Statement of Verification

BREG EN EPD No.: 000378 Issue 03

This is to verify that the

Environmental Product Declaration

provided by:

NatSteel Holdings Pte Ltd

BRE Global Verified EPD

is in accordance with the requirements of:

EN 15804:2012+A1:2013

and

BRE Global Scheme Document SD207

This declaration is for:

1 tonne steel stretched DBIC (Deformed Bar In Coil), Hard-Drawn Wire in Coil, Precut Wire in Length, and Welded Wire Mesh

Company Address

NatSteel Holdings Pte Ltd
22 Tanjong Kling Road
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Singapore
628048

NatSteel

Signed for BRE Global Ltd	Emma Baker Operator	05 October 2023 Date of this Issue
25 October 2021 Date of First Issue		24 October 2026 Expiry Date

BRE Global Verified EPD

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ECO PLATFORM EPD VERIFIED

Environmental Product Declaration

EPD Number: 000378

General Information

EPD Programme Operator	Applicable Product Category Rules
BRE Global Watford, Herts WD25 9XX United Kingdom	BRE Environmental Profiles 2013 Product Category Rules for Type III environmental product declaration of construction products to EN 15804:2012+A1:2013
Commissioner of LCA study	**LCA consultant/Tool**
NatSteel Holdings Pte Ltd 22 Tanjong Kling Road Gate 1 Singapore 628048	LCA consultant: Roger Connick Tool: BRE LINA v2.0
Declared Unit	**Applicability/Coverage**
1 tonne steel stretched DBIC (Deformed Bar In Coil), Hard-Drawn Wire in Coil, Precut Wire in Length, and Welded Wire Mesh	Manufacturer specific product
EPD Type	**Background database**
Cradle to Gate with options	ecoinvent v3.2

Demonstration of Verification
CEN standard EN 15804 serves as the core PCR [a]
Independent verification of the declaration and data according to EN ISO 14025:2010 ☐Internal ☒ External
(Where appropriate [b]) Third party verifier: Nigel Jones

a: Product category rules
b: Optional for business-to-business communication; mandatory for business-to-consumer communication (see EN ISO 14025:2010, 9.4)

Comparability
Environmental product declarations from different programmes may not be comparable if not compliant with EN 15804:2012+A1:2013. Comparability is further dependent on the specific product category rules, system boundaries and allocations, and background data sources. See Clause 5.3 of EN 15804:2012+A1:2013 for further guidance.

Information modules covered

Product			Construction		Use stage							End-of-life					Benefits and loads beyond the system boundary
					Related to the building fabric					Related to the building							
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
Raw materials supply	Transport	Manufacturing	Transport to site	Construction – Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal		Reuse, Recovery and/or Recycling potential
☑	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☑		☑

Note: Ticks indicate the Information Modules declared.

Manufacturing site

NatSteel Holdings Pte Ltd
22 Tanjong Kling Road
Gate 1
Singapore
628048

Construction Product

Product Description

Stretched Deformed Bars in Coil (DBIC)

The hot-rolled DBIC, manufactured from NatSteel's upstream process, undergoes a wire spooling process to produce stretched DBIC, which due to its compact size, allows more uniform spooled layers and higher weight per coil, hence is more efficient to use to fabricate Cut-And-Bend products. DBIC provides benefits of reduced material wastage in the fabrication process due to the continuous length nature of the coiled bar, and also storage space savings with its compact size.

Welded Wire Mesh

Welded Wire Mesh is fabricated using cold-drawn wire coils and precut wire lengths that are produced from Wire Rods. Welded Wire Mesh are widely used in the structural elements of Slabs and Walls, and occasionally used in Columns and Beam Links and Stirrup Cages. Due to its flexibility and controlled manufacturing process, Welded Wire Mesh can be produced in flat sheet or shape form to suit any structural requirement.

The product incorporates horizontal, vertical bars, and wires, welded together by an automated machine. The welded joints are structural and are designed to resist environmental forces in a building. The product is manufactured with high and consistent quality to control and reduce material wastage.

The installation of Welded Wire Mesh requires manual installation on-site by laying sheets of the product according to the construction design drawings and specifications. Despite the manual work, the product provides cost-reduction due to the enhanced speed of construction and lesser manpower required for installation.

