

PETRONAS TECHNICAL STANDARDS HEALTH, SAFETY AND ENVIRONMENT

RECOMMENDATION FOR ELECTRICAL SAFETY (STANDARD)

PTS 60.2102

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RECOMMENDATIONS FOR ELECTRICAL SAFETY DOCUMENT

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PREFACE

This document serves as a guideline for the Energy Isolation and De Isolation of Electrical Equipment and Working on Electrical Equipment in PETRONAS offshore production platforms and onshore processing facilities.

Also covers are the precautions while working on electrical circuit and the use of portable (hand held) electrical apparatus.

Greater understanding and attention needs to be given to the management of Energy Isolation and De Isolation of Electrical Equipment in PETRONAS installations in order to safeguard PETRONAS interest against any potential HSE threat that may result in damage to property or injury/loss of life.

HSE requirements mandate the compliance to the latest Malaysian statutory requirements ie Electricity Acts 447 and Electricity Regulations pertaining to Energy Isolation and De Isolation of Electrical Equipment.

Where there is conflict between this Recommendations to the Act and Regulations, the Act and Regulations will take precedence.

1.0 INTRODUCTION

The purpose of these "Recommendations for Electrical Safety" is to provide Operating Units with a comprehensive set of principles upon which policies, procedures and practices may be based for the promotion of electrical safety in their organization. These Recommendations seek to make available knowledge and experience acquired in a variety of operations. They are intended to contribute to the high level of knowledge and experience which is needed to ensure safety in the operations of power systems and in the execution of work on or near electrical equipment.

As it is impossible to cover all situations in detail, some of the recommendations are given in the form of checklists, while other recommendations merely aim to describe the skeleton for recommended procedures; certain recommendations are accompanied by explanatory notes. Should further information be sought in relation to a specific situation, then this can be obtained through the normal channels.

Definition of the proper policies, procedures and practices is a responsibility of the Management of each of the Operating Units, taking due account of all relevant operational, organizational and regulatory requirements. Accordingly, these Recommendations are in no way to be interpreted as other than advisory in nature, unless and until adopted by that Management for application within its own sphere of authority. In considering electrical safety, it should always be clear to all concerned that a mishap could result in death; complacency should not be permitted to seep in.

The issuance of these new Recommendations for Electrical Safety may give occasion to the Management's of the Operating Units to review their own electrical safety management, using the Recommendations as a yardstick against which existing policies, procedures and practices can be assessed.

2.0 DEFINITIONS

For the purpose of these Recommendations the following definitions shall apply

1. **Approved Equipment**

A type of equipment approved by Management for use in the Operating Unit.

2. **Caution Notice**

A notice attached to electrical equipment and/or its controls conveying a warning against interference with such equipment.

3. **Danger**

Danger to health or danger to life or limb or asset from shock, burns or other injury to persons.

4. **Danger Notice**

A notice attached to electrical equipment calling attention to the danger of approach to, or interference with, the equipment.

5. **Dead**

Equipment at or about zero potential and disconnected from any live power system.

6. **Distribution of electrical energy (IEC 50.25.05.025)***

The conveying of electrical energy to points of consumption.

7. **Earthed**

Connection to the general mass of earth in such a manner as will ensure at all times that the body being earthed discharges immediately any electrical energy stored in it and furthermore is maintained at a safe potential with respect to the general mass of earth.

8. **Electrical Equipment (IEC 50-25.05.045)**

The electrical machines, apparatus and circuits forming part of an electrical installation of a power system.

Note: Portable and hand-held equipment, supplied via a plug/socket combination, are not considered to form part of the electrical installation.

9. **Electrical Equipment – High Voltage**

Any electrical equipment which is normally operated at a voltage exceeding 1,000 volts.

10. **Electrical Equipment – Low Voltage**

Any electrical equipment which is normally operated at a voltage not exceeding 1,000 volts.

11. **Electrical Equipment - Open Type (IEC 50-15.10.030)**

Electrical equipment in which live parts can be touched.