

Compilation illustration of Group Standard of Green  
manufacture – General technology specifications of water-  
cooled metal mold centrifugal casting machine for ductile  
iron pipe(English translation draft)  
(Stage: Comments solicitation)

1. Brief of work

1) Task source

The task of English translation draft of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe* was given by China Foundry Association(CFA) on May 2023. The first draft was completed by Shenyang Yate Industrial Machinery Making Equipment Co., Ltd.(SYYT) In the beginning of August 2023 and be submitted to CFA for review, comments were given from CFA. SYYT had amended the first draft as per given comments, and the revised first draft had been submitted to CFA in the end of August 2023. On the 2nd September 2023, symposium of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* was held in Shenyang, China,the English translation draft was discussed by the present experts and suggestions and comments were given in that symposium. SYYT amended the English translation draft again as per all comments given, the amendment was completed in the end of October 2023.

The drafting of the English translation of this Group Standard was done by SYYT mainly. Preparation period is 12 months.

2) Work of main drafting team and members of work groups

SYYT is the main unit for translation of this Group Standard, and in charge of translation of this document and collection of all comments and suggestions, and amend the English translation draft of Group Standard accordingly.

Main members of draft translation of this document: LIANG Shuming, WANG Zhengqiang, ZHANG Yunfei.

Main work: The English translation draft was prepared as specified in GBT 20000.10-2016 *Guidelines for standardization-Part 10: General rules for the English translation of Chinese national standards* and GBT

20000.11-2016 *Guides for standardization-Part 11: General presentation of English translation of Chinese national standards*. The ISO standards corresponding the GB standards which are mentioned in normative reference were searched and reference methods have been marked. Related foreign documents were referred for equipment name mentioned in terms, to make the translation accurate.

### 3) Brief process of work

Draft (first draft and investigation) stage:

First draft of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* had been submitted to CFA by SYYT on April 20th, 2023. Then CFA organized discussion for the English translation draft, and preliminary comments were given.

SYYT amended the first draft as per those preliminary comments from May 2023 to June 2023. Video conference was held on June 14th, 2023 for discussion about the amended draft.

SYYT collected the comments proposed during the video conference on June 15th, 2023, and start to amend the English draft second time. Second revised draft of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* was submitted on August 29th, 2023.

The symposium for Group Standard of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* was held in Shenyang, China on September 2nd, leaders and experts of CFA and all units were present the symposium, Detail research and discussion for the second revised Group Standard had been done and lots of suggestions and comments were given.

From September 4th, 2023, SYYT started the amendment to *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* as per all suggestions and comments given in the symposium at the third time. Till October 30th, 33 reply comments were received. Among them, 31 comments were adopted, 1 comment was partial adopted, 1 comment was not adopted. Amendment had been completed on November 30th, 2023. Exposure draft and compilation illustration had been submitted to CFA, and they had been issued on internet for comments solicitation from public.

Comments solicitation stage:

Submission for approval stage:

Approval stage:

## 2. Principle of compilation and amendment for standard.

### 1) Basis or reason of the standard amendment

*Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* is parallel translated according the Standard in Chinese, all the contents in English draft are translated strictly and high uniformity according to Standard in Chinese.

The purpose of the English translation of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe*, is to introduce it internationally, and to make it be general standard for design, manufacture, inspection, operation and assessment of water-cooled metal mold centrifugal casting machine(WCCM) for ductile iron pipe(DIP) which is acknowledged all over the world. It will promote the pipe casting equipment manufacturer in China to enhance the management and technology to achieve international advance level.

On the other hand, the implement of this English translation of Group Standard, it will be great helpful in promotion of related National Standard in China mentioned in this Group Standard to the world.

### 2) Principle of standard compilation

Below principles and reasons have been followed:

(1) Advanced National Standards in China and other countries and international standards are adopted, reference method of international standards corresponding China standards are marked.

(2) High uniformity between the English translation and Chinese version of the Group Standard is ensured.

(3) Structure and contents in the English translation of Group Standard shall conform to requirements of International standard, to ensure the related experts and technicians can consult and understand it conveniently.

## 3. Brief of standardize object

WCCM is important equipment in DIP production, its performance relates to the quality of DIP. To guarantee the quality and efficiency of DIP production, Group Standard of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe* had been formulated in China as technology basis in manufacture of the WCCM. But similar standard is absence in international.

