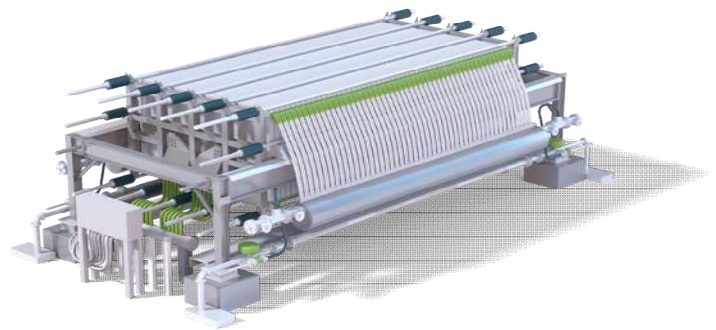


**NIPPON STEEL | NIPPON STEEL CORPORATION**

# Nickel Coils/Sheets



Bipolar ion-exchange membrane process electrolyzer,  
BiTAC® [thyssenkrupp nucera ]

## Functional unit

1t

## System boundary

final products      intermediate products

Production Stage(Raw material supply,Transport,Manufacturing)

## Main specifications of the product

Production sites :

East Nippon Works , Kansai Works , Kyushu Works

Main standards :

JIS G4902 NW2201 , ASTM B162 UNS N02201

NIPPON STEEL original :

NAR-N200 , N201

Type :

## Company Information

**NIPPON STEEL CORPORATION**

<https://www.nipponsteel.com/>

Registration#	JR-BO-24006E
PCR number	PA-187000-BO-03
PCR name	Stainless steel products
Publication date	1/10/2025
Verification date	12/16/2024
Verification method	Product-by-product
Verification#	JV-BO-24006
Expiration date	12/15/2029
PCR review was conducted by:	
Approval date	12/4/2023
PCR review panel chair	Ken Yamagishi Sustainable Management Promotion Organization

## Third party verifier\*

Hiromi Horikawa

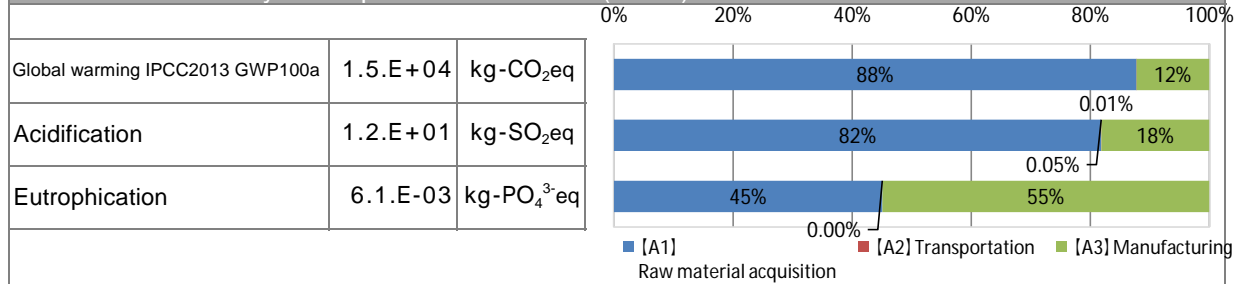
Independent verification of data & declaration in accordance with ISO14025

internal      external

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

Registration number : JR-BO-24006E

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



Parameter	stage	Unit	Total	[A1] Raw material acquisition	[A2] Transportation	[A3] Manufacturing
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	1.5E+04	1.3E+04	1.9E+00	1.9E+03
Ozone layer destruction		kg-CFC-11eq	1.5E-02	1.5E-02	1.6E-11	2.0E-05
Acidification		kg-SO <sub>2</sub> eq	1.2E+01	9.8E+00	6.3E-03	2.2E+00
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	2.4E-01	1.7E-01	1.2E-05	7.1E-02
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	6.1E-03	2.8E-03	1.3E-14	3.4E-03

### 2. Life cycle inventory analysis (LCI)

Parameter	Unit
Non-renewable material resources	8.5E+04 kg
Non-renewable energy resources	2.2E+05 MJ
Renewable material resources	1.5E+04 kg
Renewable energy resources	4.8E+03 MJ
Consumption of freshwater	2.2E+02 m <sup>3</sup>

### 3. Material composition

Material	Unit
Ni	99.0 %
Si	0.30 %
Mn	0.30 %
Cu	0.20 %
Fe	0.40 %

### 4. Waste to disposal

Parameter	Unit
Hazardous waste	0.0E+00 kg
Non-hazardous waste.	4.8E+02 kg

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

### 5. Additional explanation

- Raw materials of transport to site follow the PCR. For the transportation of inter-factory transportation for intermediate products, distances were measured using mapping software. For the transportation of raw materials, a transportation distance of 500 km was selected for a typical PCR scenario, considering domestic inter-prefecture transportation. Transport of Nickel is included in the inventory database on which this estimation is based, so those are not included in [A2] transport in 1. Result of life cycle impact assessment.
- Each item (except nickel) in table 3 is the maximum value of all product standards covered by this EPD. However, the nickel content in each product is never less than 99.0%, and the contents of other components are adjusted.
- Primary data collected in 2022. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.



SuMPO EPD

Type III Environmental Declaration (EPD)

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization  
14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan

Registration number : JR-BO-24006E

<https://ecoleaf-label.jp/>

#### 6-1. Supplementary environmental information

Each production area has ISO 14001 certificate.

#### 6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
Mn	7439-96-5	Industrial Safety and Health Act
Cu	7440-50-8	Industrial Safety and Health Act

#### 7. Assumptions of secondary data used

The IDEA2.1.3 data is 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/> )

Registration number : JR-BO-24006E