

**Designation system for steel :
Additional symbols for steel
names
(ECISS Information
Circular 10)**

Cooperating organizations

The European Committee for Standardization (CEN), under whose supervision this European Committee for Iron and Steel Standardization (ECISS) Information Circular was prepared, comprises the national standards organizations of the following countries:

Austria	Oesterreichisches Normungsinstitut
Belgium	Institut belge de normalisation
Denmark	Dansk Standardiseringsraad
Finland	Suomen Standardisoimisliitto, r.y.
France	Association française de normalisation
Germany	Deutsches Institut für Normung e. V.
Greece	Hellenic Organization for Standardization
Iceland	Technological Institute of Iceland
Ireland	National Standards Authority of Ireland
Italy	Ente Nazionale Italiano di Unificazione
Luxembourg	Inspection du Travail et des Mines
Netherlands	Nederlands Normalisatie-instituut
Norway	Norges Standardiseringsforbund
Portugal	Instituto Português da Qualidade
Spain	Asociación Española de Normalización y Certificación
Sweden	Standardiseringskommissionen i Sverige
Switzerland	Association suisse de normalisation
United Kingdom	British Standards Institution

This Draft for Development, having been prepared under the direction of the Iron and Steel Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 October 1993

© BSI 1993

The following BSI references relate to the work on this Draft for Development:
Committee reference ISM/32
Draft for comment 91/44426 DC

ISBN 0 580 22517 8

Amendments issued since publication

Amd. No.	Date	Text affected

Contents

	Page
Cooperating organizations	Inside front cover
National foreword	ii
Foreword	3
Text of ECISS IC 10	4
National annexes	
NA (informative) Committees responsible	Inside back cover
NB (informative) Cross-references	Inside back cover

This publication is not to be regarded as a British Standard

It is being issued in the Draft for Development series of publications and is of a provisional nature because certain provisions contained therein may need modification in the light of practical experience in their use. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

It is expected that ECISS will review the Information Circular with which this Draft for Development is identical before the end of 1998 and a request for the submission of comments from users of this Draft for Development will be made in an announcement in the appropriate issue of *BSI News*.

According to the replies received, the responsible BSI Committee will judge whether the UK should support conversion of the ECISS Information Circular into a European Standard or what other action should be taken.

Observations which it is felt should receive attention before the official call for comments will be welcomed. These should be sent to the Secretary of BSI Technical Committee ISM/32 at BSI, 3 York Street, Manchester M2 2AT.

National foreword

This Draft for Development which has been prepared under the direction of the Iron and Steel Standards Policy Committee is the English language version of ECISS Information Circular 10 : 1992 *Designation system for steel : Additional symbols for steel names*, published by the European Committee for Iron and Steel Standardization (ECISS).

This Draft for Development provides additional symbols for steel names and may be used to complement those published in BS EN 10027 *Designation systems for steel : Part 1 : 1992 Steel names, principal symbols*.

English version

Designation system for steel : Additional symbols for steel names

Systèmes de désignation des
aciers: Symboles additionnels
pour la désignation symbolique
des aciers

Bezeichnungssysteme für Stähle:
Zusatzsymbole für Kurznamen

An ECISS Information Circular is an agreed document containing data, information, recommendations and other appropriate material which is not appropriate to an European Standard or Harmonisation Document but relating to the aims and work of ECISS.

This ECISS Information Circular was approved by the ECISS Coordinating Commission (COCOR) on 21 October 1992.

ECISS

EUROPEAN COMMITTEE FOR IRON AND STEEL STANDARDISATION
COMITE EUROPEAN DE NORMALISATION DUE FER ET DE L'ACIER
EUROPÄISCHE KOMITEE FÜR EISEN-UND STAHLNORMUNG

Central Secretariat : c/o CEN - Rue de Stassart, 36 - 1050 BRUXELLES

© 1992 Copyright reserved to all CEN members

Ref : ECISS/IC 10:1992



Documents

Document Sharing Hub

CONTENTS

Foreword	3
1 Scope	4
2 Normative references	4
3 Definitions	4
4 Structure	4
4.1 Designation system for steel	4
4.2 Groups of additional symbols	5
5 Allocation of additional symbols	5
6 Consultation	5
7 Selection of additional symbols	5
7.1 General	5
7.2 Steels designated according to their application and mechanical or physical properties	6
7.3 Steels designated according to their chemical composition	18
Tables	
1 Examples of symbols indicating special requirements	22
2 Examples of symbols indicating type of coating	22
3 Examples of symbols indicating treatment condition	23

Foreword

This ECISS Information Circular was prepared by the ECISS Technical Committee 7 (ECISS/TC7) 'Conventional Designation of steel', the secretariat of which is the Ente Italiano di Unificazione Siderurgica (UNSIDER).