Technical Information

The below table covers the basic technical properties of the reinforcing steel products:

Property	Value, Unit
Production Route	EAF
Density[1]	7.85 g/cm^3
Weldability	Yes
Yield Strength[2]	250-700 Mpa
Tensile Strength[2]	400-800 Mpa
Surface Geometry	Plain bar and ribbed bar in round bar form
Elongation[2]	15-40%
Re-bond test	n/a
Recycled Content[3]	95%

1 Standard density for mild steel as listed in Singapore Steel standard SS 560:2016 (note 6 of clause no. 7.3).
2 Mill certificates provided confirm samples fall within the tolerances for Yield Strength, Tensile Strength and Elongation.
3 Recycled content calculated from inputs listed in the Rebar, Wire Rod and Hot-Rolled DBIC data collection form.

NatSteel's steel reinforcing bar/coil product (incorporating rebar, wire rod and hot-rolled DBIC) conforms to the following standards:

- Singapore Standards Council SS 560:2016 – Specification for steel for the reinforcement of concrete – Weldable reinforcing steel – Bar, coil and decoiled product.
- Malaysian Standard MS 146:2014 – Steel for the reinforcement of concrete – Weldable reinforcing steel – Bar, coil and decoiled product – Specification.
- Indian Standard IS 1786:2008 – High strength deformed steel bars and wires for concrete reinforcement – specification.
- Australian/New Zealand Standard AS/NZS 4671:2019 – Steel for the reinforcement of concrete.

Main Product Contents

Material/Chemical Input	Mass (%)
Iron	96-98%
Other additives	2-4%

Manufacturing Process

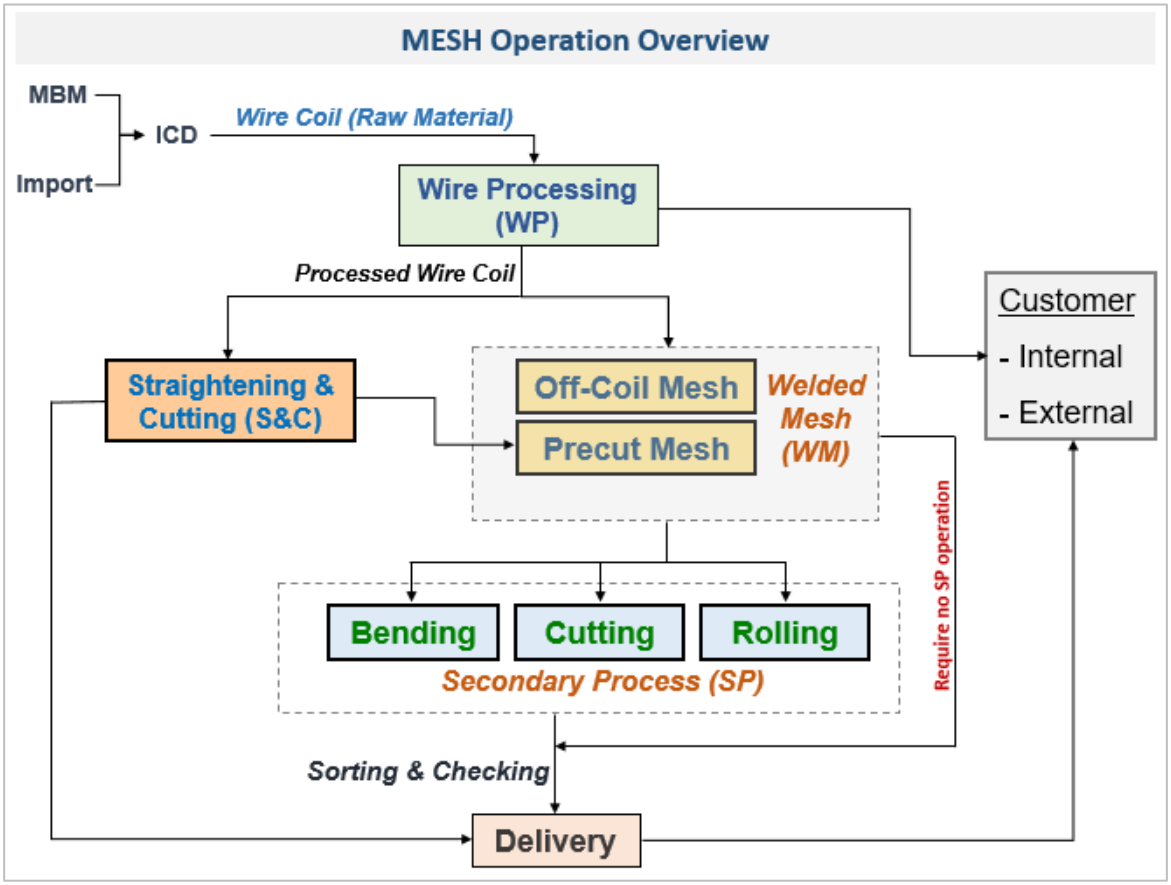
There are four manufacturing processes involved in producing the aforementioned products. First is Wire Processing, in which wire rod or hot-rolled DBIC is processed through either Cold Rolling or Stretching to produce the finished product of Hard-Drawn Ribbed Wire (HDW) coil (diameter ranges from 5-12mm), or compact DBIC (diameter ranges from 8-16mm). They are exported as is, or processed further into welded wire mesh. At Cold Rolling process, the wire rod goes through de-scaling, lubrication, rib pattern profiling, bull-blocking, stress-relieving, then finally spooling into compact coil. At Stretching process, the wire rod or DBIC is fed into the stretching unit, vertical drawing block, then finally the spooler to produce the compact coil.

