THERMAL STRESS PROCEDURE

TNCL-OHS-SOP-0023

APPROVALS

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1. INTRODUCTION

TNCL is dedicated to safeguarding the well-being of its employees by implementing a zero-harm policy. This policy aligns with TNCL's core values of safety, respect, honesty, and integrity, which form an integral part of the company culture.

The harmful effects of temperature variation in the workplace on both health and performance often go unrecognized. Temperature has both physiological and psychological effects on workers. Physiologically, both the central and peripheral nervous systems will function less efficiently at temperatures outside a fairly narrow optimal range; ill health can arise due to an increase or decrease in body temperature, and in extreme cases, this can be fatal. Performance can be affected by temperature's impact on dexterity (in the cold), concentration, and mood.

This guide aims to identify and manage the extremes of the thermal environment as the physical risk factors at both the Kabanga site and Kahama refinery.

2. DEFINITION AND ACRONYMS

Table 1: Definitions and Acronyms

Terms	Definition
GM	General Manager
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Authority
TNCL	Tembo Nickel Corporation Ltd
VDU	Video Display Unit
WBGT	Wet Bulb Globe Thermometer

3. RESPONSIBILITIES

3.1 Site General Manager (GM)

The role of the general manager is to ensure that the required funding is available to implement this program.

3.2 Occupational Health and Safety Manager (OHS)

a) The Occupational Health and Safety Manager will be the overall foresee of the program.
b) To support the TNCL Thermal Stress Management guidelines technically and administratively.

3.3 Occupational Health Lead

a) To ensure the program is operational and sustainable.
b) Conduct Hazard Identification and Risk Assessment (HIRA) onsite.
c) Develop, implement and review the Thermal stress management guidelines
d) Be available to answer the employer or employees' questions or concerns about the program.

3.4 Employees shall

a) Follow the requirements of the Thermal stress management guidelines.
b) Providing information to the onsite medical team as soon as reasonably practicable whenever they identify any hazards related to thermal stress.
c) Notify the medical team when they have symptoms related to heat disorders/

4. PROCEDURE

4.1 Scope

This procedure shall apply to all TNCL employees and contractors at the Kabanga site and Kahama refinery.

4.2 Purpose

This document aims to guide how to manage extreme temperatures as physical risk factors. It will provide a guide to both the employer and the employees on how to identify, assess, and manage workplaces with extreme temperatures.

4.3 Legislative framework

Under the Constitution of the Republic of Tanzania (CAP2), section 14 states every person has the right to live and the protection of his life by society in accordance with the law. To further ensure every person has the right to live in the working environment, the Occupational Health and Safety Act, No. 5 of 2003, requires employers to ensure the workplace is safe and healthy for the employees. It is further a requirement that the employer is required to ensure that all workplace risks are prevented or, if not practicable, must be sufficiently controlled.

The Occupational Health and Safety Act, under the Environmental Regulations, has set the ceiling temperature for employees performing heavy manual activities. The wet bulb globe temperature limit for heavy to extreme manual handling is 25.50C to 24.50C degrees, respectively. The ceiling temperature for light-duty activities is 31^{0}C degrees.

4.4 The Basics of Thermal Environment

4.4.1 Background

The human body controls internal body temperature core temperature at a very narrow range, about 370C ± 1.5 0C. Above or below that range, human health can be extremely affected. There is a difference between the skin temperature and core body temperature. Depending on the environment, skin temperature can range from 8^{0}C to 45^{0}C.

The skin temperature can be measured at different sites of the body, the most common of which is the axillary temperature. The core body temperature can be measured at different parts of the body depending on the available equipment, scenario and acceptability. These sites are the aural, tympanic membrane, and gastrointestinal and rectal temperatures.

The extremes of temperatures are divided into two main categories: high thermal environments and cold environments. The definitions of these environmental conditions are legislative and differ from one country to another. For Tanzania, a High thermal environment for heavy manual or extremely heavy manual activities, the limit ranges from 24.5^{0}C to 25.5^{0}C using the Wet bulb Globe Temperature Index, respectively. For the light work activities, the limit is 31.0^{0}C. At Tembo Nickel, the high thermal environment limit will be 24.5^{0}C WBGT, which will average over an hour for heavy manual handling and any work in confined or underground mining. For those doing light works in an open cast environment, the limit will be 31.0^{0}C WBGT, which will average over an hour period. For those who will be working in cold environments (Freezers), the dry bulb temperature averaged over four hours limit will be

6^0C. Otherwise, the control measures must be in place to allow the employee to work safely. For those who will be working in the underground mining, a wind chill index of less than ten degrees Celsius will be the limit (however, at Tembo Nickel, this is not applicable as we expect the extremely high heat in the underground mining).