The purpose of this Information Circular is to complement EN10027-1 and thereby provide guidance, based on the evolution of EURONORMS and European Standards to date, to the Technical Committees of the European Committee of Iron and Steel Standardisation (ECISS) and national standards bodies responsible for establishing steel names. To this end it contains additional symbols for use in conjunction with the principal symbols set out in EN10027-1.

When the current work of publication or revision of European Standards using steel names according to EN10027-1 and this Information Circular is complete it is recommended that the additional symbols dealt with in this Information Circular are included in the next revision of EN10027-1.

According to the ECISS Internal Regulations an ECISS Information Circular may or may not be implemented at the discretion of ECISS members by:

- (a) using the Information Circular directly, or
- (b) using the authorised text as a basis for a national standard or other similar document dealing with the subject.

1 Scope

This ECISS Information Circular is a supplement to EN10027-1.

It deals with additional symbols for steel names. These additional symbols are those symbols which are used in addition to the principal symbols defined according to EN10027-1 where the latter are not sufficient for a complete abbreviated identification of a steel or a steel product.

2 Normative references

This ECISS Information Circular incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed as follows. For dated references, subsequent amendments to or revisions of any of these publications apply to this ECISS Information Circular only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN10020	Definition and classification of grades of steel
EN10027	Designation systems for steel
	EN10027-1: Steel names; principal symbols
	EN10027-2: Steel numbers
EN10079	Definition of steel products.

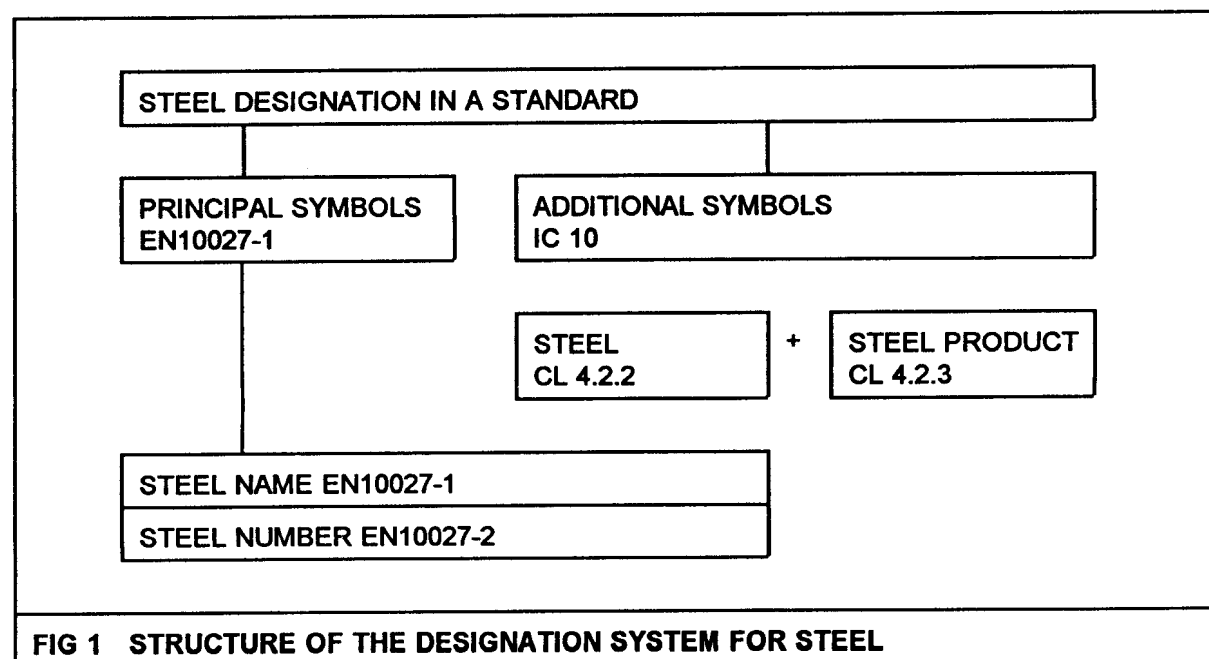
3 Definitions

For the purpose of this ECISS Information Circular the definitions in EN10020 and EN10079 apply.

