permit application. He has to submit a completed work permit form to the line supervisor and make sure it is ready for presentation during the daily coordination meeting. Permit to work application form is obtained from the client.

Refer to DBSB-HSE-03-02 (Overview of PTW) for details.