Type III Environmental Product Declaration No. 599/2024

Issuance date: 08.02.2024
Validity date: 08.02.2029

Welded steel structures with anti-corrosion protection

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Basic information

This declaration is the Type III Environmental Product Declaration (EPD) based on EN 15804+A2 and verified according to ISO 14025 by an external auditor. It contains the information on the impacts of the declared construction materials on the environment and their aspects verified by the independent body according to ISO 14025. Basically, comparison or evaluation of EPD data is possible only if all the compared data were created according to EN 15804+A2.

Life cycle analysis (LCA): A1-A5, C1-C4 and D modules in accordance with EN 15804
(Cradle-to-Gate with options)
Product standards: PN-EN 1090-2, PN-EN 14015
The year of preparing the EPD: 2024
Service Life: 50 years for standard product
PCR: ITB-PCR A
Declared unit: 1 ton
Reasons for performing LCA: B2B
Representativeness: Poland, European, 2022

MANUFACTURER

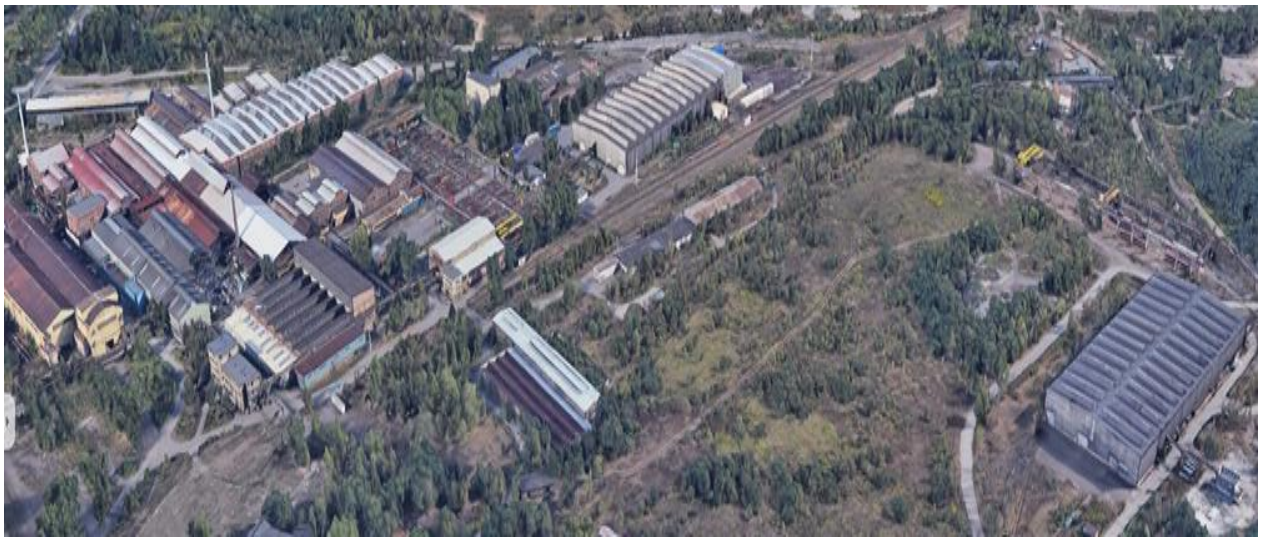

Figure 1 Bird's-eye view of Huta Pokój Konstrukcje Sp. z o. o.

Huta Pokój Konstrukcje sp. z o. o. is one of the companies belonging to the WĘGLOKOKS Capital Group. The steel structure factory has production halls with a total usable area of 32,200 m^2. Modern and optimally selected devices constitute a fleet of machinery that allows the production of even the most technically complex elements while meeting both normative requirements and customer expectations. However, our greatest asset is our qualified team of engineers/technologists and production specialists, including a strong team of certified welders.

Huta Pokój Konstrukcje sp. z o. o. specializes in the following areas:

- Steel structures, also architecturally sophisticated, with the possibility of and assembly
- Welded sections and prefabricated elements
- Laboratory tests regarding quality requirements for our own and customers' steel products.

Company has a quality management system in accordance with the requirements of PN-EN ISO 9001 standards. They ensure the quality of products and laboratory services at the highest level, including at the same time, the natural environment surrounding us.

PRODUCTS DESCRIPTION AND APPLICATION

The manufactured products covered by this EPD are welded steel structures with anti-corrosion protection. Construction elements are individual products produced directly for the client under a specific contract. The structures are manufactured based on the design provided by the client in accordance with the PN-EN 1090-2 and PN-EN 14015 standards.

