

Steel for the reinforcement and prestressing of concrete — Vocabulary

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National foreword

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

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prestressing of concrete — Vocabulary**

**Aciers pour l'armature et la précontrainte
du béton — Vocabulaire**



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 16020 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 16, *Steels for the reinforcement and prestressing of concrete*.

Introduction

The purpose of this International Standard is to promote the worldwide use of common terms in the field of steel for reinforcing and prestressing.

The terms and definitions reflect current practice. However, since the coiled hot-rolled ribbed reinforcing steels have come into the market there has been a lack of consistency in the use of some terms. This applies to wire and bar in particular, and it is hoped that this International Standard will help to establish a more consistent use of these terms.

Annex A gives a schematic illustration of the production of reinforcing steel.

Steel for the reinforcement and prestressing of concrete — Vocabulary

Aciers pour l'armature et la précontrainte du béton — Vocabulaire

1 Scope

This International Standard defines terms and symbols to be used in the field of reinforcing and prestressing steel for concrete.

NOTE In addition to terms in English and French (two of the three official ISO languages), this International Standard gives the equivalent terms in German, Spanish and Norwegian; these are published under the responsibility of the member bodies for Germany (DIN), Spanish (AENOR) and Norway (SN). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

1 Domaine d'application

La présente Norme internationale définit des termes et symboles à utiliser dans le domaine des aciers pour l'armature et la précontrainte du béton.

NOTE En complément des termes en anglais et français (deux des trois langues officielles de l'ISO), la présente Norme internationale donne les termes équivalents en allemand, espagnol et norvégien; ces termes sont publiés sous la responsabilité des comités membres allemand (DIN), espagnol (AENOR) et norvégien (SN). Toutefois, seuls les termes et définitions donnés dans les langues officielles peuvent être considérés comme étant des termes et définitions de l'ISO.

2 Terms and definitions

2.1 Types of reinforcing and prestressing steel

2.1.1 prestressing steel

wire, bar or strand used in a tensioned state to improve the tensile capacity of structural concrete members

2.1.2 reinforcing steel

wire or bar used in its untensioned state to improve the tensile or compressive capacity of structural concrete members

2.1.3 bar

product supplied in straight lengths, its cross-section being generally circular, sometimes square with rounded corners

2.1.3.1 hot-rolled bar

bar which has been produced from billets by hot-rolling, either directly in straight lengths or coiled and straightened, but not cold-worked in other ways

NOTE The term includes micro-alloyed bars, and quenched and self-tempered bars.

2.1.3.2 cold-reduced bar

wire (2.1.6) supplied in straight lengths

NOTE 1 Cold-reduced is a common term for cold-drawn and cold-rolled.

NOTE 2 Cold-working is a common term for cold-reducing, stretching and any kind of coiling or decoiling.

2 Termes et définitions

2.1 Types d'aciers pour béton armé et d'armatures de précontrainte

2.1.1 armature de précontrainte, f

fil, barre ou toron, utilisé dans un état sous traction, pour améliorer la capacité en traction des éléments structuraux en béton

2.1.2 acier pour béton armé, m

fil ou barre utilisé(e) dans un état non tendu, pour améliorer la capacité en traction et en compression des éléments structuraux en béton

2.1.3 barre, f

produit livré en longueurs droites, sa section droite étant en général de forme circulaire, quelquefois de forme carrée à angles arrondis

2.1.3.1 barre laminée à chaud, f

barre qui a été produite à partir de billettes par laminage à chaud, soit directement en longueurs droites soit en couronnes, et a été redressée, mais n'a pas été écrouie d'une autre façon

NOTE Le terme inclut les barres micro-alliées et les barres trempées et autorevenues.

2.1.3.2 barre réduite à froid, f

fil (2.1.6) livré en longueurs droites

NOTE 1 Réduit à froid est un terme courant pour tréfilé et laminé à froid.

NOTE 2 Écrouissage est un terme courant pour réduction à froid, étirage et toute sorte de mise en couronne ou de déroulage.

2.1.1

de **Spannstahl**, m
es **acero de pretensado**
no **spennstål**, n

2.1.2

de **Betonstahl**, m
es **acero para hormigón armado**
no **ordinært armeringsstål**, n

2.1.3

de **Stabstahl**, m
es **barra**
no **stang**, f

2.1.3.1

de **warmgewalzter Stabstahl**, m
es **barra laminada en caliente**
no **varmvalset stang**, f

2.1.3.2

de **kaltgezogener oder kaltgewalzter Stabstahl**, m
es **varilla de alambre**
no **kalddeformert stang**, f
rettet tråd, m

2.1.3.3**stretched bar**

stretched reinforcing steel
(2.1.5) supplied in straight lengths

2.1.3.3**barre étirée, f**

acier pour béton armé étiré
(2.1.5) livré en longueurs droites

2.1.3.3

de **gereckter Stabstahl, m**
es **barra estirada en frío**
no **kaldstrukket stang, f**

2.1.4**rod**

product which has been wound into coils directly after hot-rolling and possibly recoiled, but not cold-worked in other ways

NOTE Rod may have a plain, ribbed or indented surface. Plain rod is often referred to as wire rod.

2.1.4**matériau laminé à chaud en couronne, m**

produit qui a été enroulé en couronne directement après laminage à chaud et éventuellement ré-enroulé, mais n'a pas été écroui d'une autre manière

NOTE La surface du matériau laminé à chaud en couronne peut être lisse, à nervures ou à empreintes. On désigne souvent le matériau laminé à chaud en couronne «lisse par fil machine».

2.1.4

de **Walzdraht, m**
es **rollo laminado en caliente**
no **varmvalset stål i kveil, n**

2.1.4.1**recoiled rod**

rod (2.1.4) which has been re-wound into another, subsequent coil

2.1.4.1**matériau laminé à chaud trançonné, m**

matériau laminé à chaud en couronne (2.1.4) qui a été réenroulé ultérieurement en une autre couronne

2.1.4.1

de **umgespulter Walzdraht, m**
es **rebobinado**
no **omspolt varmvalset stål, n**

2.1.5

stretched reinforcing steel reinforcing steel (2.1.2) which has been moderately stretched in cold condition with no significant reduction in size

NOTE The term applies to the product in form of coils or bars.

2.1.5**acier pour béton armé étiré, m**

acier pour béton armé (2.1.2) qui a été modérément étiré à froid sans réduction significative de dimension

NOTE Le terme s'applique au produit sous forme de couronnes ou de barres.

2.1.5

de **gereckter Betonstahl, m**
es **acero para hormigón armado estirado en frío**
no **kaldstrukket stål**