

Eco Mark Product Category No.138

**“Building Products (Materials for Supplies) Version1.9”  
Certification Criteria  
D-1 Fire-retardant steels**

Japan Environment Association  
Eco Mark Office

**1. Purpose of Establishing Criteria**

Omitted.

**2. Applicable Scope**

Fire-retardant steels specified in the Technical Recommendations for Steel Construction for Buildings Part 1 Guide to Steel-rib Fabrications of the Architectural Institute of Japan that was compiled as an explanation to the Japanese Architectural Standard Specification JASS6 Structural Steelwork Specification for Building Construction

**3. Terminology**

Omitted.

**4. Certification Criteria and Certification Procedure**

**4-1. Environmental Criteria and Certification Procedure**

(1) The product shall be steel materials of which high-temperature strength is remarkably higher than ordinary building steel materials and that can eliminate or reduce usage of refractory materials. Specifically, the product shall be the steel materials to be used in a major structural part of construction, and its yield point (or load-bearing capacity) at 600°C shall have 2/3 or more of the standard lower limit of the yield point at normal temperature.

[Certification Procedure]

The applicant shall indicate in the Attached Certificate whether or not the product complies with this item, and submit a certificate such as test results, etc

(2) The product shall consider an amount and energy consumption of a new resource to

be committed that becomes necessary in the manufacturing phase.

[Certification Procedure]

The applicant shall indicate in the Attached Certificate whether or not the product complies with this item, and submit a reference material indicating an amount and energy consumption of a new resource to be committed per ton of crude steel in the manufacturing phase.

(3) The product shall be recyclable similarly to plain steel. For the composition of metal materials, the product shall use a material having general components in Japan, assuming that it will be recycled to a material of same system after being used. In addition, major elements to be added to ensure fire-resistance performance shall not block recycling.

[Certification Procedure]

The applicant shall indicate in the Attached Certificate whether or not the product complies with this item, and state JIS number under which a metal material falls, and a name of the metal material. The applicant shall submit any reference material describing that major elements to be added to ensure fire-resistance performance will not block recycling to plain steel.

(4) The product shall minimize consumption of rare metals (31 types of minerals defined by the Rare Metal Overall Measure Special Subcommittee of the Mining Industry Council of the Ministry of Economy, Trade and Industry) whenever possible. (The chemical components of metal materials shall follow JIS under which the product falls. Of major elements to be added to ensure fire-resistance performance, for any alloy elements that are not specified in JIS, their additive amounts shall be equivalent to or lower than the amount of other rare metals specified in JIS.)

[Certification Procedure]

The applicant shall indicate in the Attached Certificate whether or not the product complies with this item, and submit an example of chemical component table of a metal material. If any rare metal is used, the applicant shall indicate whether or not the product complies with this item, and exemplify a case that they are making efforts to control consumption of the rare metal, or the chemical component of alloy follows JIS. Of major elements to be added to ensure fire-resistance performance, for any alloy elements that are not specified in JIS, the applicant shall exemplify a case that their additive amounts shall be equivalent to or lower than the amount of other rare metals specified in JIS

(5) The product shall be accompanied by a manual for any part that differs from plain steel relating to installation, use, maintenance/management, disassembly, disposal and recycling is available for reading by the builder and the building owner. In addition, the product shall be able to eliminate or reduce usage of refractory materials, and any technological information necessary for designing/fabrication and construction to ensure adequate safety of fire resistance (secondary materials such as bolts, welding materials, etc., a method for verifying safety in case of a fire, etc.) shall be made available.

[Certification Procedure]

The applicant shall indicate in the Attached Certificate whether or not the product complies with this item, and a manual for any part that differs from plain steel relating to installation, use, maintenance/management, disassembly, disposal and recycling or a sample of technological information, etc. shall be submitted.

(6) In manufacturing the applied product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the “Environmental Laws, etc.”) must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous substances in the area where the plant performing the final manufacturing process is located.

In addition, the state of compliance with the Environmental Laws, etc. for the past five years from the date of application (whether there is any violation) must be reported. If there is any violation, proper remedies and preventive measures shall have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.

[Certification Procedure]

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the business of manufacturing the applied product or the relevant plant manager (entry or attachment of a list of names of the Environmental Laws, etc.) must be submitted. (Entry example 3)

In addition, the applicants shall report whether there is any violation in the past five years, including a violation subject to administrative punishment or administrative guidance, and if there is, the following documents in a and b must be submitted:

- a. With respect to the fact of violation, guidance documents from administrative agencies (including order of correction and warning) and copies of written

answers (including those reporting causes and results of correction) to such documents (clearly indicating a series of communication);

- b. Following materials (copies of recording documents, etc.) concerning the management system for compliance with the Environmental Laws, etc. in 1)-5):
- 1) List of the Environmental Laws, etc. related to the area where the plant is located;
  - 2) Implementation system (organization chart with roles, etc.);
  - 3) Bylaws stipulating retention of recording documents;
  - 4) Recurrence prevention measures (future preventive measures)
  - 5) State of implementation based on the recurrence prevention measures (check results of on-site inspection, etc. as compliance condition).

#### 4-2. Quality Criteria and Certification Procedure

(7) For the quality, the product shall comply with the JIS standard specified by the Minister of Land, Infrastructure and Transportation or have obtained the certification of the Minister of Land, Infrastructure, Transport and Tourism, as steel materials to be used in a major structural part of construction, in accordance with the Building Standards Act, Article 37.

[Certification Procedure]

The applicant shall submit test results indicating that the product complies with the corresponding JIS standard or a copy of the certification of the Minister.

#### 5. Product Classification, Indication and Others

Omitted.

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May 5, 2007	Established: (Version 1.0)
January 15, 2012	Revised ( D-1 and 2 added, Version1.7)
Term of Validity	March 31, 2017

The Certification Criteria for the Product Category will be revised when necessary.