SuMPO EPD
Type III Environmental Declaration (EPD)
Registration number : JR-BO-24008E

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

NIPPON STEEL | NIPPON STEEL CORPORATION

Stainless Steel Seamless Tubes and Pipes for the Chemical Industry and Boilers

Functional unit

1 t

System boundary

☐ final products ■intermediate products

Production Stage

(Raw material supply, Transport, Manufacturing)

Main specifications of the product

Production sites : Kansai Works (Wakayama, Amagasaki)
Kyushu Works (Yawata Hikari)

Main standards :
Austenitic/duplex/martensitic/ferritic stainless steel pipes

Sizes : outside diameter : 6.0mm～406.4mm
thicknes : 1.2mm～45.0mm

Company Information

NIPPON STEEL CORPORATION
Specialty Tubular Products Marketing Dept.
Energy Tubular Products Marketing Div.
Pipe and Tube Unit
https://www.nipponsteel.com

Registration#	JR-BO-24008E
PCR number	PA-187000-BO-03
PCR name	Stainless steel products
Publication date	3/10/2025
Verification date	2/19/2025
Verification method	Product-by-product
Verification#	JV-BO-24008
Expiration date	2/18/2030

PCR review was conducted by:

Approval date	12/4/2023
PCR review panel chair	Ken Yamagishi Sustainable Management Promotion Organization

Third party verifier*

Kazuo Naito

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

☐internal ■external

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

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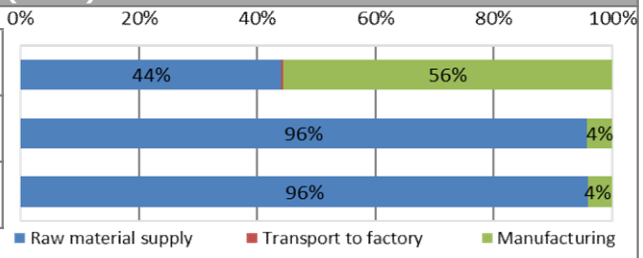
1. Results of life cycle impact assessment (LCIA)

Global warming IPCC2013 GWP100a	7700	kg-CO_2eq
Acidification	87	kg-SO_2eq
Eutrophication	2.6	kg-PO_4^{3-}eq



Parameter \ stage	Unit	Total	Raw material supply	Transport to factory	Manufacturing		
Global warming IPCC2013 GWP100a	kg-CO_2eq	7.7E+03	3.4E+03	3.0E+01	4.3E+03		
Ozone layer destruction	kg-CFC-11eq	6.6E-06	1.0E-06	2.5E-10	5.6E-06		
Acidification	kg-SO_2eq	8.7E+01	8.3E+01	1.0E-01	3.6E+00		
Photochemical ozone	kg-C_2H_4eq	4.2E-01	3.6E-01	1.9E-04	6.5E-02		
Eutrophication	kg-PO_4^{3-}eq	2.6E+00	2.5E+00	2.1E-13	1.0E-01		

2. Life cycle inventory analysis (LCI)

Parameter		Unit
Non-renewable material resources	3.1E+02	kg
Non-renewable energy resources	1.2E+05	MJ
Renewable material resources	6.4E+02	kg
Renewable primary energy	6.2E+03	MJ
Consumption of freshwater	2.0E+01	m^3

3. Material composition

Material		Unit
C	≦0.15	%
Si	≦2.00	%
Mn	≦2.50	%
P	≦0.20	%
S	≦0.15	%
Ni	≦23.0	%
Cr	≦27.0	%
Mo	≦7.00	%

4. Waste to disposal

Parameter		Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste.	6.9E+01	kg

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

5. Additional explanation

1. Scenarios of transport to site follow the PCR. For the inter-factory transportation for intermediate products, distances were measured using mapping software.
2. Each item in table 3 is the maximum value of all product standards covered by this EPD.
3. Primary data collected in 2022. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.
4. For metallurgical coal and alloys, the inventory data include transport, so the transport of these items is not counted.

6-1. Supplementary environmental information

Production site is certified to ISO 14001.

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	Industrial Safety and Health Act

7. Assumptions of secondary data used

The IDEA2.1.3 data is used.

8. Remarks

The steel grades listed on the previous page are also applicable to machine structural use.

- 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/)