TWIN LAYERED WATERPROOFED INSULATING SYSTEM

Field of the invention

This invention relates to offer thermal protection for structures in a more efficient dual step process as opposed to the multi step process currently used.

Background of the invention

Current technology uses a five independent components in a traditional inverted roof system which is time consuming, inefficient and costly due to the rise in the cost of concrete nation-wide. This invention utilizes only one layer of industry standard preformed waterproof sheet membrane and a proprietary insulating, reflective, protective, thermal or re-radiating coating over properly primed substrates.

Summary of the invention

This invention utilizes an industry standard waterproof sheet membrane which adheres to a substrate and acts as a base coat or layer for the insulating, reflective, protective, thermal or re-radiating coating this replaces the traditional conventional reinforced concrete roof built up system which consists of a waterproofing membrane installed over the structural concrete slab, an insulation layer which is usually a layer of extruded polystyrene insulation board over the membrane, a geo-textile sheet to act as a separation layer and an outermost protective screed layer or concrete paneling.

The insulating, reflective, protective, thermal or re-radiating coating applied onto the industry standard waterproof sheet membrane prevents the transfer of heat through the structural concrete slab by means of re-radiation. Just like a mirror reflecting light away, the insulating, reflective, protective, thermal or re-radiating coating used on the twin layered waterproofed insulating system reflects heat away from the surface and does not allow heat to build up on the surface and transfer inwards to the structure. As such the overall transmitted heat is greatly reduced.

Brief description of the drawing

A preferred embodiment of the present invention will now be described. By way of example only, with reference to the accompanying drawing, please refer to attached.

The dual step thermal insulation is shown in figure 1 comprises structural base 5 with industry standard preformed waterproof sheet membrane 3 with proprietary insulating, reflective, protective, thermal or re-radiating coating 2 which is reflective in nature 1. The industry standard preformed waterproof sheet membrane 3 may conveniently be formed from industry standard bitumen torched on membranes typically comprising of bitumen material heated to melting point to adhere to properly primed surface 4 which is bonded to the structure 5. Alternative application methods of industry standard preformed waterproof sheet membrane 3 include hot air welding, open flame torch or adhesives over a properly primed surface. The thickness of the membrane 3 may be 1mm or less preferably 2mm to 6mm in thickness. The insulating coating 2 is reflective in nature and acts like traditional insulation preventing heat transfer and is applied by any traditional methods such as spraying, airless sprays, compressed air gun or roller brush with a minimum thickness of 250 microns but preferably in the range of 250 microns to 500 microns. This results in a reflective surface 1.

Claims

1. Any waterproofing system that incorporates any type of proprietary insulating, reflective, protective, thermal or re-radiating attributes.
2. Any preformed membrane that is hydrophobic in nature and receives any proprietary insulating, reflective, protective, thermal or re-radiating coating system either before or after the installation of the hydrophobic system.
3. Any system that incorporates both waterproofing performance and proprietary insulating, reflective, protective, thermal or re-radiating coatings to be installed on any timber, tiles, metal or masonry surfaces.