

Managing wrinkles, bridging and ballasting during geomembrane installation

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ABSTRACT: This subject had been adequately discussed and addressed during the EUROGEO6 in 2016. Various solutions had been forwarded and analyzed during the panel discussion with the participating audience comprising experienced practitioners in the subject industry and they could be summarized as follows, amongst others:

1. Planning – Cutting plans, timing of installation (temperature control), welding and cover layer installation
2. Choice of Material – Colour, Texturing, LLDPE , Reinforced Materials, PVC, EPDM
3. Design – Geometry, anchors, intermediate anchors, round corners, sharp corners, detailing
4. Installation Procedures – Ballasting, anchor bar, ground anchors
5. Remedial actions to address the inherent installation anomalies

All the above solutions are classic that should be seriously considered from the conceptual stage to the design stage and, ultimately, to the implementation stage in any project.

The “Management” of Wrinkles, Bridging and Ballasting should be the responsibility of all parties starting with the initial involvement of the facility owner and design engineer. Subsequently, this responsibility should be extended to the implementation stage where installation supervision and the proposed installation plan and procedures or method statements of the geomembrane installer should be reviewed with due attention.

In this part of the world, there appears to be a lack of regulatory guidelines and enforcement to ensure that those involved in the use of geomembrane from the facilities owners, design engineers, supervisory engineers or technicians are truly educated and made aware of the proper requirements of a quality installation. This apparent lack of regulatory guidelines, in the absence of a code of practice, could often mean that geomembrane installers are often saddled with the sole responsibility of safeguarding the quality of geomembrane installation. Logically, the quality of the geomembrane installation should not be left entirely to the discretion of the installer. The reliance on the installer of the geomembrane to ensure the geomembrane installation quality of a project may tantamount to project design failure.

It should be time to take another step further to produce a standard code of practice, much like the CP110 (BS8110) for Concrete Design, which is universally acceptable, to set the design parameters to enhance every detailed aspect of a quality installation especially in managing wrinkles, bridging and ballasting in geomembrane installation. Which better platform to discuss this subject than in this forum?