

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization 14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan https://ecoleaf-label.jp/



SAWL PIPE



Functional unit

1 metric ton

System boundary

☐ final products ■intermediate products Production Stage (Raw material acquisition, manufucturing) and Indirect effect

Main specifications of the product

Production Site:

West Japan Works (Fukuyama)

Representive Standards:

Listed on Page 3 (5. Additional Information)

Shape: SAWL Pipe

Available size: OD 400-1422mm, WT 6.0-

50.8mm,

Company Information

JFE Steel Corporation

About us: https://www.jfe-steel.co.jp/en/index.html Contact us:

https://www.jfe-steel.co.jp/en/contact.html

Registration#	JR-AJ-23013E		
PCR number	PA-180000-AJ-04		
PCR name	Steel products for construction		
Publication date	9/15/2023		
Verification date	6/30/2023		
Verification method	Product-by-product		
Verification#	JV-AJ-23013		
Expiration date	6/29/2028		
PCR review was conducted by:			
Approval date	4/1/2022		
PCR review	Yasunari matsuno		
panel chair	(Chiba University)		
Third party verifier*			

Third party verifier*

Takahiro Atoh

Independent verification of data & declaration in accordance with ISO14025 & ISO21930

> □internal ■ external

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

Registration number: JR-AJ-23013E

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1. Results of life cycle impact assessment (LCIA)

stage Parameter	[A1,A2,A3] +[D] ¹⁾	[A1,A2,A3] ²⁾	Unit
Global warming IPCC2013 GWP100a	1100	2100	kg-CO₂eq
Acidification	0.66	0.66	kg-SO₂eq
Eutrophication	0.046	0.046	kg-PO ₄ 3-eq

1)[A1,A2,A3]+[D]:sum of [A1],[A2],[A3] and [D] 2)[A1,A2,A3]:sum of [A1],[A2] and [A3]

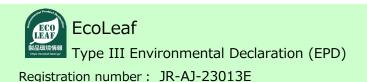
stage Parameter	Unit	Total	[A1] Raw material acquisition	[A2] Transport to factory	[A3] Manufacturin g	[D] Indirect effect
Global warming IPCC2013 GWP100a	kg-CO ₂ eq	2.1E+03	9.3E+02	2.3E+01	1.2E+03	-1.0E+03
Ozone layer destruction	kg-CFC-11eq	4.5E-07	1.9E-07	1.5E-10	2.6E-07	-1.8E-07
Acidification	kg-SO₂eq	6.6E-01	4.3E-01	3.8E-02	1.9E-01	-1.5E+00
Photochemical ozone	kg-C ₂ H ₄ eq	1.5E-02	7.3E-03	7.1E-04	7.1E-03	-2.2E-01
Eutrophication	kg-PO ₄ 3-eq	4.6E-02	1.4E-05	1.3E-13	4.6E-02	-1.8E-02

2. Life cycle inventory analysis (LCI)		
Parameter		Unit
Non-renewable material resources	9.6E+02	kg
Non-renewable energy resources	1.2E+03	MJ
Renewable material resources	1.2E+03	kg
Renewable primary energy	2.6E+02	MJ
Consumption of freshwater	3.9E+00	m ³

3. Material composition		
Material		Unit
iron[Fe]	94.2	wt%
carbon[C]	0.2	wt%
silicon[Si]	1.0	wt%
manganese[Mn]	2.0	wt%
nickel[Ni]	1.0	wt%
chromium[Cr]	0.5	wt%
molybdenum[Mo]	0.5	wt%
copper[Cu]	0.5	wt%
phosphorous[P]	0.05	wt%
sulfur[S]	0.05	wt%

4. Waste to disposal			
Parameter		Unit	
Hazardous waste	-	kg	
Non-hazardous waste.	1.7E+00	kg	
Treated MSW for landfill	0.0E+00	kg	
Treated industrial waste for landfill	1.7E+00	kg	

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



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5. Additional explanation

•The indirect effect (scrap recycling potential) is calculated based on ISO 20915/JIS Q 20915 and shown as [D]Iindirect effect in table "1. Results of life cycle impact assessment (LCIA)".

The indirect effect is added to the total value (sum of [A1], [A3]) in tables.

•Recycling ratio used in this calculation is 93.0% (calculated based on ISO 20915/JIS Q 20915 and using FY 2018 data from The Japan Iron and Steel Federatin, The Japan Steel Can recycling Association and The Japan ferrous raw materials

association).

- •The source of unit power consumption is the average of 10 electric power suppliers of Japan in 2014.
- ·Primary data collected in 2018.

Products Shape: Longitudinal Submeged Arc Welded Steel Pipe

Representive Applicattions: Transportation for gases, oiles and water. Boiler and Pressure vessel. Structures. Representive Standards:

JIS; G3444, G3457, G3475, A5525, A5530

API; 5L, 2B ASTM; A53, A134, A139, A252, A671, A672, A691, A525

DNV; DNV-ST-F101 ISO; 3183 CSA; Z245.1 AWWA C 200 JPI etc.

Including others requested by customers based on these standards

6-1. Supplementary environmental information

The Products are manufactured in ISO14000 certified factories.

West Japan Works (Fukuyama, Certified data 1998/3/2, Certification Number E026)

6-2. Regulated hazardous substances			
Substance	CAS No.	Reference to standards or regulations	
copper [Cu]	7440-50-8	Industrial Safety and Health Act.	
manganese [Mn]	7439-96-5	Industrial Safety and Health Act.	
nickel [Ni]	7440-02-0	· Act on Confirmation, etc. of Release Amounts of Specific Chemical	
chromiume [Cr]		Substances in the Environment and Promotion of Improvements to	
molybdenum [Mo]	7439-98-7	the Management Thereof	

7. Assumptions of secondary data used

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

8. Remarks

- 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/)

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