The properties and characteristics of the product are declared in the Product Declaration of Performance. Placing on the market is equivalent to delivery to the construction site and assembly. Structures are not manufactured for storage.

Table 1. Information on product groups manufactured by Huta Pokój Konstrukcje sp. z o. o.

Steel structures of bridges and viaducts	Shipping elements are adapted for normal, barite and oversized transport, in accordance with the customer's requirements. Maximum weight of a single element up to 65 Mg.	Hot-rolled structural steel according to PN-EN 10025 and PN-EN 10219	Implementation standard PN-EN 1090-2 class EXC1 to EXC4	Anti-corrosion protection based on epoxy and polyurethane paints
Frame structures				

Tank elements	According to the detailed design		Implementation standard PN-EN 14015

All additional technical information about the product is available on the manufacturer's website.

LIFE CYCLE ASSESSMENT (LCA) – general rules applied

Unit

The declared unit is 1 ton of product. Conversion from a ton to one piece of product is possible by adopting a conversion factor (ton -> piece) by the weight of an specific pole (for 50 kg piece conversion factor is 0.05).

System boundary

The life cycle analysis of the declared products covers “Product Stage” A1-A3, A4-A5, C1-C4+D modules in accordance with EN 15804 and ITB PCR A (cradle to gate with options). Energy and water consumption, emissions as well as information on generated wastes were inventoried and were included in the calculation. It can be assumed that the total sum of omitted processes does not exceed 5% of all impact categories. In accordance with EN 15804+A2, machines and facilities (capital goods) required for the production as well as transportation of employees were not included in LCA.

Allocation

The allocation rules used for this EPD are based on general ITB ’s document PCR A (2023). Production of the covered steel structures is a line process (as presented in Figure 2) conducted in the manufacturing plant located in Ruda Śląska Poland. Input and output data from the production is inventoried and allocated to the production on the mass basis. The declaration covers all steel structure products (presented in Table 1) manufactured in the plant. Their production resources and processing stages are basicly similar, so it is possible to average the production by product weight.

System limits

Minimum 99.0% input materials and 100% energy consumption (electricity, gas, LPG, other) were inventoried in a processing plant and were included in the calculation. In the assessment, all available data from production have been considered, i.e. all raw materials/elements used as per formulation process, utilized thermal energy for heating, and electric power consumption. Thus, material and energy flows contributing less than 1 % of mass or energy have been considered. It can be assumed that the total sum of neglected processes does not exceed 1 % of energy usage and mass per modules A or D. Machines and facilities required during production are neglected. The packaging products (stretch foil, wooden pallets, etc.) are included.

Modules A1 and A2*: Raw materials supply and transport*

Modules A1 and A2 represent the extraction and processing of raw materials (mainly steel) and transport to the production site. Steel sheets are commonly used semi-finished products for the production of prefabricated elements, skeleton frames, and steel structures. The steel used comes from domestic suppliers producing steel using EAF and BOF technology. Module A2 (transport) includes truck transport and uses Polish and European averages for fuel data.

Module A3: *Production*

The production processes carried out at Huta Pokój Konstrukcje sp. z o. o. are shown in Figure 2, the subsequent stages of production are described in detail below:

1. Ordering material

Metallurgical material is ordered on the basis of material lists received from the client, which constitute an integral part of the project. Steel materials are ordered:

• Rolled sheets,
• Cold-bent profiles,
• Hot rolled profiles
• Steel pipes

Purchases of metallurgical materials are carried out based on the QP-HPK-8 "Purchases" procedure, which establishes the method of assessing and qualifying suppliers and purchasing raw materials, materials and elements used for production. In accordance with these procedures, product identification is carried out at individual stages of the manufacturing process, finished product, delivery and the possibility of reconstructing the history of the product (traceability). Hot-rolled structural steel sheets intended for the production of a steel structure are delivered by a qualified supplier along with the necessary documents:

- CE marking,
- acceptance certificate 3.1 according to PN-EN 10204, which fully confirms the conditions and tests in accordance with table 1 of the PN-EN 1090-2 standard.

Products made of structural steel should meet the requirements of the PN-EN 10025 standard.

Markings and features must be maintained throughout the entire structure manufacturing process. Signs should be placed in such places that they will be visible after the structure is assembled at the construction site. The acceptance marks and measurement marks should be kept intact and enable identification of elements and control of the work at each stage of construction.

