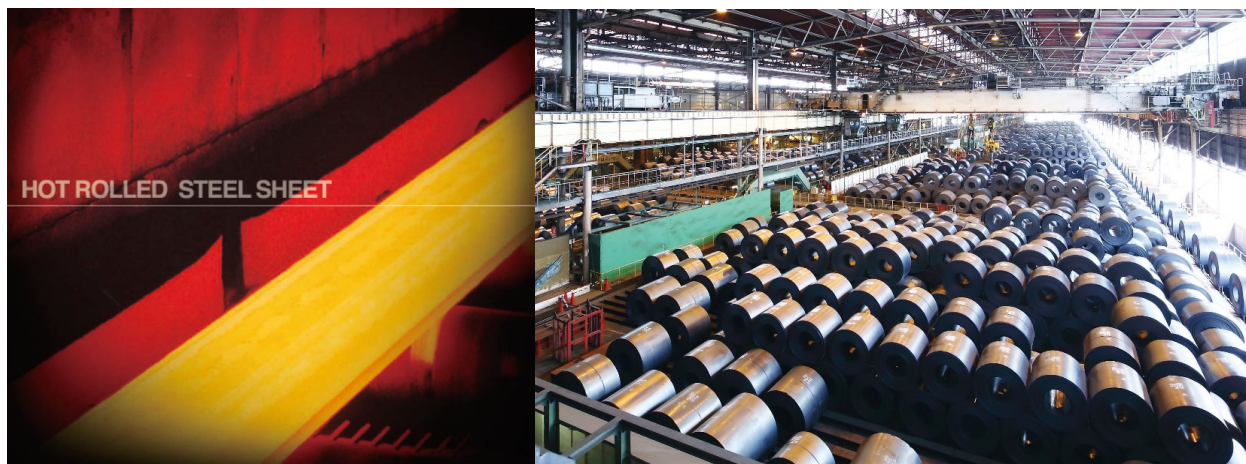




JFE Steel Corporation

Hot-Rolled Steel Sheets and Coils



Functional unit

1 metric ton

System boundary

final products intermediate products

Production stage (Raw material supply,
Transport to factory, Manufacturing)
and Recycling potential

Main specifications of the product

Production Site:

West Japan Works, East Japan Works

Representative Standards:

JIS (Japanese Industrial Standards),

JFE Standards and others

Details are listed on Page 3 (8. Remarks)

Shape: Coil, Slit and Sheet

Thickness: 1.2 - 25.4mm

Registration#	JR-AW-24037E
PCR number	PA-180000-AW-05
PCR name	Steel products (except for construction use)
Publication date	28 March 2025
Verification date	11 November 2024
Verification method	Product-by-product
Verification#	JV-AW-24067
Expiration date	10 November 2029
PCR review was conducted by:	
Approval date	10 May 2023
PCR review panel chair	Yasunari Matsuno (Chiba University)

Third party verifier*

Takahiro Atoh

Independent verification of data & declaration in
accordance with ISO14025

internal external

*Auditor's name is stated if system certification has been performed.

Company Information

JFE Steel Corporation Automotive Steel Business Planning Dept., Sheet Business Planning Dept.

<https://www.jfe-steel.co.jp/en/index.html>

1. Results of life cycle impact assessment (LCIA)

Parameter \ Stage	Production stage and Recycling potential [A1],[A2],[A3] and [D]	Production stage (cradle to gate) [A1],[A2] and [A3]	Unit
Global warming IPCC2013 GWP100a	1.6E+03	2.7E+03	kg-CO ₂ eq
Acidification	-1.0E+00	6.2E-01	kg-SO ₂ eq
Photochemical ozone	2.7E-02	4.7E-02	kg-PO ₄ ³⁻ eq