With the continuous growth of the DIP manufacture, and development and improvement of structure of various types centrifugal casting machine, also the demands of centrifugal casting machine abroad are

increasing year by year, it is necessary to promote the Group Standard of Chinese WCCM to the world, to make ductile iron pipe manufacturers fully understand the basic performance and technical requirements, also as an important basis for equipment selection and purchase.

Purpose of implement of this English translation version of this Group Standard, is to make the basic requirements for using and maintenance of WCCM are understood completely by DIP manufacturers abroad, it will be important basis of equipment selection and purchase, also the technical support for manufacture of the high quality DIP.

In order to make the English translation draft more universal and more practicability in WCCM industry, the English translation draft of this Group Standard is handed out to experts in related industry and reputed enterprises for comments, to make this draft be more detailed, wider coverage and stronger applicability.

#### 4. Comparison of international, foreign and Chinese Standards. Standard level analysis

1) If any items are adopted from international standards or advance foreign standards, the purpose, meaning, standardization level and reason of adoption shall be mentioned in detail.

None at present.

2) Deviation of similar international, foreign and China standards. Or related data comparison of the tested foreign sample.

This English translation draft is equivalent translation based on the *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe (T/CFA 0203141-2021)* issued by CFA.

3) Standard level analysis

There is no standard in this type in China and foreign countries at present, the standard level is advance in the world.

#### 5. Basis of confirmation of main technical contents in Standard

##### 5.1 Application scope

The terms and definitions, classification, technical conditions, methods of inspection and acceptance, requirements of marking, packaging, storage and transportation etc of WCCM are specified in this document.

This document is applicable in design, manufacture, inspection, transportation and storage etc of WCCM.

6. Analysis reports of main results of test(or verification), technical demonstration, expected economic effect etc(emphasized analyses need to be done

on amended contents)

## 6.1 Main difference before and after standard amendment

(1) This document is based on the amended Group Standard in Chinese, the general structure of standard had been adjusted accordingly, to strengthen the logicity of the standard.

(2) Main amendments in technology include following:

- (a) Terms and definitions
- (b) Classification and basic parameters
- (c) Technical requirements
- (d) Test methods
- (e) Inspection rules

(3) The main changes of T/CFA 0203141-2021 *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation draft)* are shown as following:

- entries in “3 *Terms and definitions*” are updated, some of entries are deleted, and some new entries are added.

- Table 1 and Table 3 in “4 *Classification and basic parameters*” are amended. Also the “*Example of model and Cooling water for mold*” are adjusted.

- Amendments and supplements for “5 *Technical requirements*” have been done in Chinese version, English translation have been done as per the amended contents in Chinese accordingly.

- Chinese texts in “6 *Test methods*” have been adjusted, some test methods are added, and standards to be conformed for each test are listed. The Table 7 is moved to “7 *Inspection rules*”.

- Content of type test is deleted from “7 *Inspection rules*”, “Acceptance inspection” is added.

## 6.2 Application verification

None at present.

## 6.3 Verification of technical and economic

None at present.

## 6.4 Expected economic effect

The purpose of the English translation of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe*, is to introduce it internationally, and to

make it be general standard for design, manufacture, inspection, operation and assessment of WCCM for DIP which is acknowledged all over the world. It will promote the pipe casting equipment manufacturer in China to enhance the management and technology to achieve international advance level.

On the other hand, the implement of this English translation of Group Standard, it will be great helpful in promotion of related National Standard in China mentioned in this Group Standard to the world.

**7. Coordination of related laws, regulations, rules and related standards at present, especially the compulsory standards**

This document is coordination with related laws, regulations, rules and related standards at present.

**8. The process and basis of treatment of major differences**

No

**9. Requirements and suggestions for standard implement**

1) Requirement and suggestions for standard implement

None at present.

2) Suggestion of implement date of this standard

None at present.

**10. Suggestion for abolishing current standard**

None at present.

**11. Explanation of patent involved in the standard**

No.

**12. Explanation of important contents and other items to be declared**

No other items need to be explained or declared.

Draft Group of *Green manufacture-General technology specifications of water-cooled metal mold centrifugal casting machine for ductile iron pipe(English translation)*

November 2023