RBI Greenfield Data Centre & Training Institute – Bhubaneshwar, Odisha

Bhubaneswar, while not necessarily as popular a location for data center development, is being presented by the Indian government as potential a data center hub. The government introduced the State Data Center Policy- in April 2022 which offer a series of incentives on land, power, capital subsidy, and exemption on state goods and services tax.

The New RBI Data Centre and the Enterprise Computing and Cybersecurity Training Institute is spread over an area of 18.55 acres. Indian Financial Technologies and Allied Services (IFTAS) awarded an Rs. 169 Crores ($20.46m) contract to Ahluwalia Contracts to build a data center complex in Bhubaneswar, Odisha, India.

EIL has provided EPCM services from concept to commissioning of the New Data Centre and the Enterprise Computing & Cybersecurity Training Institute.

The construction is planned to be a greenfield data center site and be housed on a 6.12-acre plot in Bhubaneswar, Odisha on the east coast of India. The built-up area of the campus is 30,000 sqm (323,000 sq ft).

Quick Facts

Project scope:

- 11000 sqm of basement carried out with 1.1 mm Firestone EPDM
- Prestigious project
- To deliver an excellent waterproofing to preserve water for seeping into the area
- **Owner: Reserve Bank of India**
- **Client: Indian Financial Technology & Allied Services (IFTAS)**
- **Consultant: Engineers India Limited**
- **Contractor: Ahluwalia Contracts (India) Limited**

Features of EPDM:

- Waterproofing membrane High elasticity (>300%)
- Long-term durability
- Large sheets reducing on site seaming (930 m2)
- Fast and easy installation
- Treating pipe penetrations, islands and waterfalls present in lake
- High flexibility (at high and low temperatures, as a result adapts to irregular shapes)
- High puncture resistance

Installation of Membrane Placement

A. Horizontal Placement:

a. Geo textile – 150 GSM loose laid over the lean concrete / PCC with overlap minimum 75 mm joint either stitched or spot stuck by hot airgun.

b. Place the EPDM roll as close as possible to its final position. It is easier to locate the roll in this position than to have to reposition the EPDM panels after they have been unrolled.

c. Inspect the wrapper and EPDM roll for damage before and during the installation. All membranes shall be unrolled, unfolded and positioned over the substrate without stretching. The panels can be moved sideways over the substrate by floating and allowing air underneath.

d. Prior to any attachment, cutting or splicing, each panel shall be allowed to relax a minimum of 30 minutes.

e. The EPDM panels shall be installed in a fashion so that field and flashing splices are installed to shed water. Straight cuts are very important for a neat and easy application. DBS recommends the use of scissors, markers and chalk lines to achieve this. Allow ample material for splicing with the overlap of adjoining sheets determined by the type of seam.

f. Provide an extra minimum 300 mm of EPDM membrane all around the periphery of raft edge, so as vertical EPDM membrane can be spliced on horizontal surface after removing the protection concrete as well as Geo textile.

g. The area of lap i.e. 100mm shall be cleaned using DBS Quick Prime Plus Primer and then lapped using DBS QuickSeam Splice Tape strictly in accordance with the below mentioned instructions.

h. The membrane everywhere shall be protected by a layer of 300 gsm Geotextile. Over this a protection cement screed of minimum 50mm thickness (maximum aggregate size 6mm) is poured to protect damage of DBS EPDM membrane against reinforcement and site traffic. The protection screed is required everywhere on the DBS EPDM Membrane. The area of the membrane laid at any one time should not exceed that which can be protected by screed in the same period. Care should be exercised in the sequence of laying screed to ensure that the membrane laid is not damaged due to site traffic or other trade works or any other reason. In any unforeseen case if the membrane is punctured or damaged please bring to the notice of DBS, engineer in -charge so that it may be taken care.

B. Vertical Placement

As the Retaining wall will be handed over in three (3) Phases the EPDM work will also progress in phases. The EPDM shall be fully bonded to RCC wall. The final termination of DBS EPDM Membrane shall be above ground level at a height of 300mm.

a. Apply Polygrip - Bonding Adhesive on the RCC retaining wall as well as on the DBS EPDM Membrane, fully adhered to RCC wall. The adjacent sheets should have 100 mm overlap.

b. Termination of top edge should be extended min. 300mm above the ground level. The vertical EPDM at top edge should be applied with block sealant all around the periphery behind the EPDM, which should be duly terminated with Aluminium termination bar and fasteners. The gap between the fasteners shall be 200mm. The termination bar top edge shall be filled with DBS Lap sealant to make sure water should not penetrate from the top of the EPDM.

c. Protect Waterproofing system with Protection Layer which is HDPE Protection Board, spot stuck to the EPDM membrane with bonding adhesive. The HDPE drainage board to be installed with an overlap of 100 mm.

d. Once the waterproofing treatment has been finished there should be no activity which may damage the treatment. Any damage to treatment due to ongoing civil activity or any mechanical damage is not under our scope. The back fill soil should be free from any sharp stones or Boulders. While the compaction of back filling soil the pressure should not bring the membrane down. The soil back filling compaction should be done immediately and in layers.

For further information about waterproofing applications, please contact: DBS Building Products, Sri Sobha Sing Building, 5286-87, Shardhanand Marg Delhi-110006 Tel: 011-66308888/23216062 Email: **sales@dbsbp.com/ Info@dbsbp.com**