2. Production preparation

Machining of elements.

a) Metallurgical products are sent for prefabrication after abrasive blasting performed in continuous blast cleaning machines (spherical steel shot) to remove rust and weld scale.

b) Cutting of elements and processing of edges is performed in accordance with the provisions of the design documentation, but in such a way that the requirements of PN-EN 1090-2 are met.

c) Cutting of metallurgical materials is performed mechanically on saws or thermally (automatically or semi-automatically) on plasma cutting machines and oxygen portals.

d) Quality of thermal cutting 4-4-2 in accordance with the PN-EN ISO 9013 standard. After cutting, the edges are cleaned of burrs, tears and pits.

e) The sharp edges of the elements are blunted by rounding with a radius of r = 2 mm or more. In the case of elements not exposed to weather conditions, the edges may be blunted at an angle of 45°. When cutting with oxygen, the edges that are to be melted in the welding process can be left unmachined.

Assembling the elements.

a) Before starting to assemble the structure, remove any debris and clean it

and sand adjacent surfaces and mating edges.

b) The edges and surfaces of the elements should be prepared for welding in accordance with

with the welding technology project.

c) Construction elements are assembled in accordance with workshop documentation at assembly stations.

Welding of elements.

a) All welding processes are qualified according to PN-EN ISO 15614-1.

b) Automatic welding under flux or welding in gas shields is carried out using semi-automatic welding machines.

c) Steel structure elements are manufactured in accordance with the qualifications held as part of the detailed design provided by the Customer in accordance with the WPS Welding Technological Instructions developed on the basis of the WPQR welding technologies and approved workshop documentation.

d) Welds are marked with the welder's identification mark.

e) Welding sequence, WPS, materials used and welder identification are documented in the Welding Log by the Welding Engineer.

f) The selection of welding materials is consistent with the data in the WPS instructions

in relation to the relevant WPQR welding technology approvals.

g) For semi-automatic welding in gas shields using method 135, use electrode wire of the PN-EN ISO 14341 grade: G 46 4 M21 4Si1.

h) For semi-automatic welding in gas shields using method 136, use electrode wires of the grades PN-EN ISO 17632-A: T 46 3 P M 1 H5 (FLUXOFIL 14HD) or PN-EN ISO 17632-A: T 46 4 P M 1 H5 (MEGAFIL 713R).

i) Welding consumables should be stored and used in accordance with the manufacturer's recommendations.

j) Materials are stored in the described original packaging on pallets or racks, and in designated dry and clean rooms in production halls to prevent moisture or dirt, where temperature and humidity are measured.

k) The designated place in the room for storing a given type of welding material must be clearly marked to identify the welding material.

l) The surface of the wires should be free from rust, the copper layer on the surface should be uniform, the fluxes must not be damp (use directly

from original, undamaged packaging).

m) If rust is found on the surface of the wire, it should not be used in production.

n) In case of moisture or leaking flux packaging, the flux should be dried in a dryer in accordance with the flux safety data sheet. Welding materials must have certificates - a quality certificate with the CE mark.

Anti-corrosion.

a) All finished elements are blast-cleaned in a shot-blasting booth using steel shot.

b) Cleaning

c) After cleaning, the structure is dedusted using a stream of compressed air and an anti-corrosion coating is applied using air-less spraying in accordance with the technical specifications.

d) The number of coatings, thickness and type of paint depend on the detailed design. The most commonly used is the epoxy-polyurethane painting system.

e) After drying in the storage areas, the elements are described and prepared for shipment.