Second is Straightening and Cutting (S&C), in which the HDW, in spooled or compact coil form, is fed into the S&C machine, whereby the wire is straightened by spinner rollers and cut to the required length to produce precut wires for export as is, or processed further to produce welded wire mesh.

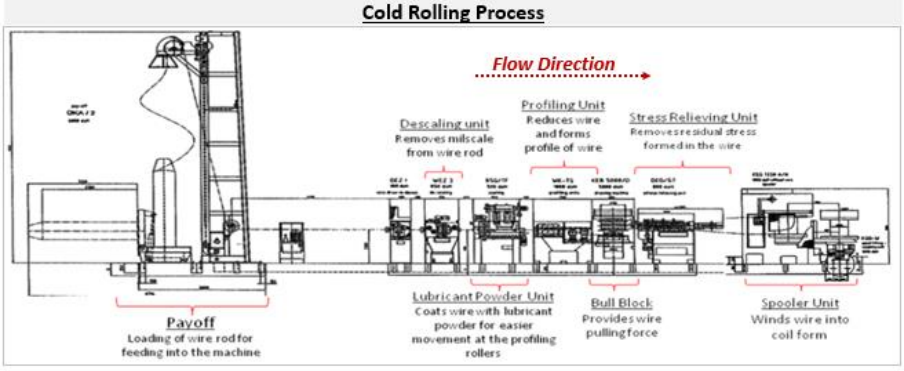
Third is the welded wire mesh fabrication process, in which the HDW coil or precut wire in length, is fed into the resistance welding line to produce the welded wire mesh. Mesh that do not require further processing at Secondary Process would be sorted by order, checked and delivered to customers via lorry crane or trailer.

Fourth is the welded wire mesh Secondary Process, which involves any combination of the three sub-processes – Cutting, Bending, and Rolling, depending on the order requirements. The Cutting process cuts the welded wire mesh to ordered dimensions with a shear cutting machine, the Bending process bends the welded wire mesh to the required shape with an autobender machine, while the Rolling process rolls the welded wire mesh for uniformity and straightness. Upon completion of the Secondary Process, the finished welded wire mesh is sorted, by order, checked and delivered to customers via lorry crane or trailer.