4 Structure

4.1 Designation system for steel

The structure of the designation system for steel in accordance with EN10027-1, EN10027-2 and this ECISS Information Circular is represented in figure 1.



4.2 Groups of additional symbols

4.2.1 The distinction is provided for 2 groups, ie:

- (a) additional symbols for steel. See 4.2.2
- (b) additional symbols for steel products. See 4.2.3.

4.2.2 Additional symbols for steel are further divided into 2 groups, ie group 1 and group 2. Symbols of group 2 shall only be used in conjunction with and follow symbols of group 1.

4.2.3 Additional symbols for steel products are set out in tables 1, 2 and 3. These symbols shall be separated from preceding symbols by the plus sign (+).

5 Allocation of additional symbols

Additional symbols shall be allocated by the same body which is responsible for the allocation of the relevant principal symbols in accordance with EN10027-1.

Application of other additional symbols which are considered necessary to identify a steel or steel product by an ECISS Technical Committee shall be notified to ECISS/TC7.

6 Consultation

Where there are difficulties or disputes in establishing additional symbols the ECISS/TC7 shall be consulted and shall advise.

7 Selection of additional symbols

7.1 General

Additional symbols for inclusion in steel names shall be selected from the following clauses 7.2 and 7.3 which are set out according to the classification of steel names in EN10027-1.

For the convenience of the user details of the principal symbols of steel names in accordance with EN10027-1 are included, but in condensed form. For the exact and complete requirements for principal symbols reference shall be made to EN10027-1.

7.2		Steels designated according to their application and mechanical or physical properties			
7.2(a)(1) ¹		Structural steels			
Principal symbols Additional symbols for steel Additional symbols for steel products G S n n n an +an +an					
Principal symbols		Additional symbols			
Letter	Mechanical property	For steel			For steel products
		Group 1 ³		Group 2 ⁴	
G = cast steel (where necessary) S = structural steel	nnn = min yield strength (Re) N/mm ² for the smallest thickness range	Impact property		C = special cold forming D = hot dip coating E = enamelling F = forging H = hollow sections L = low temperature M = thermomechanically rolled N = normalised or normalised rolled O = offshore P = sheet piling Q = quenched and tempered S = ship building T = tubes W = weather resistant an= chemical symbol of specified additional elements, eg Cu, together, where necessary, with a single digit representing 10 x the average (rounded to 0.1%) of that specified range of the content of that element	Tables 1, 2, 3
		Energy Joules (J)			
		27J	40J	60J	
		JR	KR	LR	
		J0	K0	L0	
		J2	K2	L2	
		J3	K3	L3	
		J4	K4	L4	
		J5	K5	L5	
		J6	K6	L6	
M = thermomechanically rolled N = normalised or normalised rolled Q = quenched and tempered G = other characteristics followed, where necessary by 1 or 2 digits					

1

7.2(a)(1) corresponds to 7.2(a) in EN10027-1

2

n = numerical characters, a = alpha characters, an = alphanumeric characters

3

Symbols M, N and Q in group 1 apply to fine grain steels

4

Symbols of group 2, other than chemical symbols, may be suffixed by one or two digits in order to distinguish between qualities in accordance with the relevant product standard

¹ 7.2(a)(1) corresponds to 7.2(a) in EN10027-1
² n = numerical characters, a = alpha characters, an = alphanumeric characters
³ Symbols M, N and Q in group 1 apply to fine grain steels
⁴ Symbols of group 2, other than chemical symbols, may be suffixed by one or two digits in order to distinguish between qualities in accordance with the relevant product standard