Parameter \ Stage	Unit	Total	[A1] Raw material supply	[A2] Transport to factory	[A3] Manufacturing	[D] Recycling potential
Global warming IPCC2013 GWP100a	kg-CO ₂ eq	2.7E+03	6.7E+02	9.8E+00	2.0E+03	-1.1E+03
Ozone layer destruction	kg-CFC-11eq	3.0E-07	1.7E-07	6.6E-11	1.2E-07	-1.9E-07
Acidification	kg-SO ₂ eq	6.2E-01	3.3E-01	5.8E-02	2.4E-01	-1.6E+00
Photochemical ozone	kg-C ₂ H ₄ eq	7.7E-03	5.4E-03	1.1E-03	1.2E-03	-2.3E-01
Eutrophication	kg-PO ₄ ³⁻ eq	4.7E-02	1.1E-05	5.9E-14	4.7E-02	-2.0E-02

2. Life cycle inventory analysis (LCI)

Parameter	Unit	Unit
Non-renewable material resources	1.3E+03	kg
Non-renewable energy resources	3.2E+04	MJ
Renewable material resources	9.3E+02	kg
Renewable primary energy	8.8E+01	MJ
Consumption of freshwater	2.9E+00	m ³

3. Material composition

Material	Unit	Unit
iron [Fe]	≥95.0	wt%
carbon [C]	≤1.5	wt%
silicon [Si]	≤3.0	wt%
manganese [Mn]	≤3.0	wt%
phosphorus [P]	≤0.15	wt%
sulfur [S]	≤0.05	wt%

4. Waste to disposal

Parameter	Unit	Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste.	1.8E+00	kg

*Data derived from LCA and not assigned to the impact categories of LCIA

5. Additional explanation

- This EPD shows the results calculated without applying system extensions.
- Scrap recycling potential is calculated based on ISO 20915/JIS Q 20915 and shown as [D] in table 1. Recycling ratio used in this calculation is 93.0%. (Using data is 2018FY from The Japan Iron and Steel Federation, The Japan ferrous raw materials association and The Japan Steel Can recycling Association).
- The environmental impact of self-generated electricity was calculated as primary data of fuel and the basic unit data of grid power consumption is the average of 10 electric power suppliers of Japan in 2014FY.
- Each item (except iron) in table 3 is the maximum value of all product standards covered by this EPD.
- Primary data in 2021 is used.

6-1. Supplementary environmental information

The production site is certified to ISO 14001.

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
manganese [Mn]	7349-96-5	• Industrial Safety and Health Act
copper [Cu]	7440-50-8	• Industrial Safety and Health Act
nickel [Ni]	7440-02-0	• Industrial Safety and Health Act
chromium [Cr]	7440-47-3	• Industrial Safety and Health Act
molybdenum [Mo]	7439-98-7	• Industrial Safety and Health Act

7. Assumptions of secondary data used

IDEA v2.1.3 database is used. Steel scrap data (JP-AJ-0001) from the Japan Iron and Steel Federation are used.

8. Remarks

Representative standards:

JIS (Japan Industrial Standards);

G 3101, G 3106, G 3113, G 3114, G 3116, G 3125,

G 3131, G 3132, G 3134, G 3136, G 4051, G 4053, C 2555 and others

JFE Standards;

Hot rolled steel sheets for automobile use (JFE-HA),

Hot rolled steel sheets with good press formability (JFE-HDN, HEN, HFN),

Hot rolled corrosion resistance steel sheets (JFE-ASA),

Hot rolled checkered plate (JFE-HCP),

Hot rolled steel sheets for electric resistance welded pipe and tube (JFE-HP) and others

The Japan Iron and Steel Federation Standard (JFS);

JFS A 1001 (e.g. JSH270C) and others

ASTM; (e.g. A36/A36M), SAE J403 (e.g. SAE1006), EN10025-2 (e.g. S235JR), IS 2062 (e.g. E250) and others

Including others requested by customers based on these standards

- March, 2025; Modification of the comments in Table "5. Additional explanation".

- For data quantification, please refer to PCR and Rules on quantification and declaration.
- Comparative assertion is permitted only when Rules on quantification and declaration are satisfied.
(Reference URL : <https://ecoleaf-label.jp/regulation/>)