

# Passive cooling of microwave Relay shelter

## Introduction:

This work contains the energy audit and the introduction of cooling system in stand alone microwave relay of wired and wireless communication (Algeria telecom) which is located in neighboring of Ouargla city.

This study lead to reduce the internal temperature in the shelter, based on the installation of radiators system in the shelter.

The extension for studying others sites equipped by different passive cooling systems are planned in order to choose the most efficient technology according to local climate characteristics,

## Problematical:

The shelter is located in remote areas (desert). All electrical appliances and batteries and electronic devices generate heat during the operating time. In order to reduce energy consumption the cooling systems should be operate without electric supply.

## Hypothesis:

The temporary storage of cooling energy in the night is sufficient to decrease the temperature in the day. This decrease can reach the restricted temperature of electronic devices.

## L'objectif:

A study to reduce the internal temperature in the shelter of microwave relay by using passive cooling system.



Figure 1 : shelter Telecom

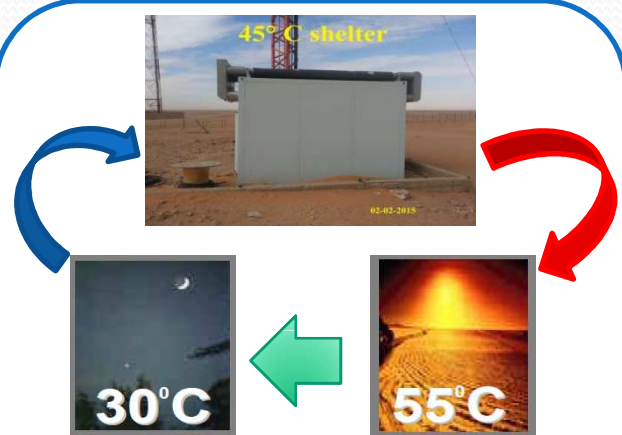


Figure 2: passive cooling application



Figure 3: passive cooling relies