ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804 for:

Meide Steel Pipe

From

Hebei Meide Steel Pipe Manufacturing Co., Ltd.

Declared product:

Programme operator:	EPD China
Registration number:	EPD-CN-00048
Issued date:	2025-11-26
Valid until:	2030-11-25

Programme Information

EPD Owner	Hebei Meide Steel Pipe Manufacturing Co., Ltd.
Product Name	Meide Steel Pipe
Production Site	Xiwang New District, Mengcunhuizu County, Cangzhou City, Hebei Province
Identification of product	UNCPC Code 412 Products of iron or steel
Field of Application	The products can be round pipe, rolled square pipe and rectangular pipe. The materials include unalloyed steel (20#, Q235, S235, S275), low-alloyed steel (16Mn, S355, Q355-Q460), and bridge structure steel, as well as over 1000 types of non-pattern wall thickness steel pipes. They are widely used in major projects such as low-pressure fluid, steel structures, ship manufacturing, and foundation piling. The products are widely used in major projects such as low-pressure fluid, steel structures, ship manufacturing, and foundation piling.
Programme Operator	EPD China Address of Headquarter: Tianping Road, Xuhui District, Shanghai Website: www.epdchina.cn Email: info@epdchina.cn | secretary@epdchina.cn
LCA Practitioner	Yufei Jiang support@1mi1.cn Ecovane Environmental Co., Ltd
Responsibility	The EPD owner has the sole ownership, liability, and responsibility for the EPD
Comparability	EPDs within same category of product in different programme operator are not suggested to be compared. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible even applying the same PCR.
Liability	The EPD owner has the sole ownership, liability, and responsibility for the EPD.
Validity	The EPD is published on 2025-11-26 and valid to 2030-11-25
LCA Software (version)	Simapro 10.2, 1Mi1 Ecoportal
LCI Dataset (version)	Ecoinvent 3.10
Year(s) of Primary Data	01/2024-12/2024
PCR	EPDCN-PCR-202204: PCR for Construction Products and Construction Services to EN 15804 V2.1
Other Reference Document	N/A
Verification statement according EN15804	

Independent verification of the declaration and data according to EN ISO 14025:2010

☐ internal ☒ external

Third-party institution verification: < Fang WANG, LRQA Industrial Technical Services (Shanghai) Co., Ltd> is an approved certification body accountable for third-party verification

Approved by: EPD China

Procedure for follow-up of data during EPD validity involves a third-party certification body:

☐ Yes ☒ No

General Information

1.1 Company information

Owner of the EPD: Hebei Meide Steel Pipe Manufacturing Co., Ltd.

Address: Xiwang New District, Mengcunhuizu County, Cangzhou City, Hebei Province

Website: www.Meidegg.cn

Contact: mdbgs101@163.com

Description of the Company:

Hebei Meide Steel Pipe Manufacturing Co., Ltd. was established in 2005. It specializes in the production of large-diameter straight seam double-sided submerged arc welded steel pipes. It is a first-class domestic manufacturer of low-pressure fluid steel pipes and structural steel pipes. With a registered and paid-in capital of 109 million yuan, the total land area is 106,000 square meters, including 35,000 square meters of building area. The annual production capacity is approximately 350,000 tons. The company currently has 360 employees.

The company has successively introduced American Lincoln automatic welding equipment and the high-end German JCOE steel pipe forming technology with international quality standards. The steel pipe processing technology is advanced and the quality is reliable. It has participated in multiple national key structural engineering projects and low-pressure fluid transmission projects.