Process flow diagram

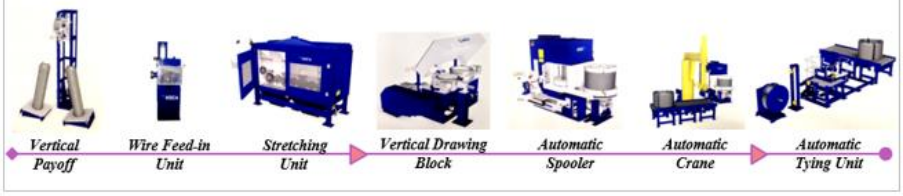


Cold Rolling Process



Finished Products: Hard Drawn Wire in Compact Coil & Spool (wire diameter size: 6 – 16mm)

Stretching Process



Welded Mesh Process

Wire infeed from Payoff (compact coil / spool) → Wire Straightening & Cutting at RA-XE → Resistance Welding at welding unit → Mesh produced and discharged out from roller conveyor

Overview of Mesh Welding Line – EVG ATT

Finished Product: Reinforced welded mesh (diameter size 6 – 16mm)

Welded Mesh

Cutting Operation

Bending Operation

Rolling Operation

Life Cycle Assessment Calculation Rules

Declared unit description

1 tonne steel stretched DBIC (Deformed Bar In Coil), Hard-Drawn Wire in Coil, Precut Wire in Length, and Welded Wire Mesh.

System boundary

In accordance with the modular approach as defined in EN15804:2012+A1:2013, this cradle-to-gate with options EPD includes the processes covered in the product manufacturing stages A1 to A3, end of life scenarios in modules C3, C4, and material and energy recovery scenarios in module D.

Data sources, quality and allocation

Specific primary data derived from the NatSteel Holdings Pte Ltd production process in Singapore have been modelled using Simapro v9.1 LCA software and the BRE LINA database v2.0.33. In accordance with the requirements of EN15804, the most current available data has been used. The manufacturer-specific data from NatSteel Holdings Pte Ltd covers a period of 1 year (01/04/19 – 31/03/20). Secondary data has been obtained for all other upstream and downstream processes that are beyond the control of the manufacturer (i.e. raw material production) from the ecoinvent 3.2 database. All ecoinvent datasets are complete within the context used, and confirm to the system boundary and the criteria for the exclusion of inputs and outputs according to the requirements specified in EN15804. Calculations were performed to enable allocation of processes to the steel products. Allocation procedures were by physical allocation and are according to EN15804 and are based on ISO14044 guidance.

Cut-off criteria

No inputs or outputs have been excluded. All raw materials and packaging inputs, plus their transport, process and general energy and water use, production and non-production waste, have been included, except for direct emissions to water and soil, which are not measured.

End of life scenarios

This EPD includes two sets of results which are published below. The first set of results present the impacts of a 100% steel waste to landfill scenario in end of life Module C4. The second set of results present the impacts of a 100% steel waste to recycling scenario in end of life Module C4. Both sets of results also include Module D, which presents the results of the environmental loads or benefits that have been calculated according to each respective end of life scenario.

NatSteel export their product to many different countries where the end of life scenario varies considerably. The two sets of results for Modules C4 and D presented in this EPD are therefore intended to allow flexibility for end-users of the EPD to calculate the impacts applicable to their own country or region.

LCA Results (Module C4 = 100% to landfill scenario)

Results per declared unit, 1 tonne steel reinforcing bar/coil, for the declared modules, can be found in the following tables:

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			GWP	ODP	AP	EP	POCP	ADPE	ADPF
			kg CO_2 equiv.	kg CFC 11 equiv.	kg SO_2 equiv.	kg $(PO_4)^{3-}$ equiv.	kg C_2H_4 equiv.	kg Sb equiv.	MJ, net calorific value.
Product stage	Raw material supply	A1	4.93e+2	6.64e-5	2.91e+0	6.68e-1	4.54e-1	4.06e-4	9.12e+3
	Transport	A2	4.82e-2	8.12e-9	7.97e-4	9.38e-5	5.96e-5	4.43e-8	6.98e-1
	Manufacturing	A3	3.06e+1	3.54e-6	1.27e-1	2.24e-2	1.61e-2	3.40e-5	5.15e+2
	Total (of product stage)	A1-3	5.23+2	6.99e-5	3.04e+0	6.90e-1	4.70e-1	4.41e-4	9.64e+3
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Disposal	C4	5.19e+0	1.79e-6	4.00e-2	9.87e-3	6.91e-3	5.61e-6	1.51e+2
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	4.70e+0	6.34e-5	2.78e+0	6.37e-1	4.33e-1	3.87e-4	8.70e+3

GWP = Global Warming Potential;
ODP = Ozone Depletion Potential;
AP = Acidification Potential for Soil and Water;
EP = Eutrophication Potential;
POCP = Formation potential of tropospheric Ozone;
ADPE = Abiotic Depletion Potential – Elements;
ADPF = Abiotic Depletion Potential – Fossil Fuels.