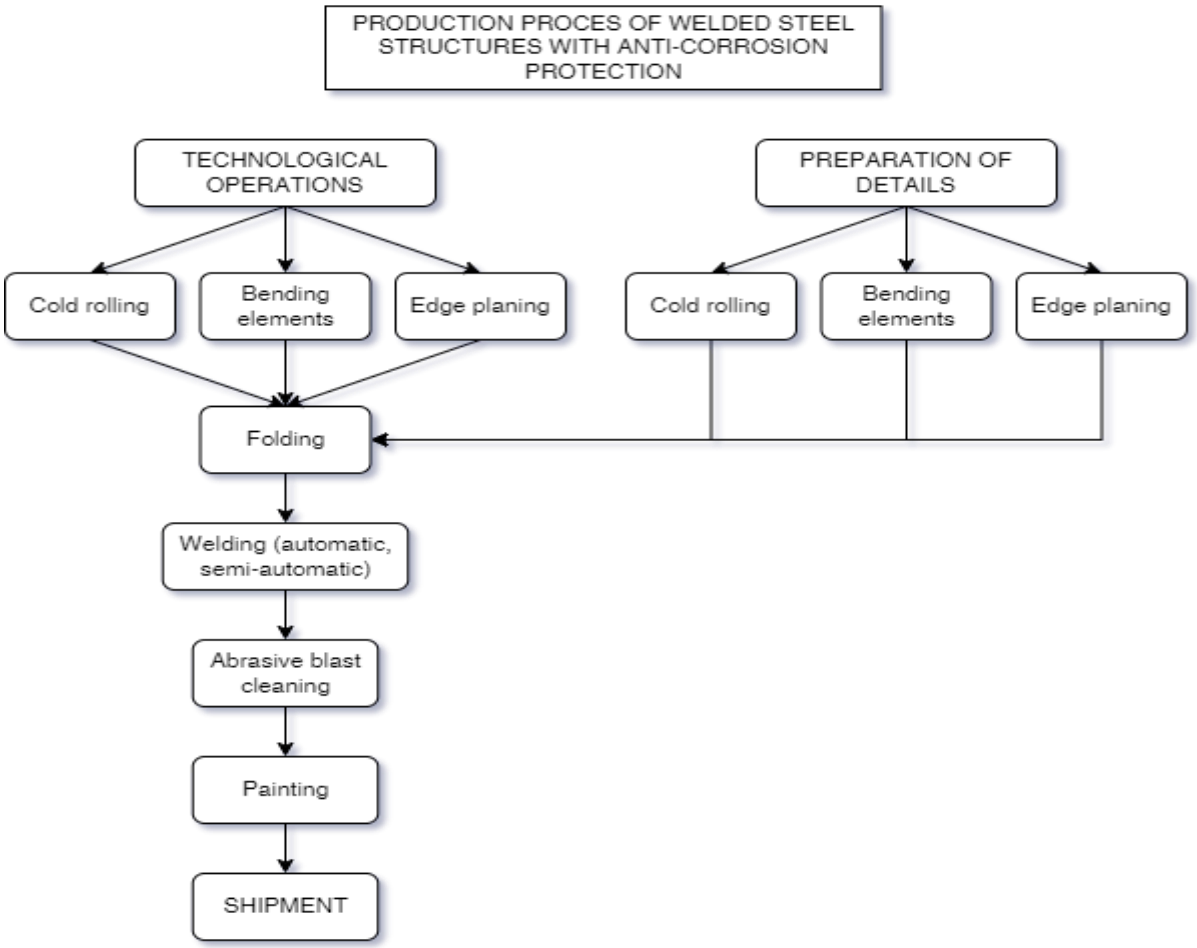

Figure 2. Diagram of the manufacturing process of welded steel structures with anti-corrosion protection

Module A4: *Transport to consumer*

Transport of the steel structure from the Factory to the construction site is carried out using specialized vehicles at own or customer's request, depending on the terms of the contract. Loads on trucks are secured with belts with tensioners or chains. Anti-slip mats and/or pads will be used on the car under the structure elements and between the structure and the chains or belts to protect the anti-corrosion coating against damage. Repair of any damage resulting from transport will take place during assembly on the construction site. Vehicle transport at distance 500 km is considered (emission standard: Euro 5) with 100% load capacity.

Modules *C and D: End-of-life (EOL)*

Due to the fact that the declaration covers a wide range of steel products for various purposes and usage scenarios, it is not possible to directly specify the de-construction technology and the amount of energy for disassembly in C1 module (so this module is very generic based on literature). In the

adapted end-of-life scenario, the de-constructed steel products are transported to a steel mill distant by 100 km on > 16t lorry EURO 5 where are used as steel scrap to produce a new steel. The recycling potential of C3 module is 95% and it is assumed that only 5% of the products will end up in a landfill – C4 module (Table 2). Module D presents credits resulting from the recycling of the steel scrap (used for steel production), calculated in accordance with the approach developed by World Steel Association.

Table 2. End-of-life scenario for the welding steel structures

Material	Material recovery	Recycling	Landfilling
Steel scrap	100%	95%	5%

Data collection period

The data for manufacture of the declared products refer to period between 01.01.2022 – 31.12.2022 (1 year). The life cycle assessments were prepared for Poland and Europe as reference area.