The human body reacts differently depending on the thermal environment. The physiological response of high thermal environments includes:

a) Vasodilation

Widening of the blood vessels, increasing surface area. The blood vessels become closer to the skin surface to allow heat dissipation.

b) Sweating

When the body temperature rises, sweat is secreted over the body to allow cooling by the process of evaporation.

c) Electrolyte changes

Heavy and prolonged sweating brings large volumes of body water and electrolytes (principally sodium) to the skin surface.

d) Dehydration

While sweating is a natural process of the body to control temperature, it presents a problem in that it sacrifices body fluid to cool the skin's surface.

e) Heart Rate increases (Tachycardia)

When the core body temperature increases, the cardiovascular system must now also (in addition to providing oxygenated blood to the organs) remove heat.

To achieve this, blood flow to the skin is increased at the expense of the less critical organs, and the increased circulatory strain causes a corresponding increase in heart rate.

f) Respiratory rate increases (Tachypnoea)

Respiration provides a pathway by which heat can be lost to the atmosphere. This heat loss is due to the evaporation of moisture in the respiratory tract.

The physiological response of Cold environments includes:

a) Vasoconstriction

When the body senses that it is getting cold, the process of vasoconstriction is activated so as to reduce heat loss.

b) Shivering

The process of shivering is designed to increase the metabolic heat production within the body as an offset against a drop in core temperature.

c) Piloerection

Piloerection (also known colloquially as "goose bumps") is the condition which occurs when the skin becomes cold and, in an attempt to reduce heat loss, the hairs of the body "stand on end" so as to maintain a layer of still air between the body and the environment.

d) Cold Diuresis

One side effect of vasoconstriction is that of cold diuresis, whereby the constriction of all skin blood vessels forces a large amount of blood to the body's core. This causes a rapid increase in blood pressure, and to compensate, the kidneys quickly remove fluid from the bloodstream so as to stabilise blood pressure. The effect of these changes is the resultant need to urinate.

e) Respiration

Cold may cause bronchospasms and adversely affect physical work performance, and, in some people, may lead to exercise-induced asthma.

f) Dehydration

Water loss via the respiratory tract but from the skin and cold diuresis can cause dehydration.

g) Psychological

Studies have demonstrated that persons working in cold areas suffer incidences of boredom, weariness, bad temper, anxiety and disturbances of mood and self-confidence.

4.4.2 Health-Related effects of High Thermal environment

The acute effects of high thermal environment (Heat strain)

a) Heat Stroke

The disease of a medical emergency after the failure of thermoregulatory mechanisms. The most serious illness of heat. The victim will suffer from Increased core body temperature > 41 ^{0}C, altered mental status, conclusion and loss of consciousness.

b) Heat Exhaustion

Heat exhaustion, while serious, is initially a less severe illness than heat stroke, although it can become a preliminary to heat stroke. Heat exhaustion is generally characterised by clammy, moist skin, weakness or extreme fatigue, nausea, headache, no excessive increase in body temperature, and low blood pressure with a weak pulse. Without prompt treatment, collapse is inevitable.

c) Heat Syncope

Exposure of fluid-deficient persons to hot environmental conditions can cause a major shift in the body's remaining blood supply to the skin vessels in an attempt to dissipate the heat load. This ultimately results in an insufficient supply of blood being delivered to the brain (lower blood pressure) and, consequently, fainting.

d) Heat Cramps

Heat cramps are characterised by painful spasms in one or more skeletal muscles. Heat cramps may occur in persons who sweat profusely in heat without replacing salt losses or unacclimatised personnel with higher levels of salt in their sweat.

e) Prickly Heat

Heat rashes usually occur as a result of continued exposure to humid heat, with the skin remaining continuously wet from unevaporated sweat. This can often result in blocked glands, itchy skin and reduced sweating.