Parameters describing resource use, primary energy

			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	3.18e+2	9.56e-4	3.18e+2	9.08e+3	0.00e+0	9.08e+3
	Transport	A2	1.52e-2	2.23e-8	1.52e-2	7.09e-1	0.00e+0	7.09e-1
	Manufacturing	A3	5.37e+0	1.08e-4	5.37e+0	4.80e+2	0.00e+0	4.80e+2
	Total (of product stage)	A1-3	3.23e+2	1.06e-3	3.23e+2	9.56e+3	0.00e+0	9.56e+3
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Disposal	C4	3.89e+0	5.90e-6	3.89e+0	1.50e+2	0.00e+0	1.50e+2
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	3.03e+2	9.12e-4	3.03e+2	8.66e+3	0.00e+0	8.66e+3

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;
PERM = Use of renewable primary energy resources used as raw materials;
PERT = Total use of renewable primary energy resources;
PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
PENRM = Use of non-renewable primary energy resources used as raw materials;
PENRT = Total use of non-renewable primary energy resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	1.16e+3	0.00e+0	0.00e+0	2.74e+1
	Transport	A2	0.00e+0	0.00e+0	0.00e+0	1.65e-4
	Manufacturing	A3	0.00e+0	0.00e+0	0.00e+0	1.57e-1
	Total (of product stage)	A1-3	1.16e+3	0.00e+0	0.00e+0	2.76e+1
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	1.72e-1
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	1.11e+3	0.00e+0	0.00e+0	2.61e+1

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water.

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	5.53e+1	1.90e+1	2.04e-2
	Transport	A2	2.94e-4	9.29e-3	4.77e-6
	Manufacturing	A3	2.22e-1	8.74e-1	5.15e-4
	Total (of product stage)	A1-3	5.55e+1	1.99e+1	2.09e-2
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0
	Disposal	C4	5.41e-2	1.00e+3	1.02e-3
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	5.28e+1	1.81e+1	1.95e-2

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed.

LCA Results (continued)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	0.00e+0	1.81e+2	0.00e+0	0.00e+0
	Transport	A2	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Manufacturing	A3	0.00e+0	6.95e+0	0.00e+0	0.00e+0
	Total (of product stage)	A1-3	0.00e+0	1.88e+2	0.00e+0	0.00e+0
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00e+0	1.73e+2	0.00e+0	0.00e+0

CRU = Components for reuse;
MFR = Materials for recycling;
MER = Materials for energy recovery;
EE = Exported energy.

LCA Results (Module C4 = 100% to recycling scenario)

Results per declared unit, 1 tonne steel reinforcing bar/coil, for the declared modules, can be found in the following tables:

(MND = module not declared; MNR = module not relevant; INA = indicator not assessed; AGG = aggregated)

Parameters describing environmental impacts

			GWP	ODP	AP	EP	POCP	ADPE	ADPF
			kg CO_2 equiv.	kg CFC 11 equiv.	kg SO_2 equiv.	kg $(PO_4)^{3-}$ equiv.	kg C_2H_4 equiv.	kg Sb equiv.	MJ, net calorific value.
Product stage	Raw material supply	A1	4.93e+2	6.64e-5	2.91e+0	6.68e-1	4.54e-1	4.06e-4	9.12e+3
	Transport	A2	4.82e-2	8.12e-9	7.97e-4	9.38e-5	5.96e-5	4.43e-8	6.98e-1
	Manufacturing	A3	3.06e+1	3.54e-6	1.27e-1	2.24e-2	1.61e-2	3.40e-5	5.15e+2
	Total (of product stage)	A1-3	5.23+2	6.99e-5	3.04e+0	6.90e-1	4.70e-1	4.41e-4	9.64e+3
End of life	Waste processing	C3	1.86e+0	8.35e-8	8.40e-3	2.75e-3	6.55e-4	7.03e-7	2.72e+1
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.26e+1	-3.04e-6	-1.33e-1	-3.06e-2	-2.08e-2	-1.86e-5	-4.18e+2

GWP = Global Warming Potential;
ODP = Ozone Depletion Potential;
AP = Acidification Potential for Soil and Water;
EP = Eutrophication Potential;
POCP = Formation potential of tropospheric Ozone;
ADPE = Abiotic Depletion Potential – Elements;
ADPF = Abiotic Depletion Potential – Fossil Fuels.

