

C826832 MAJOR : INTER DEPARTMENT OF ENVIRONMENTAL SCIENCE

KEY WORD : SURFACE COATING MATERIALS / ACRYLIC COATING / ACRYLIC PAINTS / UV-STABILIZER

NIPAPORN SUNTORNPITAKKUL : COMPARISON OF SURFACE COATING MATERIALS FOR CONSERVATION OF ANTIQUE TEAK. THESIS ADVISOR : ASST.PROF.SURAPHOL SUDARA,Ph.D. 86 pp. ISBN 974-639-678-1.

The conservation of teak sculpture in the openair by application of surface coating materials is one of the known techniques for art objects conservation. Very little information concerning the suitable types of surface coating materials, proper application process are known differences between the old and new teak, as well as durability-testing techniques are still lack.

Suitable UV-stabilizer to protect the impact of UV is the mixture of Tinuvin 1130 and Tinuvin 292. Using the acrylic solvent-based paints and acrylic water-based paints, the optimal amounts of Tinuvin 1130 and Tinuvin 292 were 3:1 by weight. To use with acrylic lacquers, the amounts of UV-stabilizer would be 3:0.5 by weight. After mixed with surface coating materials, durability tests showed that acrylic lacquer was the best to reduce percentage of damage, ranked secondary in acrylic solvent-based paints. Acrylic water-based paints showed no significant difference between adding or without UV-stabilizers. Comparision all types of surface coating materials, using the acrylic water-based paints seems to be the most durable. For effective use, would be best application of twice coating for the old-teak works and one time for the new one. Acrylic lacquers would be better when used indoor, particulary for sculpture which showed the wood grain.

The suitable durability-testing method was the outdoor natural explosure. The Industrial Product Standard method was good for testing surface coating materials in high humidity and less light condition. Besides, in high humidity condition, surface coating materials gave more percentage of damage to the new teak than the old one. The cyclic method proposed is not suitable for testing.

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