Product-related or management system-related certifications:

➢ GB/T 19001-2016/ISO 9001:2015, GB/T 24001-2016/ISO 14001:2015, GB/T 45001-2020/ISO 45001:2018
➢ EN10219, EN10210
➢ BC1:2023

1.2 Scope and type of EPD

Declare unit: One ton of Meide steel pipe

Reference service life: N/A

Time representativeness: 2024.1-2024.12

Description of system boundaries: Cradle-to-gate with options, modules C1-C4 and module D (A1-A3 + C + D and additional modules: A4)

Excluded life cycle stages: A5 and B1-B7

Table1 Process stages and EPD modules

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITSAND LOADSBEYOND THESYSTEM BOUNDARIES
Raw material supply	Transport	Production	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	reuse- recovery- recycling- potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
x	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x

A1 Raw material supply:

Production starts with the material supply. This module includes the mining and pretreatment processes before production. Unalloyed and low-alloyed steel coils are the main raw material used for steel pipe production.

A2 Transportation of raw materials to manufacturer

Transportation module includes the delivery of raw materials from suppliers to the gate of manufacturing plant. Steel coils are transported by lorry to Meide plant from suppliers located in China.

A3 Manufacturing

The manufacturing process of Meide steel pipe are shown in Figure 2, which involves raw materials, energy, water, and emissions during the process.

A4 Transportation of products

According to Meide, steel pipes are mainly consumed to East China, Central China, North China and South China.

C1 De-construction and demolition

The impact of the dismantling phase was considered negligible.

C2 Transportation to waste processing

The discarded product is transported either to the recycling site or to landfills for final disposal. As a conservative assumption, a distance of 100 km to waste processing sites is assumed.

C3 Waste processing for reuse, recovery and/or recycling

According to World Steel Association, the average recycling rate of steel after its life cycle is 85%. The rest is assumed to be landfilled. Recycling includes sorting and pressing.

C4 Disposal

Usually, a small amount of the waste remains either at the deconstruction site or during the separation. This small portion will be landfilled. In relation to the C3 stage explained above, 15% of steel after its life cycle will be landfilled.

D Reuse-Recovery-Recycling-potential

Module D consists of avoided burdens related to the potential reuse and/or recycling of the product after its end-of-life stage. The reuse/recycling rates of steel is 85%.

2 Detailed Product Description

2.1 Description of the product

Product name: Meide Steel Pipe

Product identification: UNCPC Code 412 Products of iron or steel

Table 2 Product specification and technical performance:

Yield strength (MPa)	Product grade	Chemical composition				
		C	Si	Mn	P	S
235	S235JRH	≤0.17%	-	≤1.40%	≤0.040%	≤0.040%
275	S275JOH	≤0.2%	-	≤1.50%	≤0.035%	≤0.035%
	S275JRH	≤0.2%	-	≤1.50%	≤0.030%	≤0.030%
355	S355J0H	≤0.22%	≤0.55%	≤1.60%	≤0.035%	≤0.035%
	S355J2H				≤0.030%	≤0.030%
	S355K2H				≤0.030%	≤0.030%
390	Q390B	≤0.20%	≤0.55%	≤1.70%	≤0.035%	≤0.035%
	Q390C				≤0.030%	≤0.030%
	Q390D				≤0.025%	≤0.025%
420	S420MH	≤0.20%	≤0.50%	≤1.70%	≤0.035%	≤0.030%
	S420NH	≤0.22%	≤0.60%	1.00%-1.70%	≤0.035%	≤0.030%
460	S460NH	≤0.20%	≤0.60%	1.00%-1.70%	≤0.035%	≤0.030%
	S460MH	≤0.16%	≤0.60%	≤1.70%		

Figure 1 Picture of the declared product.

The company specializes in manufacturing large-diameter straight seam double-sided submerged arc welded steel pipes. It can produce straight seam welded pipe specifications ranging from Φ325mm to 1420mm, with wall thicknesses from 8mm to 50mm, and lengths from 3m to 14m. The materials include unalloyed steel (20#, Q235, S235, S275), low-alloyed steel (16Mn, S355, Q355-Q460), and bridge structure steel, as well as over 1000 types of non-pattern wall thickness steel pipes.
The products can be round pipe, rolled square pipe and rectangular pipe. They are widely used in major projects such as low-pressure fluid, steel structures, ship manufacturing, and foundation piling.

