



HSE BULLETIN

Issue 23, July 2019

BEAT THE HEAT (Working In Hot Environment)

Hot thermal environment is where heat exposure limits are exceeded and require specific measures to control the work environment. These heat exposure limits can be exceeded in both internal and external to a confined space. When a person works in a hot environment, the body must reduce excess heat. If the body cannot dispose-off excess heat, it will store it, causing core body temperature to rise. Excessive exposure to heat can cause a range of heat-related illnesses, including heat exhaustion and heat stroke and may even lead to fatality.

Thermal Work Limit (TWL): A Thermal Work Limit (TWL) is an index of heat stress that gives a measure of safe work rates based on existing environmental conditions (temperature, humidity, wind speed, etc.).



Wet Bulb Globe Thermometer(WBGT)

Control Interventions, Rest-Work and Rehydration Schedules

Working Zones	Interventions	Rehydration Schedule (per hr)	Work-rest Schedule (minutes)
Low Risk Unrestricted Zone TWL: 140 - 220 <	No limits on self-paced work ^a for educated, hydrated workers.	Light Work 600 ml - 1 Litre / hr	Safe for all continuous self-paced work ^a
Medium Risk Cautionary Zone TWL: 115 - 140	Cautionary zone indicates situations in which environmental conditions require additional precautions. <ul style="list-style-type: none"> Practicable Engineering control measures to reduce heat stress should be implemented e.g. provide shade, improve ventilation etc. Working alone to be avoided No unacclimatised person to work^b Ensure adequate fluid intakes appropriate for type of work 	Light Work 1 -1.2 Litres / hr Heavy Work > 1.2 Litres / hr [*]	Safe for continuous self-paced light work ^a Continuous paced work 45 work - 15 rest
High Risk Zone TWL: < 115	<ul style="list-style-type: none"> Strict Work/Rest cycling required No person to work alone No unacclimatised person to work^b High Risk induction required emphasising hydration and identifying signs of heat strain Provide personal water bottle (2 litre capacity) on-site at all times 	All Work >1.2 Litres / hr [*]	Light work ^c 45 work - 15 rest Heavy work ^d 20 work - 40 rest

Hot, tired & fatigued workers

- Reduced accuracy / concentration / focus
- Reduced efficiency
- Workers more susceptible to accident
- Workers more prone to injury

Please Send your answers by email to:

hse@aimsgt.com

Permit to work

- Addresses personnel safety hazards only
- Addresses process safety hazards only
- Addresses components of both personnel safety and process safety hazards
- All of the above
- None of the above

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Last Month HSE Quiz

Answer: Option E

- ✓ Joe David ✓ Muhammad PK
- ✓ Mohammad Wasim ✓ Vijay Kumar
- ✓ Eliyaz Ahmed
- ✓ Anamika Manu
- ✓ Affan Ahmed Juddy
- ✓ Abdul Mannan Sharief

Congratulations!

BE INFORMED

Be watchful for symptoms (self and others). Co-workers should recognize what's happening and intervene.

PPE

Wear appropriate clothing and PPE where applicable. Be aware when using any PPE that prevents sweat from evaporating.