

NON-SHIELDING TESTING ON POLYMERIC MESH BACKED TAPE AND POLYETHYLENE TAPE

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Field applied Polymeric Mesh Backed tapes have been used in the North American market for the last 30 years and occupy a very significant part of the American and Canadian girth weld and rehabilitation market share. Those coatings consist of one single layer, simple and very fast to apply. They are differentiated from other multi-layer tape systems and heat shrinkable sleeves in materials, adhesion and application. In addition, they are recognized to not shield cathodic protection currents if the coating fails. Non-shielding means that, if the coating fails or disbonds, cathodic protection current can reach and protect the steel against corrosion under disbonded coating.

A major European gas transportation pipelines operator tested this property on Polymeric Mesh Backed tape and Polyethylene tape of POLYGUARD between June 2017 and September 2018. The tests were conducted in different electrolytes, showing different results in function of the coating. The topic of our paper consists of technical explanation & clarification of this cathodic protection non-shielding testing conducted during a period of 15 months.