Data quality

The data selected for LCA originate from ITB-LCI questionnaires completed by Huta Pokój Konstrukcje Sp. z o.o. and verified during data audit. No data collected is older than five years and no generic datasets used are older than ten years. The representativeness, completeness, reliability, and consistency is judged as good. The background data for the processes come from the following resources database Ecoinvent v.3.10 and specific suppliers (EPDs). Specific (LCI) data quality analysis was a part of the input data verification.

Assumptions and estimates

The impacts of the representative products were aggregated using weighted average.

Calculation rules

LCA was performed using ITB-LCA tool developed in accordance with EN15804+A2. Emission of greenhouse gases was calculated using the IPCC 2013 GWP method with a 100-year horizon. Emission of acidifying substances, Emission of substances to water contributing to oxygen depletion, Emission of gases that contribute to the creation of ground-level ozone, Abiotic depletion, and ozone depletion emissions where all calculated with the CML-IA baseline method

Additional information

Polish electricity (Ecoinvent v.3.10 supplemented by actual national KOBiZE data) emission factor used is 0.685kg CO_2/kWh (National for 2022). As a general rule, no particular environmental or health protection measures other than those specified by law are necessary.

LIFE CYCLE ASSESSMENT (LCA) – Results

Declared unit

The declaration refers to declared unit (DU) – 1 ton of welded steel structures with anti-corrosion protection produced in Poland. The following life cycle modules (Table 3) were included in the analysis. The following tables 4-7 show the environmental impacts of the life cycle of selected modules (A1-A4+C1-C4+D).

Table 3 System boundaries for the environmental characteristic of the product.

Environmental assessment information (MD – Module Declared, MND – Module Not Declared, INA – Indicator Not Assessed)																
Product stage			Construction process		Use stage							End of life				Benefits and loads beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport to construction site	Construction-installation process	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**
MD	**MD**	**MD**	**MD**	**MD**	**MND**	**MND**	**MND**	**MND**	**MND**	**MD**	**MND**	**MD**	**MD**	**MD**	**MD**	**MD**

Table 4 Life cycle assessment (LCA) results of the product – environmental impacts (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Global Warming Potential	eq. kg CO_2	2.21E+03	3.34E+00	2.79E+02	2.49E+03	8.34E+01	4.57E-02	6.85E+00	2.21E+01	6.85E+00	5.28E-01	-6.58E+02
Greenhouse potential - fossil	eq. kg CO_2	2.20E+03	3.32E+00	2.77E+02	2.49E+03	8.31E+01	4.57E-02	6.85E+00	2.20E+01	6.85E+00	5.27E-01	-6.61E+02
Greenhouse potential - biogenic	eq. kg CO_2	5.73E+00	1.14E-02	1.60E+00	7.34E+00	2.84E-01	1.23E-04	1.85E-02	7.52E-02	1.85E-02	1.34E-03	2.51E+00
Global warming potential - land use and land use change	eq. kg CO_2	1.08E+00	1.30E-03	6.21E-02	1.14E+00	3.26E-02	7.14E-06	1.07E-03	8.64E-03	1.07E-03	4.97E-04	-3.96E-02
Stratospheric ozone depletion potential	eq. kg CFC 11	1.21E-04	7.69E-07	3.18E-06	1.25E-04	1.92E-05	2.51E-10	3.77E-08	5.09E-06	3.77E-08	2.13E-07	-2.33E-05
Soil and water acidification potential	eq. mol H+	9.84E+00	1.35E-02	3.24E+00	1.31E+01	3.37E-01	4.83E-04	7.25E-02	8.93E-02	7.25E-02	4.95E-03	-2.62E+00
Eutrophication potential - freshwater	eq. kg P	1.20E+00	2.23E-04	4.85E-01	1.69E+00	5.59E-03	7.87E-05	1.18E-02	1.48E-03	1.18E-02	4.91E-05	-2.81E-01
Eutrophication potential - seawater	eq. kg N	2.01E+00	4.07E-03	4.31E-01	2.44E+00	1.02E-01	6.84E-05	1.03E-02	2.70E-02	1.03E-02	1.72E-03	-5.74E-01
Eutrophication potential - terrestrial	eq. mol N	2.08E+01	4.44E-02	3.77E+00	2.46E+01	1.11E+00	5.97E-04	8.95E-02	2.94E-01	8.95E-02	1.89E-02	-6.26E+00
Potential for photochemical ozone synthesis	eq. kg NMVOC	8.71E+00	1.36E-02	3.13E+00	1.19E+01	3.40E-01	1.72E-04	2.57E-02	9.01E-02	2.57E-02	5.48E-03	-3.31E+00
Potential for depletion of abiotic resources - non-fossil resources	eq. kg Sb	3.63E-02	1.18E-05	1.08E-02	4.71E-02	2.95E-04	1.72E-08	2.58E-06	7.80E-05	2.58E-06	1.21E-06	-1.27E-02
Abiotic depletion potential - fossil fuels	MJ	2.38E+04	4.93E+01	4.59E+03	2.85E+04	1.23E+03	7.21E-01	1.08E+02	3.27E+02	1.08E+02	1.44E+01	-5.41E+03
Water deprivation potential	eq. m^3	7.05E+02	2.28E-01	9.18E+01	7.97E+02	5.70E+00	1.38E-02	2.07E+00	1.51E+00	2.07E+00	4.58E-02	-8.75E+01