4.4.3 Health-Related effects of cold environment

a) Hypothermia

I. Mild

II. Moderate

III. Severe

Hypothermia refers to any condition in which the temperature of a body drops below the level required for normal metabolism and/or bodily function to take place. In severe hypothermia, Severe hypothermia, a core body temperature of 30°C – 25.5°C, the victim will experience Severe muscle stiffness, very sleepy or unconscious, Ice-cold skin, and Death might be the outcome.

b) Frostbite

Frostbite is a medical condition whereby damage is caused to the skin and other tissues due to extreme cold. At or below 0°, core temperature may be reduced, and blood vessels close to the skin start to narrow (constrict), thus helping to preserve the core body temperature. In extreme cold or when the body is exposed to cold for long periods, and the core temperature is reduced, this protective strategy can reduce blood flow in some areas of the body to dangerously low levels. The combination of cold temperatures and poor blood flow can cause severe tissue injury by freezing the tissue.

c) Trench foot

Trench foot or immersion foot, as it is now referred to, is a medical condition caused by prolonged exposure of the feet to damp and cold. It was a particular problem for soldiers engaged in trench warfare during the winter months of World War I, World War II and also during the Vietnam conflict.

Trench foot occurs when feet are cold and damp while wearing constricting footwear. Unlike frostbite, immersion foot does not require freezing temperatures and can occur in temperatures up to 16°C. Immersion foot can occur with only twelve hours of exposure. When affected by immersion foot, the feet become numb, followed by a change in colour to red or blue.

4.4.4 Symptoms and Signs of High Thermal-Related Disorders

Table 2: Symptoms and Signs of High Thermal-Related Disorders

	a) Heat Stroke	Heat Exhaustion	Heat Cramps
Pathophysiology	a) Thermoregulatory failures	a) Volume/Electrolyte depletion	a) Salt deficiency
Symptoms	a) Irritability b) Confusion c) Collapse d) Psychotic behaviour	a) Weakness b) Headache c) Syncope d) Nausea e) Vomiting f) Intense thirst g) Fatigue h) Muscle cramps i) Malaise	a) Painful muscle cramps/spasms b) Weakness c) Nausea d) Vomiting
Objective Findings/Signs	a) Core temperature at or above 40^{0}C b) Altered mental status- bizarre behaviour c) Hot, dry skin d) Coma e) Hypotension/shock f) Seizure g) Tachycardia (Rapid heart rate) h) Cyanosis (Bluish discoloration of mucous membrane) i) Rare	a) Core body temperature at or below 38^{0}C b) Profuse sweating c) Hyperventilation	a) Euthermia (Normal core body temperature)

4.4.5 Symptoms and Signs of Cold Environment Disorders

a) A table showing different health symptoms and signs of hypothermia

Core temperature	Effects
Below 35°C	muscle weakness becomes evident
Below 34°C	confusion and visual errors
Below 33°C	temperature regulation fails and body temperature falls rapidly
Below 32°C	consciousness becomes clouded
At 30°C	deep unconsciousness occurs
28°C – 25°C	death may occur, due to ventricular fibrillation.

Other symptoms and signs include:

b) Behavioural change- It may be manifest at first by inertia and withdrawal or occasionally by an unusual amount of self-confidence. As the condition progresses, there may be bizarre behaviour – perhaps overt aggression or, at the other extreme, total remoteness.

c) Local injury to the skin- including – Blueish/Reddish discolouration of the feet, numbness, etc

4.4.6 Factors Affecting Body Temperature

The body's temperature is affected by six parameters: four are environmental, and two are individual. The six parameters are:

a) Air temperature
b) Humidity
c) Radiant heat (mean value or localised source);
d) Air velocity
e) Clothing (insulation, coverage, reflectivity); and
f) Metabolic heat production (which is dependent on activity).

Air temperature

Air temperature affects heat gain/loss by convection and evaporation.

Humidity

Humidity is the water content in the air. It affects heat loss by evaporation; limited heat loss will occur in very humid environments.

Radiant temperature

The radiant temperature will affect the heat gained or lost by radiation. Sources of radiant heat include furnaces, the sun, or chiller cabinets.

Air velocity

The movement of air over the body will affect heat loss by convection and evaporation.

Clothing

Clothing can both insulate (and help retain body heat) and affect the evaporation of sweat. This may be detrimental because it inhibits convective and radiant heat loss from the skin and the evaporation of sweat, but in extreme heat, it can be beneficial by reducing convective and radiant heat gain from the environment.

Metabolic heat production

Metabolic heat is constantly produced by the body. The rate of production varies with physical activity and can be measured or estimated.