2.2 Description of the production process

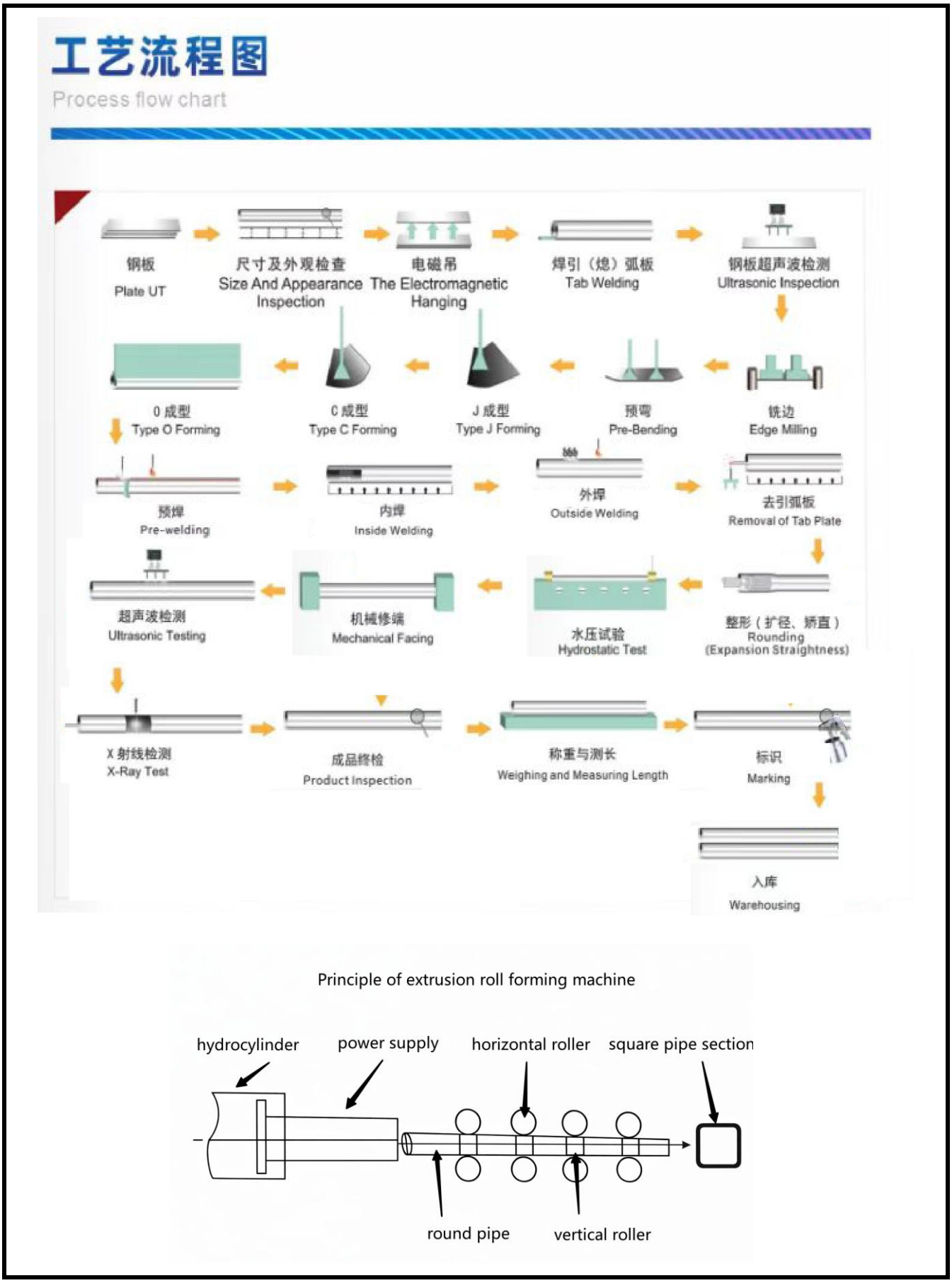

Figure 2 Manufacturing process of Meide steel pipe

Table 3 Main product components per unit

Product components	Weight, t	Weight-% (versus the product)
Steel coil	1.04	104

The included product contains no substances in the “Candidate List of Substances of Very High Concern for authorization” registration with the European Chemicals Agency.