Table 5 Life cycle assessment (LCA) results of the product – additional impacts indicators (DU: 1 ton)

Indicator	Unit	A1-A5	C1-C4	D
Particulate matter	disease incidence	INA	INA	INA
Potential human exposure efficiency relative to U235	eg. kBq U235	INA	INA	INA
Potential comparative toxic unit for ecosystems	CTUe	INA	INA	INA
Potential comparative toxic unit for humans (cancer effects)	CTUh	INA	INA	INA
Potential comparative toxic unit for humans (non-cancer effects)	CTUh	INA	INA	INA
Potential soil quality index	dimensionless	INA	INA	INA

Table 6 Life cycle assessment (LCA) results of the the product - the resource use (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Consumption of renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	2.24E+03	7.08E-01	3.38E+02	2.58E+03	1.77E+01	5.93E-02	8.90E+00	4.69E+00	8.90E+00	1.25E-01	-4.55E+02
Consumption of renewable primary energy resources used as raw materials	MJ	7.79E+01	0.00E+00	0.00E+00	7.79E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of renewable primary energy resources	MJ	2.32E+03	7.08E-01	3.72E+02	2.69E+03	1.77E+01	5.93E-02	8.90E+00	4.69E+00	8.90E+00	1.25E-01	-4.55E+02
Consumption of non-renewable primary energy - excluding renewable primary energy sources used as raw materials	MJ	2.45E+04	4.93E+01	4.15E+03	2.87E+04	1.23E+03	7.21E-01	1.08E+02	3.27E+02	1.08E+02	1.44E+01	-5.19E+03
Consumption of non-renewable primary energy resources used as raw materials	MJ	6.53E+00	0.00E+00	2.28E+02	2.34E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total consumption of non-renewable primary energy resources	MJ	2.45E+04	4.93E+01	4.60E+03	2.92E+04	1.23E+03	7.21E-01	1.08E+02	3.27E+02	1.08E+02	1.44E+01	-5.19E+03
Consumption of secondary materials	kg	3.83E+02	1.65E-02	4.10E-01	3.84E+02	4.14E-01	6.27E-05	9.40E-03	1.10E-01	9.40E-03	3.03E-03	-8.78E+01
Consumption of renew. secondary fuels	MJ	3.69E-01	1.82E-04	1.87E-03	3.71E-01	4.56E-03	3.16E-07	4.75E-05	1.21E-03	4.75E-05	7.93E-05	-1.17E-01
Consumption of non-renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net consumption of freshwater	m^3	1.25E+01	6.21E-03	1.35E+01	2.61E+01	1.55E-01	2.07E-03	3.11E-01	4.11E-02	3.11E-01	1.58E-02	-4.75E+00

Table 7 Life cycle assessment (LCA) results of the product – waste categories (DU: 1 ton)

