



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-AW-23017E

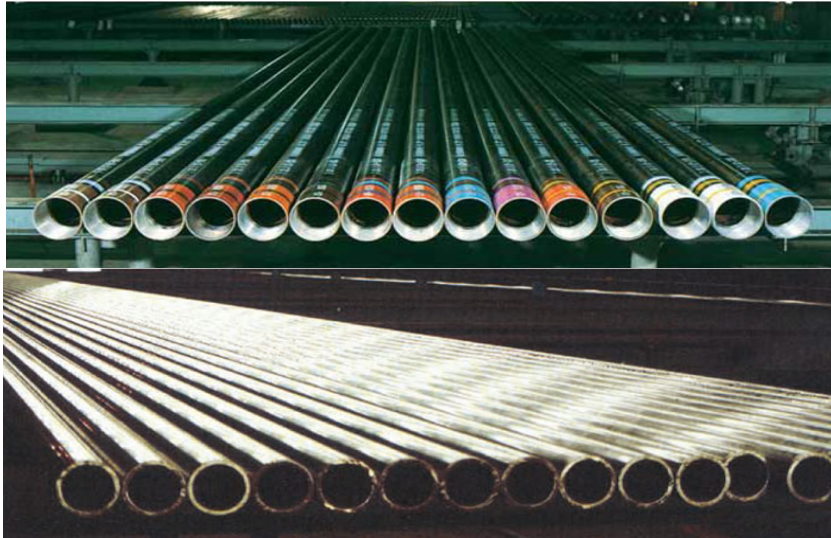
Japan EPD Program by SuMPO

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



JFE Steel Corporation

Seamless (OCTG) and LinePipe, Piping & Structures



Functional unit

1 metric ton

System boundary

- final products intermediate products
- Production Stage (Raw material acquisition and Transportation to factory, manufacturing) and Indirect effect

Main specifications of the product

Production Site:
Chita Works

Representative Standards:
Listed on Page 3 (5. Additional Information)

Shape:
Seamless Pipe

Size Range:
OD; 25.4mm(1inch) - 426mm(16.8inch)
WT; 2.3mm(0.09inch) -65mm(2.56inch)
Length; 4m(13.1ft) - 28.5m(93.5ft)

Company Information

JFE Steel Corporation Tubular Business Planning & Marketing Dept.
About us: <https://www.jfe-steel.co.jp/en/index.html>
Contact us: <https://www.jfe-steel.co.jp/en/contact.html>

Registration#	JR-AW-23017E
PCR number	PA-180000-AW-05
PCR name	Steel products (except for construction use)
Publication date	12/26/2023
Verification date	10/16/2023
Verification method	Product-by-product
Verification#	JV-AW-23017
Expiration date	10/15/2028
PCR review was conducted by:	
Approval date	5/10/2023
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.

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**1. Results of life cycle impact assessment (LCIA)**

Parameter	stage	[A1,A3]+[D] ¹⁾	[A1,A3] ²⁾	Unit
Global warming IPCC2013 GWP100a		1.3E+03	2.4E+03	kg-CO ₂ eq
Acidification		-1.6E+00	3.0E-02	kg-SO ₂ eq
Eutrophication		3.8E-02	5.8E-02	kg-PO ₄ ³⁻ eq

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

2)[A1,A3]:sum of [A1] and [A3]

Parameter	stage	Unit	Total	[A1] Raw material acquisition and Transportation to factory	[A3] Manufacturing		[D] Indirect effect
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	2.4E+03	7.4E+02	1.7E+03	-	-1.1E+03
Ozone layer destruction		kg-CFC-11eq	-6.2E-08	1.8E-07	-2.4E-07	-	-1.9E-07
Acidification		kg-SO ₂ eq	3.0E-02	5.5E-01	-5.2E-01	-	-1.7E+00
Photochemical ozone		kg-C ₂ H ₄ eq	2.1E-02	1.0E-02	1.1E-02	-	-2.3E-01
Eutrophication		kg-PO ₄ ³⁻ eq	5.8E-02	6.6E-06	5.8E-02	-	-2.0E-02

2. Life cycle inventory analysis (LCI)

Parameter		Unit
Renewable primary energy	2.5E+02	MJ
Non-renewable energy resources	4.3E+04	MJ
Renewable material resources	1.0E+03	kg
Non-renewable material resources	9.3E+02	kg
Consumption of freshwater	8.4E-01	m ³

3. Material composition

Material		Unit
iron[Fe]	≥88.8	wt%
manganese[Mn]	≤1.65	wt%
nickel[Ni]	≤3.8	wt%
chromium[Cr]	≤3.50	wt%
molybdenum[Mo]	≤1.24	wt%
copper[Cu]	≤1.00	wt%

4. Waste to disposal

Parameter		Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste	9.1E-01	kg

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



5. Additional explanation

- The indirect effect (scrap recycling potential) is calculated based on ISO 20915/JIS Q 20915 and shown as [D]indirect 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.

Each item (except iron) in the table "3. Material composition" is the maximum value of all product standards covered by this EPD.

Representive Standards:

JIS; G3454(STPG), G3458(STPA), G346(STPT), G3460(STPL),
G3455(STS), G3461(STB), G3462(STBA), G3429(STH),
G3444(STK), G3445(STKM), G3475(STKN),G3466(STKR)
ATSM A53,A106,A192,A210,A213,A333,A519
API 5CT and 5L grades, ISO 11960 and 3183, DNV-ST-F101,
JFE-Sreies(OCTG for carbon and sour grades etc.), EN10216-1,2
Including others requested by customers based on these standards

6-1. Supplementary environmental information

The Products are manufactured in ISO14001 certified factories.

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
manganese [Mn]	7439-96-5	• Industrial Safety and Health Act.
nickel [Ni]	7440-02-0	• Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement
chromium [Cr]	7440-47-3	
molybdenum [Mo]	7439-98-7	
copper [Cu]	7440-50-8	• Industrial Safety and Health Act.

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

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- 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/>)