3 LCA results according to EN 15804

3.1 Environmental Impacts

The results of the underlying LCA are provided in this section as environmental impacts, resource use, output flows and additional information on biogenic carbon. All pre-set parameters of EN 15804 are required. Note that the results are calculated based on the average case of two product group, unalloyed steel pipe and low-alloyed steel pipe.

Table 4 Environmental impacts according to EN 15804 (unalloyed steel pipe)

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT per declared unit								
Core indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	[kg CO2 eq.]	2.41E+03	1.25E+02	0.00E+00	1.94E+01	8.91E+01	9.38E-01	-1.57E+03
Global Warming Potential fossil fuels (GWP-fossil)	[kg CO2 eq.]	2.41E+03	1.25E+02	0.00E+00	1.94E+01	5.23E+01	9.38E-01	-1.57E+03
Global Warming Potential biogenic (GWP-biogenic)	[kg CO2 eq.]	1.19E+01	6.84E-01	0.00E+00	1.06E-01	3.76E+01	7.10E-03	0.00E+00
Global Warming Potential land use and land use change (GWP-luluc)	[kg CO2 eq.]	8.78E-01	5.02E-02	0.00E+00	7.80E-03	1.16E-01	4.83E-04	-2.57E-01
Depletion potential of the stratospheric ozone layer (ODP)	[kg CFC 11 eq.]	1.01E-05	1.86E-06	0.00E+00	2.88E-07	6.25E-07	2.71E-08	-3.91E-06
Acidification potential, Accumulated Exceedance (AP)	[mol H+ eq.]	8.51E+00	5.23E-01	0.00E+00	8.10E-02	3.47E-01	6.65E-03	-5.14E+00
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	[kg P eq.]	8.13E-01	9.80E-03	0.00E+00	1.52E-03	1.12E-02	7.79E-05	-4.02E-01
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	[kg N eq.]	1.98E+00	1.90E-01	0.00E+00	2.95E-02	1.37E-01	2.53E-03	-1.15E+00
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	[mol N eq.]	2.12E+01	2.07E+00	0.00E+00	3.22E-01	1.22E+00	2.77E-02	-1.26E+01
Formation potential of tropospheric ozone (POCP)	[kg NMVOC eq.]	7.61E+00	7.22E-01	0.00E+00	1.12E-01	3.90E-01	9.91E-03	-4.27E+00
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	[kg Sb eq.]	2.38E-03	4.03E-04	0.00E+00	6.27E-05	4.41E-04	1.47E-06	-7.24E-04
Abiotic depletion potential for fossil resources (ADP-fossil)	MJ, net calorific value	1.70E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	[m3 world eq. Deprived]	7.78E+02	7.91E+00	0.00E+00	1.23E+00	4.99E+00	1.01E+00	-1.03E+02

Table 5 Environmental impacts according to EN 15804 (low-alloyed steel pipe)