Table 3: Metabolic Heat Production

Metabolic rate class	**Typical metabolic rate per unit area of body surface Wm^{-2}***	**Examples of typical industrial activities**
0-Resting	=<65	Resting
1-Low metabolic rate	100	Sitting or standing; inspecting / monitoring hot processes; walking in easily accessible areas; very light assembly operations; light control operations (buttons etc).
2-Moderate metabolic rate	165	Carrying or stacking light items; operating heavy controls (e.g. opening valves); cleaning or clearing light debris, spillages etc; walking in confined areas (e.g. limited headroom); heavy welding.
3-High metabolic rate	230	Intense arm and trunk work; pushing or pulling heavily loaded cages or pallet trucks; heavy manual handling; clearing heavy debris (e.g. cleaning and relining reactor vessels).
4-Very high metabolic rate**	290	Very intense activities at fast to medium pace (e.g. intense shovelling); heavy assembly or building work; climbing stairs or ladders rapidly. Work in this category can rarely be sustained for long periods without a break.

*The total rate of heat production, in watts, is calculated by multiplying the metabolic rate in watts per square metre by the total body surface area in square metres. The typical body surface area for a man is usually taken to be $1.8m^2$, so his total rate of heat production can be obtained by multiplying his metabolic rate by 1.8. There is limited variation in body surface area for men, and this value can be taken as an adequate approximation. For women the body surface area is approximately $1.6m^2$.

**A very high metabolic rate is difficult to sustain for long periods and workers are likely to reduce their work rate to take account of this (i.e. they will pace themselves). Therefore, in undertaking an assessment, it is necessary to determine the time weighted average metabolic rate for the work situation (see BS EN ISO 8996).

4.4.7 Heat Balance Mechanism

Given that there is a physiological requirement that the body should maintain its core temperature around 37°C, this leads to the conclusion that there is a heat balance between the body and its environment. This is to say that, on average, heat transfer into the body and heat generation within the body must be balanced by heat outputs from the body.

The human heat balance equation can be presented in many forms; however, all equations involve the following heat processes, i.e.:

a) Heat generation in the body
b) Heat transfer
c) Heat storage

One means is to represent the human heat balance equation as:

M – W = E ± R ± C ± K ± S

Where:

M = Rate of metabolic heat production

W = External work performed by or on the body

E = Heat exchange via evaporation

R = Heat exchange via radiation

C = Heat exchange via convection

K = Heat exchange via conduction

S = Rate of heat storage (heat gained or lost by the body)

Note: **M - W** is always positive

E, R, C, K, S (positive value is heat loss, negative value is heat gain)

This equation can be re-written as:

M + W + K + C + R – E = S

4.4.8 Sources of Thermal Stresses at Kabanga and Kahama Refinery

High Thermal stress:

a) Underground Mining- (radiant heat from the rocks)
b) Radiant heat from the sun (i.e. During the outdoor drilling activities)
c) Radiant heat from the steam pipes (Kahama Refinery- Oxidation plant)
d) Some offices, i.e. environmental office – due to poor ventilation

Cold stress:

a) Freezers and chillers in the Main kitchen

4.4.9 Management of High Thermal stress at work

Hazards Identification and Risk Assessment:

a) The first step to controlling worker exposure to heat is to understand the particular thermal environment to which they are exposed.
b) Identifying the heat sources and location.
c) Characterising the nature of the thermal environment (e.g. radiant heat, high air temperatures, high/low humidity) and
d) Understanding the nature of the work and clothing worn.

Control Measures:

Where it is not possible to prevent workers from being exposed to heat stress, there are four basic approaches to controlling thermal environment problems:

a) Eliminating or isolating the heat sources;
b) Engineering controls to modify the thermal environment;
c) Administrative controls;
d) Personal protection.

The above order constitutes a 'hierarchy of control'. However, in practice, a combination of different measures will normally be appropriate to minimise the risk from heat stress.

Based on the activities that will be conducted, eliminating, or isolating the heat source will not be reasonably practicable; therefore, engineering control will be the first measure that will be applied in the hierarchy of controls.

Engineering controls:

Underground Mining at Kabanga.

a) Proper Mine planning.
   I. Proper planning will provide for conveniently available cool rest areas and allow workers rest time to cool off.
b) Sufficient ventilation.
   I. The ventilation system will remove the hot air and contaminated air and supply the fresh air.
c) Air conditioning may reduce heat to acceptable levels.
   I. Air conditioning systems are important for cooling the fresh air which is supplied.

