

Material and Preparation Requirements for Steel Test Panels Used to Evaluate the Performance of Industrial Coatings

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Foreword

The performance of new coating and lining systems (as well changes in formulation to existing systems) are frequently evaluated by applying them to prepared steel test panels and subjecting them to natural and/or accelerated exposures, followed by physical and/or visual assessments of relative performance. It is imperative that a consistent substrate be employed so that the performance of the coating/lining system can be isolated to the extent feasible. Coating and lining manufacturers as well as testing laboratories can benefit from using this standard that focuses on ensuring the substrate material, surface preparation, application of the systems under consideration, and preparation for testing conform to specific criteria and are consistent.

Scope

This standard contains requirements for steel panels used to perform tests for evaluation of various performance characteristics of protective coatings applied to steel substrates. Panels meeting requirements of this standard may be used for tests including, but not limited to, natural and accelerated exposure in or out of the laboratory; tests to determine resistance to various chemicals, impact, and abrasion; and tests to characterize properties such as color, gloss, adhesion, and hardness. Requirements for steel composition, panel dimensions, surface preparation, ambient conditions for application and cure of coatings, and location and dimensions of scribes on coated panels are included.

Rationale

This standard was updated/revised to provide the user with clearer guidance on the importance of using a standard substrate (materials and preparation), proper coating application and curing processes, as well as scribing procedures when evaluating the comparative performance of industrial protective coating systems in either natural or simulated, accelerated environments