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT per declared unit								
Core indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	[kg CO2 eq.]	2.60E+03	1.25E+02	0.00E+00	1.94E+01	8.91E+01	9.38E-01	-1.58E+03
Global Warming Potential fossil fuels (GWP-fossil)	[kg CO2 eq.]	2.60E+03	1.25E+02	0.00E+00	1.94E+01	5.23E+01	9.38E-01	-1.57E+03
Global Warming Potential biogenic (GWP-biogenic)	[kg CO2 eq.]	5.41E+01	6.84E-01	0.00E+00	1.06E-01	3.76E+01	7.10E-03	0.00E+00
Global Warming Potential land use and land use change (GWP-luluc)	[kg CO2 eq.]	1.33E+00	5.02E-02	0.00E+00	7.80E-03	1.16E-01	4.83E-04	-2.57E-01
Depletion potential of the stratospheric ozone layer (ODP)	[kg CFC 11 eq.]	1.42E-05	1.86E-06	0.00E+00	2.88E-07	6.25E-07	2.71E-08	-3.91E-06
Acidification potential, Accumulated Exceedance (AP)	[mol H+ eq.]	1.08E+01	5.23E-01	0.00E+00	8.10E-02	3.47E-01	6.65E-03	-5.14E+00
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	[kg P eq.]	1.01E+00	9.80E-03	0.00E+00	1.52E-03	1.12E-02	7.79E-05	-4.02E-01
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	[kg N eq.]	2.45E+00	1.90E-01	0.00E+00	2.95E-02	1.37E-01	2.53E-03	-1.15E+00
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	[mol N eq.]	2.54E+01	2.07E+00	0.00E+00	3.22E-01	1.22E+00	2.77E-02	-1.26E+01
Formation potential of tropospheric ozone (POCP)	[kg NMVOC eq.]	8.93E+00	7.22E-01	0.00E+00	1.12E-01	3.90E-01	9.91E-03	-4.27E+00
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	[kg Sb eq.]	1.56E-02	4.03E-04	0.00E+00	6.27E-05	4.41E-04	1.47E-06	-7.24E-04
Abiotic depletion potential for fossil resources (ADP-fossil)	MJ, net calorific value	1.81E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	[m3 world eq. Deprived]	7.89E+02	7.91E+00	0.00E+00	1.23E+00	4.99E+00	1.01E+00	-1.03E+02

**Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

***For all environmental impact indicators, the estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.*

3.2 Resource use and waste categories

Table 6 Resource use and waste categories according to EN 15804 (unalloyed steel pipe)

RESULTS OF THE LCA - Resource use and waste categories per declared unit								
Core indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)	MJ	8.60E+02	2.32E+01	0.00E+00	3.61E+00	2.92E+01	2.16E-01	-3.14E+02
Use of renewable primary energy resources used as raw materials (PERM)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (PERT) (primary energy and primary energy resources used as raw materials)	MJ	8.60E+02	2.32E+01	0.00E+00	3.61E+00	2.92E+01	2.16E-01	-3.14E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE)	MJ	1.70E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Use of non-renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (PENRT) (primary energy and primary energy resources used as raw materials)	MJ	1.70E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Use of secondary material (SM)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water (FW)	m3	1.97E+01	2.39E-01	0.00E+00	3.72E-02	1.53E-01	2.39E-02	-2.73E+00
Hazardous waste disposed (HWD)	kg	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-hazardous waste disposed (NHWD)	kg	5.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+02	0.00E+00
Radioactive waste disposed (RWD)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use (CRU)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling (MFR)	kg	4.16E+01	0.00E+00	0.00E+00	0.00E+00	8.50E+02	0.00E+00	0.00E+00
Materials for energy recovery (MER)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy (EEE)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 7 Resource use and waste categories according to EN 15804 (low-alloyed steel pipe)

