



**US Army Corps
of Engineers®**

Engineer Research and
Development Center

Paint Testing

Description

Since its inception, the Paint Technology Center (PTC), located at the Construction Engineering Research Laboratory (CERL), Champaign, IL has provided a paint testing service, primarily for government agencies and military customers. This work has primarily consisted of testing individual batches of paint proposed for use on specific projects. The objective of this service is to provide accurate test results, rapidly and at a low cost. Testing consisted of performing a range of both formulation and performance tests as required by the applicable specification.

Capabilities

The PTC has performed Qualified Products List (QPL) testing for the General Services Administration (GSA) on a number of government specification paints. GSA uses this list as a source of potential bidders on contracts to provide large quantities of these paints. The objective of this work has always been to conduct every test exactly as required in the specification. (Many of the specifications had tests requiring weeks, and in some cases as long as a year, to obtain the required results.) Most paints are tested for a flat rate, paid by the government installation where the painting was to take place. Results are provided in 1 to 2 weeks, depending on the length of the tests performed.

In the future, it is anticipated that more testing will be performed to determine if commercial paints conform to Commercial Item Descriptions (CID). This work will require strict compliance with specification requirements, and in the case of many of the specifications, more lengthy tests. When completed, products meeting specification requirements will be listed on the Internet. Costs for the work will vary with the level of effort required by the specification and may be paid by manufacturers, installations, or other sponsors.

Supporting Technology

The PTC staff has an extensive array of equipment at its disposal, ranging from the common laboratory tools/supplies necessary to perform routine paint testing to the sophisticated electronic instrumentation required to perform research and development and forensic-type studies. Raw materials and milling equipment for the manufacture of laboratory batches of paint, as well as gages and meters for the field evaluation of coatings, are available. The staff maintains a close relationship with the Steel Structures Painting Council, American Society for Testing and Materials, Tri-Services Paint Committee, National Association of Corrosion Engineers, and the University of Illinois. These relationships help



The PTC performs a range of paint formulation and performance tests.

the PTC to maintain the broad equipment and technology bases required to address the full range of needs within the field of painting technology.

Benefits

The paint-testing activity at the PTC closes a three-way “feedback loop,” which benefits all participants: the Corps customers, the commercial paint industry, and the laboratory itself. Corps of Engineers’ Field offices gain low cost, rapid response testing of paints to be used on Corps structures. The commercial paint industry benefits from an independent evaluation of the quality of paint being produced in the private sector. The laboratory benefits from the constant opportunity (and need) to maintain and use up-to-date knowledge of test methods, of test-equipment operation. The PTC plays a pivotal role in maintaining the working relationship between Corps field offices conducting painting operations and the paint manufacturers.

Success Stories

The PTC has evaluated coatings for use on Navy torpedoes and developed a kit to rapidly test paints commonly used in facilities painting. The center has conducted on-site inspections and evaluations of coatings for the Riyadh District, Egypt, Korea, Japan, the Panama Canal Commission, and U.S. Army Corps of Engineers (USACE) Civil Works and Military Construction projects nationwide. The PTC also conducted investigations to provide evidence of criminal fraud in painting done on military installations.

Points of Contact

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