
Specification for

**Pre-hardened and tempered carbon and
low alloy round steel wire for springs for
general engineering purposes**

**Spécification pour le fil rond en acier au carbone et acier faiblement
allié prétrempés et revenus pour les ressorts d'usage mécanique général**

**Spezifikation für gehärtete und angelassene niedriglegierte runde
Stahldrahtsorten für Federn für den allgemeinen Maschinenbau**

Contents

	Page		Page
Foreword	Inside front cover	18. Chemical composition of low alloy steels	5
Cooperating organizations	Back cover	19. Standard sizes and tensile strengths for low alloy steel wires	6
Specification		20. Decarburization, surface and internal defects in low alloy steels	7
Section one. General		Appendix	
1. Scope	1	A. Product analysis and permitted variations	8
2. References	1	Tables	
3. Information to be supplied by the purchaser	1	1. Tolerances on diameter and ovality	2
4. Manufacture	1	2. Tolerances on length of straight lengths	2
5. Selection of test pieces	1	3. Production range and quality codes for carbon steel wires	3
6. Mechanical testing	2	4. Chemical composition of carbon steel wires	3
7. Dimensions and tolerances	2	5. Standard sizes and tensile strengths for carbon steel wires	4
8. Examination for defects	2	6. Decarburization limits for carbon steel wires	4
9. Retests	3	7. Surface defect limits for carbon steel wires	4
10. Packing and identification	3	8. Production range, grades and quality codes for low alloy steel wires	5
Section two. Specific requirements for carbon steel wires		9. Chemical composition of low alloy steel wires	5
11. General	3	10. Standard sizes and tensile strengths for low alloy steel wires	6
12. Production range and quality codes for carbon steel wires	3	11. Decarburization limits for low alloy steel wires	7
13. Chemical composition of carbon steels	3	12. Surface defect levels for low alloy steel wires	7
14. Standard sizes and tensile strengths for carbon steel wires	4	13. Permitted variations of product analysis from specified ranges	8
15. Decarburization, surface and internal defects in carbon steels	4		
Section three. Specific requirements for low alloy steel wires			
16. General	5		
17. Production range and quality codes for low alloy steel wires	5		

Foreword

This edition of BS 2803, prepared under the direction of the Iron and Steel Standards Committee, has been very extensively revised and is now retitled and fully metricated. BS 2803 : 1956 is now withdrawn.

For the convenience of the user, separate sections cover the requirements for carbon and low alloy steel wires.

Provision has been made for the supply of wire according to the type of duty for which the manufactured springs

are intended and to which appropriate grade designations are allocated.

Standard and preferred sizes of wire have been added to the specification. The size ranges listed may not be available, however, from every manufacturer without restriction.