

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14179-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 18.12.2019

Date of issue: 18.12.2019

Holder of certificate:

**A.M.C.O. United Samplers and Assayers GmbH
Buschstr. 95, 47166 Duisburg**

Tests in the fields:

**physical and chemical determination of ores, foundry raw materials, metal-products, ferro alloys, electroplating- and galvanizing solutions, wastewater, sulphuric acid;
Sampling and selected analyses of coke and coal;
Sampling and preparation of ores, foundry raw materials, metal-products and ferro alloys as well as solid fuels**

1 Sampling and preparation of ores, foundry raw materials, ferro alloys

ISO 4552-1 1987-12	Ferro alloys - sampling and preparation for chemical analysis; Part 1: Ferrochromium, ferrosilicochromium, ferrosilicon, ferrosiliconmanganese, ferromanganese
ISO 4552-2 1987-12	Ferro alloys - sampling and preparation for chemical analysis; Part 2: Ferrotitanium, ferromolybdenum, ferrotungsten, ferroniobium, ferrovanadium
DIN EN ISO 21068-1 2008-12	Chemical analysis of silicon-carbide-containing raw materials and refractory products - Part 1: General information and sample preparation

This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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<p>HfdE, volume 5, 56 following pages 2013</p>	<p>„Handbuch für das Eisenhüttenlaboratorium,, Sampling of Ferro alloys and additive metals. Universal rules for sampling of heaps and diverse packing- and loading units as well as conveyor belts.</p>
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2 Physical determinations of ores, foundry raw materials, ferro alloys

<p>DIN EN 15439 2012-11</p>	<p>Sludge, treated biowaste, soil and waste - Calculation of dry matter fraction after determination of dry residue or water content. (Matrix modification: <i>Products of zinc- and iron works industry</i>)</p>
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<p>HfdE, volume 5, 74 following pages 2013</p>	<p>Analysis of particle size, screen test, procedure</p>
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3 Chemical determination of metals, alloys and metal products, wastewater and sulphuric acid

<p>ISO 4140 1979-09</p>	<p>Ferrochromium and ferrosilicochromium; Determination of Chromium content; Potentiometric method</p>
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<p>ISO 4158 1978-12</p>	<p>Ferrosilicon, ferrosilicomanganese and ferrosilicochromium; Determination of silicon content; Gravimetric method</p>
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<p>DIN EN ISO 3815-2 2005-10</p>	<p>Zinc and zinc-alloys - Part 2: Analysis by inductively coupled plasma optical emission spectrometry</p>
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<p>DIN EN ISO 11885 2009-09</p>	<p>Water quality - determination of selected elements by inductive coupled plasma optical emission spectrometry (ICP-OES) (Modification: <i>Determination of elements in alloys, metals and additives for steel- and foundry industries as well as galvanizing samples, wastewater and sulphuric acid</i>)</p>
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<p>DIN EN ISO 15350 2010-08</p>	<p>Steel and iron - Determination of total carbon and Sulphur content - Infrared absorption method after combustion in an induction furnace (routine method).</p>
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<p>DIN EN 24159 1990-04</p>	<p>Ferromanganese and ferrosilicomanganese; determination of manganese content; potentiometric method</p>
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DIN 21068-2 2008-12	Chemical analysis of silicon-carbide-containing raw materials and refractory products - Part 2: Determination of loss on ignition, total carbon, free carbon and silicon carbide, total and free silica and total and free silicon
DIN 21068-3 2008-12	Chemical analysis of silicon-carbide-containing raw materials and refractory products - Part 3: Determination of nitrogen, oxygen and metallic and oxidic constituents
HfdE Bd. 2, 273 following pages 2004	Analytical determination of the silicon content in ferroalloys and additional metals

4 Sampling and selected analyses of coke and coal

DIN 51701-1 2007-12	Testing of solid fuels - Sampling and sample preparation - Part 1: Definitions
DIN 51701-2 2006-09	Testing of solid fuels - Sampling and sample preparation - Part 2: Sampling
DIN 51701-3 2006-09	Testing of solid fuels - Sampling and sample preparation - Part 3: Sample preparation
DIN 51701-4 2006-09	Testing of solid fuels - Sampling and sample preparation - Part 4: Equipment
DIN 51718 2002-06	Testing of solid fuels - Determination of the water content and the moisture of analysis sample
DIN 51719 1997-07	Testing of solid fuels - Determination of ash content
DIN 51720 2001-03	Testing of solid fuels - Determination of volatile matter content
DIN 51732 2014-07	Testing of solid mineral fuels - Determination of total carbon, hydrogen and nitrogen - Instrumental methods

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Abbreviations used:

DIN	Deutsches Institut für Normung
EN	Europäische Norm
HfdE	Handbuch für das Eisenhüttenlaboratorium (Manual for iron work laboratories)
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization

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