DESCRIPTION

Coating over substrate transitions, interfaces with other lining materials and coating terminations should be addressed in a manner which ensures the integrity of the coating system and in turn the substrate beneath. Standard techniques for terminations and transitions include creating a key by saw cut into the substrate at the termination or transition point to assist the coating in resisting undercutting corrosion, peeling or disbondment from physical or thermal movement or external forces. In cases where bolts, pipes, hangers or other fixtures must penetrate the coating, special care should be taken to seal the area of the penetration with a suitable flexible material such as a urethane grout. Methods for coating pipe penetrations should include procedures and materials which can form a bond to the pipe material and a seal between the coating and the pipe. Similarly, when interfacing with another type of coating or lining, careful evaluation of the materials involved should be performed on a case by case basis. General treatments may be suitable in many cases, however, the selection of proper methods and materials can have a significant impact on performance.

In many cases spray applied coatings are needed to interface with sheet or cured in place linings. The surface preparation and coating application method will vary depending upon the materials involved. Typically, cured in place liners require only cleaning and profiling of the surface prior to top coating, however, many sheet linings are composed of materials such as PVC and PE which are very difficult to create an adhesive bond to. In such situations, it is recommended that the materials and preparation methods described in the Raven TB on Raven 150 be utilized to enhance the bond of an epoxy topcoats.

In instances where there are penetration, transitions or terminations from concrete substrates to steel or other substrates it is important to properly prepare both substrates accordingly and to create a key at the interface of the two materials. This key allows the coating to resisting undercutting or disbondment. Termination groves and Key ways should be appropriately sized and spaced, but at a minimum should be 1/4” x 1/4” in dimension and roughly one inch apart. A minimum 1-3 inches of overlap onto the adjacent substrate is recommended but should be adjusted according to scale.

Coatings should be applied over the key way and into the termination groove. Masking off the edge of where the coating application stopped is recommended to give a clean line at the termination groove.
The following drawings illustrate recommended treatments for the above situations. Careful evaluation of the particular instance should be performed by a qualified individual.

Sample Termination and Transition Details

Terminations and Transitions to Dissimilar Substrates

Note: Thickness of materials exaggerated for clarity
Sample Termination and Transition Details

PVC Sheet Liner

Concrete

Raven 150

Epoxy Topcoat

Cut back keyway

PVC Sheet Liner/Epoxy Interface

PVC Pipe Wall

Concrete

Raven 150

Epoxy Topcoat

Cut back keyway

PVC Pipe Penetration/Epoxy Interface

Note: Thickness of materials exaggerated for clarity
Sample Manhole Frame Termination Detail

Note: Thickness of materials exaggerated for clarity
Sample Termination and Transition Details

Existing Compatible Coating or CIPP Liner/ Epoxy Topcoat Interface

Existing Coating/ CIPP Liner

Concrete

Epoxy Topcoat

Cut back keyway