



North Carolina Department of Transportation
Materials and Tests Unit – Product Evaluation Program
Innovative Technologies and Products Awareness Report
December 8th, 2021



PRODUCT HIGHLIGHT – Aegis Robotic Spray-Applied Pipe Liner



The Aegis Robotic Spray-Applied Pipe Liner (SAPL) is manufactured by Nukote Coating Systems International (NCSI) out of Bedford, Texas. It is currently approved for provisional use and listed on the Approved Products List (APL) as NP21-8907. The Aegis Robotic SAPL utilizes Nukote Metal Prime I[®] primer, Nukote ST[®] liner, and a 360Ringtech[®] robotic lining machine. The Nukote ST[®] liner is a two-component, 100% solids, aromatic polyurea. It is UV, thermal, and chemical resistant with zero VOCs. Both the Nukote Metal Prime I[®] and Nukote ST[®] can be applied using traditional methods or using the 360Ringtech[®] robotic application machine. Using the machine reduces manned entry by approximately 85%, results in a more uniform and faster application, and can be used in pipe sizes between 8-inches and 108-inches in diameter. For more information, please visit:

www.nukoteglobal.com/products/elastomeric

Application of Spray-Applied Pipe Liner using the 360Ringtech[®] Robot – image from 360Ringtech[®] brochure

PRODUCT INNOVATION – ZAM[®]



ZAM[®] is a new Zinc-Aluminum-Magnesium coating for steel and is currently manufactured by Wheeling Nippon Steel out of Follansbee, West Virginia. It is currently under evaluation and listed on the APL as NP21-8909. The ZAM[®] coating can be applied to any commonly used metallic materials used in transportation that are subjected to corrosion, such as guardrail beams, posts, blocks, rails, and end-treatments. The ZAM[®] coating is composed of 6% Aluminum, 3% Magnesium, with the balance being Zinc. After the ZAM[®] is applied, the exterior of the ZAM[®] metal coating is chemically treated to further prevent corrosion. The ZAM[®] coating is available in several different thicknesses depending upon the desired anti-corrosion needs. ZAM[®] can also result in a total cost reduction as the coating is applied by the manufacturer, and there is no need to send the materials to a galvanizing plant. For more information, please visit: www.wheeling-nipponsteel.com/zam

ZAM[®] coated guardrail installed along a roadway – image from Wheeling Nippon Steel ZAM[®] website