

PETRONAS TECHNICAL STANDARDS

HEALTH, SAFETY & ENVIRONMENT

GUIDELINE FOR MANAGEMENT OF WORKERS WITH BURN INJURIES

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This new PTS 60.1501.05 - GUIDELINE FOR MANAGEMENT OF WORKERS WITH BURN INJURIES has been developed to provide guidance for the emergency management of workers in PETRONAS who may suffer burn injuries

This PTS also includes PETRONAS Lessons Learnt and PETRONAS Best Practice for the subject matter GUIDELINE FOR MANAGEMENT OF WORKERS WITH BURN INJURIES (PTS 60.1501.05).

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PREFACE

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1.0 INTRODUCTION

One of the most painful injuries that one can ever experience is a burn injury. When a burn occurs to the skin, nerve endings are damaged causing intense feeling of pain.

Serious burns are complex injuries. In addition to the burn injury itself, a number of other functions may be affected. Burn injuries can affect muscle, bones, nerves, and blood vessels. The respiratory system can be damaged, with possible airway obstruction, respiratory failure and respiratory arrest. Since burns injure the skin, they impair the body's normal fluid/electrolyte balance, body temperature, body thermal regulation, joint function, manual dexterity, and physical appearance. In addition to the physical damage caused by burns, patients may also suffer emotional and psychological problems that begin at the emergency scene and could last a long time.

2.0 OBJECTIVE

This guideline provides guidance for the emergency management of workers in PETRONAS who may suffer burn injuries.

3.0 SCOPE

This guideline is applicable to all PETRONAS employees (permanent and contract) and contractors working in PETRONAS facilities.

4.0 DEFINITION

Attending Doctor

The doctor treating/managing the patient.

PETRONAS Health Adviser

Registered Medical Practitioners employed (permanent or direct hire contract) by PETRONAS to provide advisory services on medical and health related matters.

Medevac

"MEDEVAC" is a medical evacuation activity made, due either to illness or injury, where "Life or Limb" is at risk. It entails evacuation of the injured personnel from the Emergency Site in order to prevent death or serious damage to a person's health.

Transportation of casualties or patients will always be effected by the quickest practical means, appropriate to the medical requirement, usually by an aircraft. It has priority over all other categories of flights.

5.0 REFERENCES

- KIPC Crisis and Emergency Management Manual; April 2008
- PPMSB HSE-MS 20310 Sending Injured Person to Clinic or Medical Institution
- MLNG Emergency Response Manual- ERP Section 10.0

6.0 BURN INJURIES

6.1 Types of Burns

- Thermal - including flame, radiation or excessive heat from fire, steam and hot liquids and hot objects. Cold burns from liquid nitrogen, liquid LNG etc.
- Chemical - including various acids, bases and caustics
- Electrical – including electrical current and lightning
- Light – burns caused by intense light sources or ultraviolet light which includes sunlight
- Radiation – such as from nuclear sources. Ultraviolet light is also a source of radiation burns

6.2 Classification of Burns

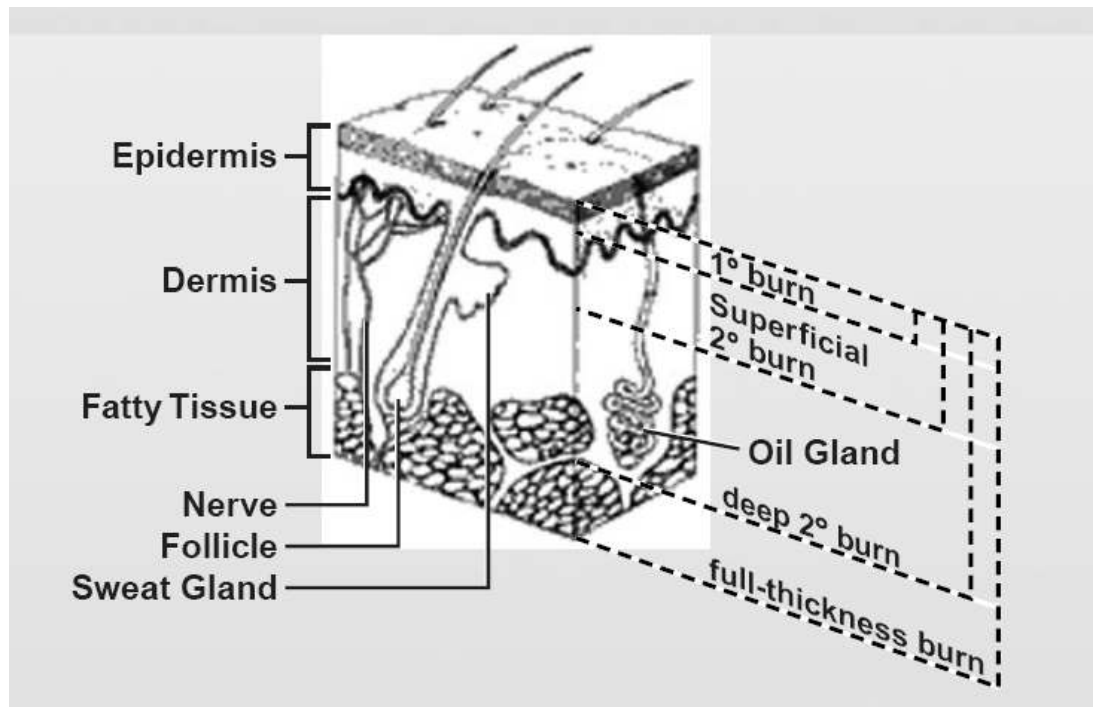


Fig 1: Degrees of Burns

The following are degrees of burns and their principal characteristics:

- **First degree burns** are superficial injuries that involve only the epidermis and outer layers of the skin. They are the most common and the most minor of all burns. The skin is reddened and extremely painful. The burn will heal on its own without scarring within two to five days. There may be peeling of the skin and some temporary discoloration.
- **Second degree burns** occur when the first layer of skin is burned through and the second layer, the dermal layer, is damaged but the burn does not pass through to the underlying tissues. The skin appears moist and there will be deep intense pain, reddening, blisters and a mottled appearance to the skin. Second degree burns are considered minor if they involve less than 15 percent of the body surface in the adults and less than 10 percent in children. When treated with reasonable care, second degree burns will heal themselves and produce very little scarring. Healing is usually complete within three weeks.