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TYPE REGISTRATION OF CABLE SYSTEMS

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PURPOSE AND SCOPE

The purpose of this guide is to set out the detailed requirements for the National Grid policy on type registration contained in PS(T) 003 that should be applied in the case of a cable system. This document should be read in conjunction with UKBP/TP183 which set out some more general information on the type registration process. This document applies to equipment purchased to National Grid TS 2.5 and its subdocuments covering power cable systems.

PART 1 –PROCEDURAL

1 CABLE SYSTEM TYPE REGISTRATION REQUIREMENTS

1.1 Type Registered Cable System and a Cable System as a ‘Solution’

For type registration purposes, a type registered cable system shall be made up of a range of cables, accessories and ancillary items that a selection can be made from to construct a specific cable system (or type registered solution) for use on the National Grid system. Normally a type registration pack will cover a complete type registered cable system. An example of a type registered cable system is given in Appendix A.

1.2 Equipment Included in a Cable Type Registration

Only components that are required in a cable system as specified in TS 2.5 are required in a type registered system. Currently the list of this equipment is:

- a) Cable.
- b) Terminations.
- c) Joints.
- d) Bonding and earthing equipment for systems with rated voltages (Um) of 72.5 kV and above or specially bonded cable systems.
- e) Fibre optic cable for cable temperature monitoring for systems with rated voltages of 275 kV and above.

- f) Cable hydraulic system for oil filled cables.

Cable system equipment that is additionally specified in a contract may have a 3rd level TS but as the number of items procured will be small in number or installation dependent these shall be technically assessed by each project that uses these items and will not require type registration.

For cable systems there are a number of technical requirements that can not be assessed at type registration stage (for example the current rating of a cable system) and these shall be technically assessed by each project.

1.3 Use of Type Registered Components together in a Solution

For cable systems with voltages (U_m) at or below 145 kV, type registered solutions can be made from components of more than type registration pack as long as the voltage levels are the same or higher. It is the responsibility of each project to ensure that the components are compatible.

For cable systems with voltages (U_m) above 145 kV, some components are required to be tested together so components from one type registration pack can not be automatically added to another type registration pack to form a type registered solution. It is still the responsibility of each project to ensure that the components are compatible.

2 TYPE REGISTRATION PACKS

Type registration information shall be presented to National Grid in the form of type registration packs. The packs will comprise of:

- a) Self certification statement (form in UKBP/TP183)
- b) Schedule of components (form in TS 2.5)
- c) Component data pack for each component
- d) Schedule of non-compliances (unless one is filled in for each components – form in UKBP/183 or similar) or statement that there are no non-compliances

Once a pack has been assessed and type registered by National Grid, a type registration number shall be issued by National Grid that refers to the type registration pack that was submitted. Each component that forms part of the type registered cable system shall be given a National Grid Asset (EGI) code. Components that are not tied to the type registered pack will have an “unrestricted” EGI code. For components that are tied to a registration pack the EGI code will be marked restricted.

The component data pack for each component shall contain the information as described in clause 2.1 for cable systems with voltages (U_m) at or below 36 kV, or clause 2.2 for cable systems with voltages (U_m) higher than 36 kV. If the component data pack has already been provided in a previous type registration it is permissible to refer to the previous type registration pack number containing the component data pack although type registration acceptance can not be assumed (for example there may be requirements to test components together).

2.1 Information on Each Component for Systems with Voltages (U_m) at 36 kV or Below

For each component within the type registration a component data pack will be compiled and will contain:

- a) A data schedule for the component (form A in the associated 3rd level TS)