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Electricity Specification 603

Issue 4 July 2022

Dielectric Waterproof Boots

Amendment Summary

ISSUE NO. DATE	DESCRIPTION
Issue 4 **July 2022**	New document template applied Updated specification based on current sourced product of dielectric boot References to standard protective footwear (non-dielectric) removed. Prepared by: Philip Howell Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director

Contents

1 Introduction

This specification sets out the requirements for Dielectric waterproof boots purchased by Electricity North West Limited, hereinafter referred to as Electricity North West.

2 Scope

The specification covers dielectric waterproof boots, typically referred to as “Wellingtons”, which offer a high degree of personal protection against electrical shock, mechanical impact and moisture ingress.

The boots are required to electrically insulate the wearer against contact with the ground, forming part of the overall system of protection against electric shock.

These dialectic waterproof boots are mandatory PPE when carrying out live working on LV underground cables and overhead lines.

3 Technical and Performance Requirements

3.1 Boot Construction

The boots shall comply in full to the following standards;

- EN ISO 20345 , Safety Class SB E HRO SRA CI
- EN 50321 Class 0

All boots shall be manufactured using insulating materials exclusively, other than the protective toe cap. They shall consist of a moulded yellow shaft from dielectric rubber compound moulded over a steel toe cap, a moulded vulcanised rubber sole and a knitted nylon lining.

The overall height of boots shall be that appropriate to 'Knee Boots' as defined in EN ISO 20347

Boots shall not be fitted with any laces, buckles or other fastenings.

3.2 Colouring and Marking of Boot

The shaft of the boots shall be yellow.

The sole of the boot shall be black or dark blue.

Marking shall be as per EN ISO 20345 and include a batch number for traceability.

Each boot shall have a permanently label placed that it faces directly out from the wearer's legs when in use (that is, on the left-hand side for left foot boots and on the right-hand side for right foot boots).

The name of the maker and the size of the boot shall be marked, using the English system, on the inside of the boot at a point not more than 75mm from the upper edge.

3.3 Sizes of Boots

All boots are required in the following English system sizes: Size 3 to Size 15

4 Testing

The boots shall be manufactured and tested to withstand 20 000V for 8 hours over the complete boot surface and 35 000V over the sole for 3 minutes.

5 Packaging

Boots shall be supplied boxed in pairs of the same size with left and right boots temporarily fixed together, but in a manner that does not damage the boot when removed.The outside of packaging boxes shall be labelled with the maker's name, type and the boot size and standard reference.

6 General Requirements for Approvals and Testing

6.1 Product not to be Changed

No change in the product, packaging or labelling shall be made after Approval has been granted without prior notice to the Circuits Policy Manager, and receipt of a written agreement to the proposed change from the Circuits Policy Manager.

6.2 Electricity North West Technical Approval

The tenderer shall submit, with this tender, proposals for testing which will demonstrate, to the satisfaction of the Circuits Policy Manager, compliance with this Specification. Such tests shall be carried out without e4pense to Electricity North West.

Alternatively, the tenderer may submit technical reports and other data that he considers will demonstrate, to the satisfaction of the Circuits Policy Manager, compliance with this specification. Acceptance of this evidence shall be at the discretion of the Circuits Policy Manager but will not be unreasonably withheld.

6.3 Quality Assurance

The Tenderer shall confirm whether or not approval is held in accordance with a Quality Assurance Scheme accredited under BS EN ISO 9000: 2000. If not, he shall submit a statement of the quality assurance procedures employed to control the quality of the product, including the performance of Suppliers and Sub-Contractors.

The right is reserved for the Circuits Policy Manager to require, from time to time, the repeat of such tests as he may deem to be reasonably necessary to demonstrate continued compliance with the Specification.

The tenderer shall submit, with his tender, a list of tests and inspections which are carried out on the product prior to despatch which shall demonstrate, to the satisfaction of the Circuits Policy Manager, fitness for installation and service.

The tenderer shall provide free of charge to Electricity North West such samples as may, in the opinion of the Circuits Policy Manager, be reasonably required for inspection and/or retention as quality control samples. The Circuits Policy Manager will confirm the requirement for samples at the time of tendering.

The right is reserved for the Circuits Policy Manager to make, from time to time, such inspections of the tenderer's facilities as he may deem to be reasonably necessary to ensure compliance with this Specification and any Contract of which it forms a part.

The Tenderer shall submit, with his tender, such details of product packaging disposal, as will enable Electricity North West to comply with the requirements of BS EN ISO 14001: 1996 – Environmental Management Systems.

6.4 Formulation

The Tenderer shall submit, with his tender, such details of the formulation and use of the product and associated substances as will enable Electricity North West to comply with the obligations of the Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health Regulations 1988, in the use, storage and disposal of the product. The tenderer may stipulate, prior to submission of such information, that he requires it to remain confidential and the Circuits Policy Manager will, if requested, confirm his agreement to this prior to receipt of the information.

6.5 Identification Markings

The Tenderer shall submit, with his Tender, details of markings which it is proposed to apply to the product or packaging to identify manufacturing batches or items. The forms and content of such markings shall be subject to the Approval of the Circuits Policy Manager and shall in all cases include the Electricity North West Commodity Code Number.

The Tenderer shall submit, with his Tender, such details of marking gross weight on components, assemblies and packages, as will enable Electricity North West to comply with the Health and Safety Manual Handling Operation Regulations 1992, for components, assemblies and packages supplied with a gross weight over 1kg. The forms and content of such markings shall be subject to the Approval of the Circuits Policy Manager.

6.6 Minimum Life Expectancy

The minimum life expectancy of all products covered by this specification is 10 years.

6.7 Manufacturers Already Approved

Clauses 6.2.1, 6.2.2, 6.3.1, 6.3.3, 6.3.4, 6.4 and 6.5 will be waived in the case of products already approved.

6.8 Product Conformity

Preference will be given to those suppliers who can provide suitable Product Conformity Certification to a recognised or specified standard, or an equivalent certification.

7 Requirements for Type and Routine Testing

The specifier shall set out the requirement of the following tests to be carried out by the supplier at the suppliers' cost.

7.1 Requirement for Type Tests at the Supplier's Premises

These are a series of one-off type tests, which are carried out to ensure the satisfactory performance of the product design, under extremes of operating stresses, and of endurance, as may be appropriate, to be determined by the specifier.

These may or may not be destructive tests.

7.2 Requirement for Routine Tests at the Supplier's Premises

These tests may be required to be carried out on every individual unit or component, as specified, or at some regular frequency to be determined by the specifier.

The results of these tests may be required to be supplied to Electricity North West with each unit purchased or retained for inspection, at a period to be determined.

8 Documents Referenced

DOCUMENTS REFERENCED	
Health and Safety at Work Act 1974	
Control of Substances Hazardous to Health Regulations 2002	
Manual Handling Operations Regulations 1992	
BS EN ISO 9000	Quality management systems
BS EN ISO 14001	Environmental management systems. Requirements with guidance for use
EN ISO 20345	Personal Protective Equipment – Safety Footwear
EN ISO 50321	Footwear for electrical protection - Insulating footwear and overboots
EN ISO 20347	Personal protective equipment — Occupational footwear
CP311	Equipment Approval Policy and Process

9 Keywords

Safety; Wellingtons; Dielectric ; footwear