



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 50837-2013

Standard for Non-ferrous Metal Refinery Drawings

有色金属冶炼工程制图标准

(English Translation)

Issued on: August 8, 2013

Implemented on: March 1, 2014

Issued by: Ministry of Housing and Urban-Rural Development

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Foreword

This standard was prepared by China ENFI Engineering Corporation together with the organizations concerned, in accordance with the requirements of the "Notice on Printing

and Distributing the Plan for Formulating and Revising Engineering Construction Standards and Codes in 2008 (Second Batch)" (JIANBIAO [2008] No. 105) issued by the Ministry of Housing and Urban-Rural Development.

During the preparation of this standard, the drafting group carried out extensive and in-depth investigation and research, conscientiously summarized the practical experience of engineering drawing in the domestic non-ferrous metal smelting industry and, on the basis of widely soliciting opinions, finalized the standard through repeated discussion, revision and improvement and, finally, through review.

This standard consists of 5 chapters, the main contents of which are: general provisions, basic requirements, graphics and drawing methods, main drawing categories and their preparation, and legends.

The Ministry of Housing and Urban-Rural Development is in charge of the administration of this standard, the China Non-ferrous Metals Industry Engineering Construction Standards Administration Office is responsible for its routine management, and China ENFI Engineering Corporation is responsible for the explanation of specific technical contents. During the implementation of this standard, all organizations are kindly requested to sum up experience and accumulate data, and to send any comments and suggestions for modification and supplement to China ENFI Engineering Corporation (address: No. 12 Fuxing Road, Haidian District, Beijing; postcode: 100038) for reference in future revision.

Chief development organization: China ENFI Engineering Corporation

Participating development organizations: Changsha Engineering & Research Institute Ltd. of Nonferrous Metallurgy; China Nerin Engineering Co., Ltd.; Kunming Engineering & Research Institute of Nonferrous Metallurgy Co., Ltd.; Xi'an Engineering & Research Institute of Nonferrous Metallurgy; Shenyang Aluminium & Magnesium Engineering & Research Institute Co., Ltd.; Guiyang Aluminium & Magnesium Design & Research Institute Co., Ltd.

1 General provisions

1.0.1

This standard is formulated with a view to unifying the technical requirements for design drawing of non-ferrous metal smelting engineering, achieving the standardization of drawing, improving drawing efficiency and ensuring the quality of drawings.

1.0.2

This standard is applicable to the engineering drawing at all consulting and design stages of non-ferrous metal smelting engineering.

1.0.3

Legends, symbols and codes not specified in this standard may be extended as required on the basis of this standard, and shall be noted on the drawings.

1.0.4

The drawing of non-ferrous metal smelting engineering shall comply not only with this standard but also with the current relevant standards of the nation.

2.1 Requirement of drawing

2.1.1

On the premise of meeting the content and depth requirements of each consulting and design stage, drawings shall be concise, clear and easy to understand.

2.1.2

The simplified Chinese characters, units of measurement, names and symbols used in engineering consulting and design drawings shall comply with the current relevant national laws, regulations and provisions.

2.1.3

Drawings shall adopt appropriate drawing sizes and scales according to the different consulting and design stages; the layout of the drawing shall be reasonable, the design contents expressed on the drawing shall be complete and concise, the graphic projections shall be correct, and the figures and text in the drawing shall be accurate.

2.2 Drawing size and boundary format

2.2.1

Drawing sizes shall comply with Table 2.2.1.

Table 2.2.1 Basic drawing sizes (mm) - size codes A0, A1, A2, A3 and A4, dimensions B x L.

2.2.2

Where necessary, drawing sizes (Figure 2.2.2) may be selected in accordance with Table 2.2.2.

Figure 2.2.2 Drawing sizes. Solid line - basic size; dashed line - elongated size.

Table 2.2.2 Elongated sizes (mm) - size codes A0x2, A0x3, A1x3, A1x4, A2x3, A2x4, A2x5, A3x3, A3x4 and A3x5.

2.2.3

The frame format (Figure 2.2.3-1, Figure 2.2.3-2, Figure 2.2.3-3) shall be the format with a binding margin. Drawing sizes and frame dimensions shall comply with Table 2.2.3.

Figure 2.2.3-1 Landscape format of A0, A1, A2 and A3 drawings

Figure 2.2.3-2 Portrait format of A4 drawings

Figure 2.2.3-3 Portrait format of A0, A1 and A2 drawings

Table 2.2.3 Drawing sizes and frame dimensions (mm)

2.3 Drawing title bar

2.3.1

Drawings shall be provided with a title bar, the contents of which shall include the project name, drawing title, design stage, design date, revision, designer and reviewers at all levels, etc. The title bar should be located at the lower right corner of the drawing. For A4 drawings it should be located at the lower edge of the drawing, and may also be located at the upper edge.

2.3.2

The title bar of design drawings for overseas projects shall be annotated in the foreign language; for design drawings of domestic projects, annotation in a foreign language may be omitted where there is no special requirement.

2.3.3

The title bar of as-built drawings shall comply with the following provisions:

1 Where the as-built drawing is inconsistent with the original construction drawing and is to be redrawn, "as-built drawing" shall be entered in the design stage field of the title bar format.

2 Where the as-built drawing is completely consistent with the original construction drawing, an as-built drawing stamp may be affixed to the left of the title bar of the original construction drawing; the stamp shall be marked "As-built drawing", and its contents shall include the construction organization, project name, compiler, reviewer, technical director, compilation date, supervision organization, site supervisor and chief supervisor.

2.3.4

When a whole set or part of existing drawings is reused, the appraiser shall affix a reused drawing stamp to the left of the title bar of the original drawing; the stamp shall be marked "Reused drawing", and its contents shall include the appraiser, reviewer, project name, project number, compilation time, etc.

2.3.5

Where the contents of a drawing need to be jointly confirmed by several disciplines, a joint approval column shall be provided at the upper left corner outside the inner frame of the drawing and marked "Joint approval column"; its contents shall include discipline, signature,