Geology exploration (open case drilling including boreholes) at Kabanga.

a) Building Mobile Refugee huts, which will have a cooling mechanism.

Kahama Refinery

a) Ensure that most of the processes in the oxygen plant are automated to reduce human interphase and, therefore, heat exposure.
b) Ensuring all steam pipes are effectively and sufficiently insulated.

Administrative controls:

For both Kahama and Kabanga Refinery

a) Work organisation.
b) Acclimatisation.
c) Water provision.
d) Diet
e) Medical supervision.
f) Buddy system.
g) Information, instruction, training.

Worker organisation

a) Short periods of heat exposure with long cooling-off rest periods are, therefore, the normal mode of operation.
b) The important parameter is the body core temperature, which should not be allowed to rise significantly above 38ºC. It can be dangerous to allow the core temperature to rise above 39ºC.
c) Workers should be able to, and be encouraged to, self-pace, i.e. the work rate should not dictate the speed at which they work. This is particularly important for inexperienced or unacclimatised workers.

Acclimatisation

Understanding that the majority of the employees will be in the roster system, putting in place an acclimatisation system will not be practised as it will take a minimum of six to ten days to achieve acclimatisation. However, it can be fully lost during the breaks. Therefore, acclimatisation will be inferred once the employee passes the heat stress tolerance test.

Water provision.

a) The state of hydration is an important determinant of the physiological response to heat strain.
b) Those who are to be exposed to heat should be aware of this and the need to maintain good hydration, including the ingestion of fluids shortly before exposure to elevated temperature and the avoidance of significant dehydration prior to attending work (for example, through the consumption of excessive alcohol)
c) Working in a hot environment inevitably leads to a significant loss of water and salt due to perspiration.
d) Consequently, workers operating in hot conditions will be provided with plenty of freely available cool drinking water or other suitable (non-alcoholic) drinks.

Diet

a) An excessively high protein diet should be avoided since this increases the obligatory urine output for nitrogen removal and thus increases water intake.
b) Employees will be provided with sucrose at mid-shift, which has been shown to be of metabolic benefit and assist in the prevention of large water deficits.
c) Sports drinks, containing carbohydrates and electrolytes, can greatly improve physical performance in subsequent work periods. Therefore, whenever reasonably practicable, the selected employees, based on the risk profile, will be provided with the drink.

Medical supervision

a) All employees who will be working in a high thermal environment will be under medical surveillance.
b) The employee who will be working in the underground mining at the Kabanga site will undergo Heat Tolerance Screening tests at entry and periodically.

Buddy system

A buddy system will be implemented (where workers keep an eye out for the state of health of their colleagues); this is very beneficial since one of the effects of heat strain is confusion and poor judgment.

Information, Instruction, and Training

Everyone working in a high thermal environment needs to be made aware of the consequences of severe heat exposure. Training will include information on:

a) Recognition of the early symptoms of the onset of heat stress, both in themselves and in colleagues.
b) The first aid treatment of heat stroke and milder forms of heat strain: the guiding rule should be, 'When in doubt, treat every suspicious case for heat stroke'.
c) Appropriate behaviour in the heat, e.g. self-pacing during regular work, and also in unpredictable situations such as mechanical breakdowns to the cooling or air-conditioning.

d) The importance of appropriate hydration (i.e. drinking before exposure to the heat and regularly during and after the exposure), avoiding alcohol prior to exposure, and a suitable diet.
e) The lifestyle factors that mitigate against undertaking hot work.
f) Health conditions or minor illnesses may predispose them to an increased risk of heat strain. They should be aware of who to report these to and the advisability of not being exposed to hot conditions in these circumstances.
g) There is a need to follow local procedures (e.g., work/rest regimes) and use proper protective equipment.
h) Above all, workers should appreciate the wisdom of the old adage: "Prevention is better than cure".

Personal protection

As with all other occupational health and safety problems, personal protection of workers will be a last resort, i.e. where it is not possible to control exposure to heat by other means. However, in extreme conditions, the workers will inevitably have to wear special clothing with a high degree of insulation (Firefighters when combating fire).

When selecting protective clothing, a number of factors will be considered:

a) Worker acceptability.
b) Insulation.
c) Reflectivity.
d) Cooling.
e) Face protection.
f) Protective footwear.
g) Respiratory protection.
h) Regulatory requirements.

