

<b>Document Reference:-</b>		NPS/001/015	<b>Document Type:-</b>		Code of Practice			
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# NPS/001/015 – Technical Specification for Barbed Wire

## 1. Purpose

The purpose of this document is to detail the technical specification for barbed wire for use on the overhead line distribution networks of Northern Powergrid (the Company).

This document supersedes the following documents, all copies of which should be destroyed;

Document Reference	Document Title	Version	Published Date
NPS/001/015	Technical Specification for Barbed Wire	5.0	Oct 2017

## 2. Scope

This document applies to barbed wire for use on wood poles, towers and support stays on the overhead line networks of the Company.

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### 3. Specification

#### 3.1. General

Barbed wire shall be in accordance with Energy Networks Association Technical Specification (ENA TS) 43-90 Issue 7: 2021, manufactured in accordance with BS EN 10223 – 1: 2012 and galvanised to BS EN 10244 – 2: 2023.

#### 3.2. Material Requirements

Barbed wire shall be 2 PLY with a 2.5mm diameter and have four pointed barbs. The barbs shall have a 2mm diameter and be 12.5mm in length. The spacing between the barbs shall not exceed 50mm. It shall be supplied in 100-meter lengths on a reel equipped with a handle.

Galvanised coatings shall have a surface coating of 735g/m<sup>2</sup> as detailed in BS EN 10244 – 2 Table 1, Class A x 3. Alternative protective coating will be considered providing supporting test data is submitted.

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## 4. References

### 4.1. External Documentation

Reference	Title
BS EN 10223 – 1: 2012	Steel wire and wire products for fences. Zinc and zinc alloy coated steel barbed wire
BS EN 10244 – 2: 2023	Steel wire and wire products. Non-ferrous metallic coatings on steel wire. Zinc or zinc alloy coatings
ENA TS 43-90 Issue 7: 2021	Anti-climbing Devices and Safety Signs for HV Lines up to and including 400kV

### 4.2. Internal Documentation

Reference	Title
n/a	

### 4.3. Amendments from Previous Version

Reference	Description
3.1	Update of reference to the latest version of 43-90 and BS EN 10244-2
4.1	External documentation, revision updated
6.0	Authority for Issue, updated
Appendix 1	Self-certification conformance declaration

## 5. Definitions

Term	Definition
The Company	Northern Powergrid

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## 6. Authority for Issue

### 6.1. CDS Assurance

I sign to confirm that I have completed and checked this document and I am satisfied with its content and submit it for approval and authorisation.

		<b>Date</b>
Liz Beat	Governance Administrator	11/12/2023

### 6.2. Author

I sign to confirm that I have completed and checked this document and I am satisfied with its content and submit it for approval and authorisation.

**Review Period** - This document should be reviewed within the following time period;

Standard CDS review of 3 years?	Non Standard Review Period & Reason	
No	Period: 5 Years	Reason: Update will be dictated by contact renewal date or any significant changes in the specification or documents referenced.
Should this document be displayed on the Northern Powergrid external website?		Yes
		<b>Date</b>
Steven Salkeld	Policy and Standards Engineer	11/12/2023

### 6.3. Technical Assurance

I sign to confirm that I am satisfied with all aspects of the content and preparation of this document and submit it for approval and authorisation.

		<b>Date</b>
Ged Hammel	Lead Policy and Standards Engineer	11/12/2023

### 6.4. Authorisation

Authorisation is granted for publication of this document.

		<b>Date</b>
Paul Black	Head of System Engineering	09/01/2024

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## Appendix 1 – Self Certification Conformance Declaration

To be completed by suppliers.

Barbed wire shall comply with the latest issues of the relevant international and British Standards.

This check sheet identifies the clauses in BS EN 10223 - 1 and BS EN 10244 - 2 and the clauses of the aforementioned Standards relevant to barbed wire for use on current United Kingdom designs of wood pole and tower overhead lines.

The manufacturer shall declare conformance or otherwise, clause by clause, using the following levels of conformance declaration codes.

### Conformance declaration codes

N/A = Clause is not applicable/ appropriate to the product

Cs1 = The product conforms fully with the requirements of this clause

Cs2 = The product conforms partially with the requirements of this clause

Cs3 = The product does not conform to the requirements of this clause

Cs4 = The product does not currently conform to the requirements of this clause, but the manufacturer proposes to modify and test the product in order to conform.

**Manufacturer:**

**Product Reference:**

**Name:**

**Signature:**

**Date:**

### Instructions for completion

- When Cs1 code is entered the supplier shall provide evidence of conformance
- When any other code is entered the reason and supporting evidence for non-Conformance shall be entered
- Prefix each remark with the relevant 'BS EN' or 'ENATS' as appropriate

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<b>BS EN 10223 – 1: 2012</b>			<b>BS EN 10244 – 2: 2023</b>			
Clause / Sub-clause	Requirement	Conformance Code	Clause / Sub-clause	Requirement	Conformance Code	Remarks
4.0	Manufacture		4.0	Coating requirements (Table 1 - Class A x 3 <sup>b</sup> )		
6.0	Sample Testing		5.0	Testing		
7.0	Inspection and documentation					
8.0	Testing					

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## Appendix 2 – Technical Information Check List

Requirement	Provided (Y/N)
Full product descriptions and part number/reference	
Appendix 1 – Completed self-certification conformance declaration	
Product Data Sheet	
Type test evidence	
Routine test plan (example)	
Packaging/delivery information	