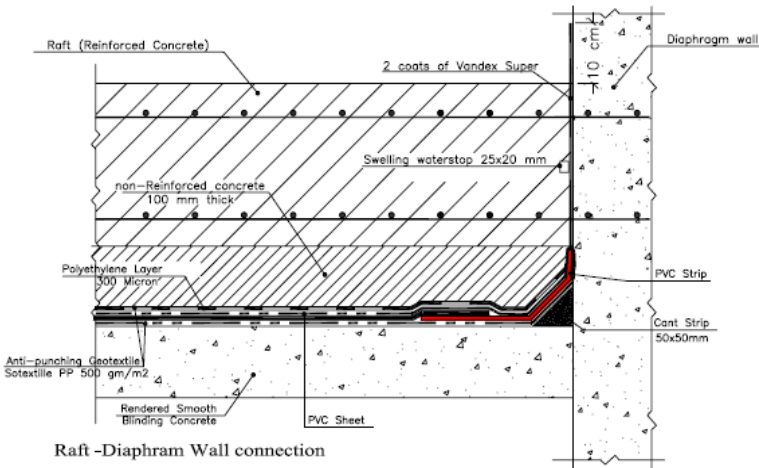




Tahrir Car Park (Raft level) - Egypt

Project Name: Tahrir Park
Scope: Watertightness Works
City: Cairo
Country: Egypt
Main Contractor: The Arab Contractors
Applicator: Sodeco Specialties S.A.E
Construction Period: 2012 -2014
Owner: Tahrir Investment Company (TICO)



Technical Information

Products Used: PVC membrane 2.00mm thick
Geotextile

Areas Treated: 18,000m²

❖ Geotextile Material

- Non woven polypropylene geotextile layer. It is a protection felt used to protect the PVC geomembrane from damage during metal work & backfilling.

❖ PVC membrane

- for horizontal & vertical concrete surface
- Homogeneous, translucent, flexible, polyvinyl chloride (PVC) geomembrane.
- Applications: waterproofing for tunnels, basement structure & tanking works.



The main purpose of watertightness is to keep the raft dry & away from any moisture.

Raft :

Surface Preparation

- Inspect substrate where waterproofing work will be applied
- Make the necessary cleaning removing all dust, loose parts, clean oil, and spillage grease if any.
- In case of sharp edges and irregularities it should be chipped off and all Cavities & rough parts are made good with sand/cement mortar with SBR latex as bonding
- All concrete surfaces must left to dry for a period of at least 7 days (depending on climate condition) prior to the application of waterproofing layers (for curing purpose)



Waterproofing Works

- 1- Bedding concrete layer– 10cm thick of plain concrete to be executed on the horizontal surface plain concrete surface should be smooth and leveled to receive the W.P layers.
- 2- Install a layer of non-woven polypropylene geotextile with a weight of 300gm/m² on the horizontal surface with an overlap of 10 cm.
- 3- The non –woven polypropylene geotextile layer should be fixed mechanically on the vertical surface by means of fasteners.
- 4- The P.V.C membrane shall be installed loosely laid on top of the above areas of geotextile and welded by hot air and double wedge machine with the proper overlap as required by manufacture.
- 5- The P.V.C membrane shall be installed using double automatic welding equipment and a hot air with an overlap of 50mm for manual hot air welding machine and 80mm for double welding machine.
- 6- The P.V.C membrane should be applied vertically by weld with the P.V.C parts located with the fastener.
- 7- P.V.C. external waterstop profile with 30cm width profile will be welded to P.V.C membrane by hot air to divide the horizontal area to compartments.
- 8- The above PVC waterstop profile shall be fixed at borders of compartment in both directions of horizontal areas to divide the surface into compartments of maximum 120 ~ 150m².
- 9- Four PVC injection pipes with a P.V.C thick base to be welded with the P.V.C membrane in each compartment for future injection purpose.
- 10- An upper protection layer of the geotextiles shall be applied on top of P.V.C. membrane with a weight of 300 gm/m².
- 11- For horizontal surface, a protection layer of non-reinforced concrete with 75mm thick should be applied on top of the geotextile layer.