Indicator	Unit	A1	A2	A3	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste	kg	6.42E+00	5.54E-02	3.21E+01	3.85E+01	1.38E+00	5.59E-03	8.38E-01	3.67E-01	8.38E-01	1.53E-02	-6.68E-02
Non-hazardous waste	kg	8.82E+02	9.83E-01	2.14E+02	1.10E+03	2.46E+01	3.76E-01	5.65E+01	6.51E+00	5.65E+01	2.16E-01	1.03E+02
Radioactive waste	kg	1.98E+00	3.68E-06	1.69E-03	1.98E+00	9.21E-05	1.08E-07	1.62E-05	2.44E-05	1.62E-05	9.59E-05	1.14E-02
Components for re-use	kg	0.00E+00	0.00E+00	7.40E-04	7.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.67E+02	1.53E-04	2.83E-02	1.67E+02	3.82E-03	4.84E-06	7.26E-04	1.01E-03	7.26E-04	2.89E-05	0.00E+00
Materials for energy recovery	kg	3.13E-02	1.24E-06	4.64E-05	3.14E-02	3.09E-05	7.78E-09	1.17E-06	8.18E-06	1.17E-06	3.42E-07	0.00E+00
Exported Energy	MJ	3.05E+01	0.00E+00	1.33E+01	4.38E+01	0.00E+00	2.31E-03	3.46E-01	0.00E+00	3.46E-01	0.00E+00	0.00E+00

Verification

The process of verification of this EPD is in accordance with ISO 14025 and ISO 21930. After verification, this EPD is valid for a 5-year-period. EPD does not have to be recalculated after 5 years, if the underlying data have not changed significantly.

The basis for LCA analysis was EN 15804 and ITB PCR A
Independent verification corresponding to ISO 14025 (subclause 8.1.3.) [x] external [ ] internal
External verification of EPD: PhD. Eng. Halina Prejzner LCI audit and verification: Filip Poznański, M.Sc. Eng. LCA, LCI audit and input data verification: Michał Piasecki, PhD., D.Sc., Eng.

Note 1: The declaration owner has the sole ownership, liability, and responsibility for the for the information provided and contained in EPD. Declarations of construction products may not be comparable if they do not comply with EN 15804+A2. For further information about comparability, see EN 15804+A2 and ISO 14025.

Note 2: Note: ITB is a public Research Organization and Notified Body (EC Reg. no 1488) to the European Commission and to other Member States of the European Union designated for the tasks concerning the assessment of building products' performance. ITB acts as the independent, third-party verification organization (ISO 17025/17065/17029). ITB-EPD program is recognized and registered member of The European Platform - Association of EPD program operators and ITB-EPD declarations are registered and stored in the international ECO-PORTAL.

Normative references

- ITB PCR A General Product Category Rules for Construction Products
- EN 1090-2:2018 - Execution of steel structures and aluminium structures - Technical requirements for steel structures
- PN-EN 1090-1+A1:2012 - Wykonanie konstrukcji stalowych i aluminiowych -- Część 1: Zasady oceny zgodności elementów konstrukcyjnych
- ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures
- ISO 21930:2017 Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
- ISO 15686-1:2011 Buildings and constructed assets – Service life planning – Part 1: General principles and framework
- ISO 15686-8:2008 Buildings and constructed assets – Service life planning – Part 8: Reference service life and service-life estimation
- EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- ▪ ISO 14067:2018 Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification
- PN-EN 15942:2012 Sustainability of construction works – Environmental product declarations – Communication format business-to-business
- ISO 20915:2018 Life cycle inventory calculation methodology for steel products
- KOBiZE Wskaźniki emisyjności CO_2, SO_2, NO_x, CO i pyłu całkowitego dla energii elektrycznej. December 2022
- ▪ World Steel Association 2017 Life Cycle inventory methodology report for steel products
- https://ecoinvent.org/

Instytut Techniki Budowlanej
00-611 Warsaw, Filtrowa 1

Thermal Physics, Acoustics and Environment Department
02-656 Warsaw, Ksawerów 21

CERTIFICATE № 599/2024
of TYPE III ENVIRONMENTAL DECLARATION

Products:

Welded steel structures with anti-corrosion protection

Manufacturer:

Huta Pokój Konstrukcje Sp. z o.o.
ul. Piotra Niedurnego 56, 41-709 Ruda Śląska, Poland

confirms the correctness of the data included in the development of
Type III Environmental Declaration and accordance with the requirements of the standard

EN 15804+A2

Sustainability of construction works.
Environmental product declarations.
Core rules for the product category of construction products.

This certificate, issued on 8th February 2024 is valid for 5 years
or until amendment of mentioned Environmental Declaration

Head of the Thermal Physic, Acoustics and Environment Department
Agnieszka Winkler-Skalna, PhD

INSTYTUT TECHNIKI BUDOWLANEJ

Deputy Director
for Research and Innovation
Krzysztof Kuczyński, PhD

Warsaw, February 2024