4.4.10 The management of cold stress at work

The management principles of a high thermal environment will also apply, except:

a) A Heat Tolerance Screening test will not be done as it is not applicable.
b) The concept of acclimatisation is not applicable.

The following will be the guidance and actions that must be taken based on the cold stress:

Temperature °C	Maximum exposure
0° to -18°	No limit.
Lower than -18° but not lower than -34° degrees	Maximum continuous exposure during each hour = 50 minutes. After every exposure in a low-temperature area at least 10 minutes must be spent, under supervisions, in a comfortably warm environment.
Lower than -34° but not lower lower than -57°	Two periods of 30 minutes each, at least 4 hours apart. Total low- temperature exposure: 1 hour per day.
Lower than -57°	Maximum permissible exposure = 5 minutes during any 8-hour period.

The employee will provide with the following protective clothing:

a) A nylon freezer suit or equivalent and, where the said temperature is below -34°C, such suit or equivalent shall be of double layer.
b) A woolen Balaclava or equivalent.
c) Fur-lined leather gloves or equivalent.
d) Waterproof outer gloves with knitted woolen or equivalent inners as well as a waterproof apron where wet or thawing substances are handled.
e) Woolen socks and
f) Waterproof industrial boots or equivalent
g) Provided that an employee who works in a low-temperature area in which the temperature is not lower than - 18°C for periods not exceeding five minutes in
h) every hour need only be provided with an ordinary overall, gloves, shoes, or equivalent.

4.4.11 The evaluation/measurement of the thermal environment at the workplace.

a) The Wet Bulb Globe Thermometer (WBGT) will be the thermal stress index that will be used both at the Kabanga and Kahama refineries.
b) The WBGT combines the effects of the four main thermal components affecting heat stress: air temperature, humidity, air velocity and radiation as measured by the dry bulb, natural wet bulb, and globe temperatures.

The WBGT values are calculated from one of the following equations:

With direct exposure to sunlight

WBGTout = 0.7 NWB + 0.2 GT + 0.1 DB

Without direct exposure to the sun

WBGTin = 0.7 NWB + 0.3 GT

Where:

NWB = Natural wet bulb temperature

GT = Globe temperature

DB = Dry bulb (air) temperature

Figure 1: Wet bulb Globe Thermometer

5. SYSTEM EVALUATION

This procedure shall be reviewed at least two years by members of the OHS department and presented to the Standard Committee for approval or when organisational changes take place or are required as part of internal and external audits. The TNCL Document Controller will monitor compliance with the document control system on an ongoing basis.

6. DISTRIBUTION

List physical locations which require a controlled copy of this document.

Copy	Controlled Document Folder Location
Master	Controlled Documents Central Filing System

7. CONTRAVENTION

Any breach of this procedure shall be regarded as refusal/failure to carry out a lawful instruction and will be dealt with as per the disciplinary procedure.

8. DOCUMENT CHANGE PROCESS

The process of document change starts when the document custodian identifies there is a need to make changes within the document. The document custodian/ owner shall complete the document change request form, sign it off and submit it to the Document Controller.

The Document controller shall issue the controlled word copy of the document to the respective document custodian/owner so that changes may be made. The document custodian/owner shall resubmit the updated document to the document controller so that the document can be controlled and updated within the filing system and ready for use by the end users.

8.1 Reason for Change

A	As a result of incidents	F	Change in training requirements
B	As a result of the audit findings	G	Results of risk assessments
C	New / changes in governance documents	H	Change due to spelling or grammatical error
D	Changes in legislation	I	New document format
E	Changes in technology	J	To integrate special instruction into the document control system

8.2 History of Change

Date of Change	Revision No	Revised Item (paragraph Number reference if required)	Reason Code	Name of Reviewer

9. RECORD CONTROL

Document Title:	Document ID:	Responsible for Maintenance:	Responsible for Filling:	Location of Storage:	Retention Period:	Method of Disposal:
Thermal Stress Procedure	TNCL-OHS-SOP-0023	Document Controller	Document Controller	OHS Department	Hard Copy two Years	Hard copy shared file electronic

10. DECLARATION

I, at this moment, declare that I have taken part in the discussion of this procedure, and I understand its contents and do commit that I shall ensure compliance hereto:

	Name and Surname	Company Number	Designation / Role	Signature	Date Signed
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