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PAINTING OF LATTICE STEEL TOWERS

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PURPOSE AND SCOPE

This document forms part of a suite of documents which define National Grid's functional and performance requirements for new plant and equipment.

This specification defines the requirements for painting tower, landing gantry and sealing end platform steelwork. It includes materials, workmanship and testing.

PART 1 – PROCEDURAL

1 GENERAL REQUIREMENTS

The requirement for painting the National Grid assets listed above shall be based on an asset health review programme or as required by a condition assessment and where occurrences of corroded steelwork have been identified and found to compromise the structural integrity of the structure. It is National Grid's policy to use a two coat paint system on all newly erected steelwork and existing steelwork where the application of a single coat paint system is not feasible. The single coat paint system shall be used for repairs of existing structures where the coating system and galvanising have not been seriously impaired. The single coat paint system is vinyl based and may be applied over an existing paint coating of good quality with no rust (grade 1 - 2 degraded steelwork as identified in the condition assessment). The single coat paint system shall be capable of being applied over either Alkyd or Vinyl type paint.

The option of using a single coat paint system shall be reviewed after 12 months.

1.1 Materials

Only manufacturers approved by National Grid shall be used for the supply of paint.

Within the normal constraints of good practise all paints should be formulated with the lowest toxicity materials and where possible with high flash point solvents.

All paints must be suitable for application over a wide variety of substrates including weathered galvanising, rusty steel, aged paint or any combination of these.

Each coat of a multi-coat paint system must be compatible with all preceding coats and, to avoid any dispute, should be supplied by the same manufacturer.

All materials must have a shelf life in excess of 12 months. No hard settlement will be accepted.

All paints shall be vinyl based (with the exception of water based paint) and suitable for hand brushing applications. They shall also be compatible with the methods of surface preparation listed below and suitable for use on galvanised steel structures with varying levels of degradation and/or corrosion.

1.1.1 Primer (Two Coat System)

The primer coat shall be compatible with and adheres to zinc finished or ferrous substrates. It shall also be suitable for application at temperatures of 5 – 30°C. The basic requirements and characteristics of this paint are shown in Table 1.

1.1.2 Top Coat (Two Coat System)

The top coat shall be suitable for application over the primer. It shall also be compatible with a zinc coated steel surface when two coats of this paint are used in accordance with the client's requirements. The basic requirements and characteristics of this paint are shown in Table 1

1.1.3 Single Coat System

The single coat paint system shall only be used for application over previously painted surfaces of either Alkyd or Vinyl based paints. The basic requirements and characteristics of this paint are shown in Table 1.

1.1.4 Water Based System (Two Coat System). To be used in special circumstances with the approval of National Grid.

Primer (Water based Two Coat System)

The primer coat shall be compatible with and adheres to zinc finished or ferrous substrates. It shall also be suitable for application at temperatures of 5 – 30°C. The basic requirements and characteristics of this paint are shown in Table 1.

Top Coat (Water based Two Coat System)

The top coat shall be suitable for application over the primer. It shall also be compatible with a zinc coated steel surface when two coats of this paint are used in accordance with the client's requirements. The basic requirements and characteristics of this paint are shown in Table 1.