SWEDISH STANDARDS INSTITUTE

SVENSK STANDARD
SS-EN 10184:2006

Fastställd 2006-02-27

Utgåva 2

Kemiska analysmetoder för järnmetaller – Bestämning av fosfor i järn och icke legerade stål – Spektrofotometrisk metod (Molybdenum blue)

Chemical analysis of ferrous materials – Determination of phosphorus in non-alloyed steels and irons – Molybdenum blue spectrophotometric method

ICS 77.040.30; 77.080

Språk: engelska

Publicerad: april 2006

Europastandarden EN 10184:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 10184:2006.

Denna standard ersätter SS-EN 10184, utgåva 1 och SS-EN 10184/AC:1991, utgåva 1.

The European Standard EN 10184:2006 has the status of a Swedish Standard. This document contains the official English version of EN 10184:2006.

This standard supersedes the Swedish Standards SS-EN 10184, edition 1 and SS-EN 10184/AC:1991, edition 1.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 10184

February 2006

ICS 77.040.30

Supersedes EN 10184:1989

English Version

Chemical analysis of ferrous materials - Determination of phosphorus in non-alloyed steels and irons - Molybdenum blue spectrophotometric method

Analyse chimique des matériaux sidérurgiques - Détermination du phosphore dans les aciers et fontes non alliés - Méthode par spectrophotométrie au bleu de molybdène

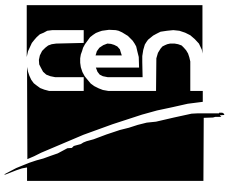
Chemische Analyse von Eisenwerkstoffen - Bestimmung von Phosphor in unlegierten Stählen und Eisen - Spektralphotometrisches Verfahren über Molybdänblau

This European Standard was approved by CEN on 30 December 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 10184:2006: E

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Foreword

This European Standard (EN 10184:2006) has been prepared by Technical Committee ECISS/TC 20 “Methods of chemical analysis of ferrous products”, the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2006, and conflicting national standards shall be withdrawn at the latest by August 2006.

This European Standard supersedes EN 10184:1989.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies a method for the molybdenum blue spectrophotometric determination of phosphorus in non-alloyed steels and irons.

The method is applicable to non-alloyed steels and irons with phosphorus contents from 0,005 % to 0,25 % (m/m).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition (ISO 14284:1996)*

3 Principle

Dissolution of a test portion in nitric and hydrochloric acids and controlled addition of perchloric acid.

Formation of the phosphomolybdate complex after removal of silicon and arsenic and reduction with hydrazine sulphate to molybdenum blue.

Spectrophotometric measurement of the blue complex at a wavelength of 680 nm or 825 nm.

4 Reagents

4.1 General

During the analysis, unless otherwise stated, only reagents of recognized analytical grade shall be used and only distilled water or water of equivalent purity.

Blank tests shall verify that the relevant reagents are free from phosphorus. Whenever necessary, the results shall be corrected accordingly. Grades giving high blank values are unsuitable and should be discarded.

4.2 Hydrochloric acid

ρ about 1,19 g/ml.

4.3 Nitric acid

ρ about 1,40 g/ml.

4.4 Perchloric acid

ρ about 1,67 g/ml.