



OTIF/RID/CE/GTP/2019/4

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Original: Russian/English

RID: 11th Session of the RID Committee of Experts' standing working group
(Vienna, 25 - 29 November 2019)

Subject: Correction of the term "Fine grain steels"; Proposal to transfer the term "Fine grain steels" to 1.2.1; Proposal to use the term "Fine grain steels" in the English version

Proposal submitted by the Russian Federation

Introduction

1. In the current versions of RID and Annex 2 to SMGS, the definition of the term "Fine grain steels" is contained in paragraph 6.7.2.1 of chapter 6.7. This term is used in chapter 6.7 (6.7.2.2.1, 6.7.2.3.3.3, 6.7.3.2.1, 6.7.3.3.3.3, 6.7.4.2.1, 6.7.4.3.3.3).

In addition, the term "Fine grain steels" is widely used in chapter 6.8 (6.8.2.1.10, 6.8.2.1.12, 6.8.4 (special provision TT 8), 6.8.5.1.1, 6.8.5.1.2, 6.8.5.2.1). However, in chapter 6.8 there is no reference to the definition of the term "Fine grain steel", which is contained in paragraph 6.7.2.1 of chapter 6.7; this term is not defined in 1.2.1, which contains the main terms and definitions.

2. According to experts from the Russian Federation, the definition of the term "Fine grained steel" as a steel with a ferritic grain size of 6 or less, determined in accordance with ASTM E 112-96 or EN 10028-3, part 3, may mislead users of RID and SMGS Annex 2, since the words "or less" after indicating the size (number 6) of ferritic grain can be assigned to the number (No.) of the grain, which is not correct. They should relate to the physical grain size (microns). According to the standards (ASTM E 112-96, EN 10028-3, ISO 643:2012, EN ISO 643 (2012-12)), the following relationship is true:

the smaller the number (No.) of the grain = the larger the physical grain size (microns):

Grain number (No)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
Grain size, micron	320	269,1	226.3	190.3	160	134.5	113.1	95.1	80	67.3	56.6	47.6	40	33.6

Grain number (No)	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5
Grain size, micron	28.3	23.8	20	16.8	14.1	11.9	10	8.4	7.1	5.9	5	4.2	3.5	3.0

Standards ISO 643:2012, EN ISO 643 (2012-12) and ASTM E 112-96 are identical in terms of the procedure for determining grain size. In this regard, we believe that in international regulations a reference to standard ISO 643:2012 is preferable for all participants in the transport process.

3. Analysis of the English version of RID revealed that in Chapter 6.7, the term “Fine grain steel” is used, whereas in Chapter 6.8, the term used is “Fine-grained steel”.

Proposals

4. Due to the fact that the term “Fine grain steel” is used in more than one chapter and in Chapter 6.8 there is no reference to the definition of the term “Fine grain steel”, which is contained in 6.7.2.1 of Chapter 6.7, we propose that the term “Fine grain steel” be included in 1.2.1, “Terms and definitions”, and that it be deleted from 6.7.2.1 of Chapter 6.7.
5. In order correctly to understand the requirements, it is proposed that the term “Fine grain steel” be defined as follows:

“***Fine grain steel***” means steel with a ferritic grain number of 6 or more, determined in accordance with ISO 643:2012.”

6. Use only the term “Fine grain steel” in the English version.

Justification

7. These proposals will correctly interpret the requirements of international regulations for the transport of dangerous goods.
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