RESULTS OF THE LCA - Resource use and waste categories per declared unit								
Core indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)	MJ	2.28E+03	2.32E+01	0.00E+00	3.61E+00	2.92E+01	2.16E-01	-3.14E+02
Use of renewable primary energy resources used as raw materials (PERM)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (PERT) (primary energy and primary energy resources used as raw materials)	MJ	2.28E+03	2.32E+01	0.00E+00	3.61E+00	2.92E+01	2.16E-01	-3.14E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE)	MJ	1.81E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Use of non-renewable primary energy resources used as raw materials (PENRM)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (PENRT) (primary energy and primary energy resources used as raw materials)	MJ	1.81E+04	1.71E+02	0.00E+00	2.66E+01	1.38E+02	1.42E+00	-1.25E+04
Use of secondary material (SM)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water (FW)	m3	2.48E+01	2.39E-01	0.00E+00	3.72E-02	1.53E-01	2.39E-02	-2.73E+00
Hazardous waste disposed (HWD)	kg	3.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-hazardous waste disposed (NHWD)	kg	5.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E+02	0.00E+00
Radioactive waste disposed (RWD)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use (CRU)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling (MFR)	kg	4.16E+01	0.00E+00	0.00E+00	0.00E+00	8.50E+02	0.00E+00	0.00E+00
Materials for energy recovery (MER)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy (EEE)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

3.3 Information on biogenic carbon content

Information on biogenic carbon content which shall be included in the EPD as follows:

Biogenic carbon content	Unit (expressed per functional unit or per declared unit)
Biogenic carbon content in product	0 kg C
Biogenic carbon content in accompanying packaging	0 kg C
NOTE：1 kg biogenic carbon is equivalent to 44/12 kg of CO2.	

4 Supplementary information

4.1 Calculation rules

All inputs and outputs of the production by Meide were considered in the calculation. Generic data was used for the considered raw materials from the supplier due to the fact that these materials are not produced by Meide.

Data was collected from primary sources including the manufacturer, suppliers and their publications on standards locations, logistics, technology, market share, management system, and commitment to improved environmental performance.

Transport assumptions are made where it is not possible to obtain the specific data. When this occurs, it is clearly stated in the report and a sensitivity analysis is conducted;

The cut-off criteria adopted are as stated in "EN 15804:2012+A2:2019". Where there are insufficient data or data gaps for a unit process, the cut-off criteria are 1% of the total mass of input of that process. The total of neglected input flows per module is a maximum of 5% of energy usage and mass. In this study, only 0.03% of the products has heat treatment, and 0.07% of the products has extrusion and roll forming, the energy and auxiliary material needed for these two processes are cut off due to neglective impact.

Needed machines, plants and further infrastructure for the production at Meide are not considered in the calculation.

In the production of steel pipes, special production is used because all the inputs and outputs are clearly corresponding to the products, and scraps are treated as by-products for sale in this situation.

The grid mix data on electricity of for the site in Hebei is based on grid mixes of the State Grid North China Branch (NCGC). Electricity mix has been modelled from Ecoinvent database 3.10. The electricity inventory is based on the year of 2021 for Chinese electricity generation (China Energy Statistics). According to the dataset in Ecoinvent, the main part of electricity is produced by hard coal, followed by natural gas, oil and wind in China.

4.2 Scenarios and additional technical information

Table 8 Transportation of raw materials

Raw materials	Distance/km	Vehicle
Steel coil	265	Lorry
Welding wire	95/59	Lorry
Welding flux	520	Lorry

Table 9 Transportation of products

Market location	Ratio	Distance (km)	Vehicle
East China	33.7%	800	Lorry
Central China	27%	950	Lorry
North China	39%	300	Lorry
South China	0.33%	2020	Ship

References

1. ISO 14040 (2006): Environmental Management - Life Cycle Assessment - Principles and Framework
2. ISO 14044 (2006): Environmental Management - Life Cycle Assessment - Requirements and Guidelines
3. EPDCN-PCR-202204: PCR for Construction Products and Construction Services to EN 15804 V2.1
4. China Statistical Yearbook, 2021. National Bureau of Statistics of China.
5. EN15804:2012+A2:2019/AC: Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products
6. World Steel Association. (2019). Life Cycle Inventory Study: 2019 data release
7. General Programme Instructions for EPD China. Version 3.1

Programme operator EPD China
Registration number EPD -CN – 00048

ENVIRONMENTAL PRODUCT DECLARATION