Parameters describing resource use, primary energy

			PERE	PERM	PERT	PENRE	PENRM	PENRT
			MJ	MJ	MJ	MJ	MJ	MJ
Product stage	Raw material supply	A1	3.18e+2	9.56e-4	3.18e+2	9.08e+3	0.00e+0	9.08e+3
	Transport	A2	1.52e-2	2.23e-8	1.52e-2	7.09e-1	0.00e+0	7.09e-1
	Manufacturing	A3	5.37e+0	1.08e-4	5.37e+0	4.80e+2	0.00e+0	4.80e+2
	Total (of product stage)	A1-3	3.23e+2	1.06e-3	3.23e+2	9.56e+3	0.00e+0	9.56e+3
End of life	Waste processing	C3	1.36e+0	9.20e-7	1.36e+0	2.70e+1	0.00e+0	2.70e+1
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-1.46e+1	4.38e-5	-1.46e+1	-4.16e+2	0.00e+0	-4.16e+2

PERE = Use of renewable primary energy excluding renewable primary energy used as raw materials;
PERM = Use of renewable primary energy resources used as raw materials;
PERT = Total use of renewable primary energy resources;
PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials;
PENRM = Use of non-renewable primary energy resources used as raw materials;
PENRT = Total use of non-renewable primary energy resource

LCA Results (continued)

Parameters describing resource use, secondary materials and fuels, use of water						
			SM	RSF	NRSF	FW
			kg	MJ net calorific value	MJ net calorific value	m^3
Product stage	Raw material supply	A1	1.16e+3	0.00e+0	0.00e+0	2.74e+1
	Transport	A2	0.00e+0	0.00e+0	0.00e+0	1.65e-4
	Manufacturing	A3	0.00e+0	0.00e+0	0.00e+0	1.57e-1
	Total (of product stage)	A1-3	1.16e+3	0.00e+0	0.00e+0	2.76e+1
End of life	Waste processing	C3	0.00e+0	0.00e+0	0.00e+0	1.86e-2
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-5.31e+1	0.00e+0	0.00e+0	-1.25e+0

SM = Use of secondary material;
RSF = Use of renewable secondary fuels;
NRSF = Use of non-renewable secondary fuels;
FW = Net use of fresh water.

Other environmental information describing waste categories					
			HWD	NHWD	RWD
			kg	kg	kg
Product stage	Raw material supply	A1	5.53e+1	1.90e+1	2.04e-2
	Transport	A2	2.94e-4	9.29e-3	4.77e-6
	Manufacturing	A3	2.22e-1	8.74e-1	5.15e-4
	Total (of product stage)	A1-3	5.55e+1	1.99e+1	2.09e-2
End of life	Waste processing	C3	3.44e-3	1.13e-1	3.55e-5
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	-2.53e+0	-8.70e-1	-9.34e-4

HWD = Hazardous waste disposed;
NHWD = Non-hazardous waste disposed;
RWD = Radioactive waste disposed.

LCA Results (continued)

Other environmental information describing output flows – at end of life						
			CRU	MFR	MER	EE
			kg	kg	kg	MJ per energy carrier
Product stage	Raw material supply	A1	0.00e+0	1.81e+2	0.00e+0	0.00e+0
	Transport	A2	0.00e+0	0.00e+0	0.00e+0	0.00e+0
	Manufacturing	A3	0.00e+0	6.95e+0	0.00e+0	0.00e+0
	Total (of product stage)	A1-3	0.00e+0	1.88e+2	0.00e+0	0.00e+0
End of life	Waste processing	C3	0.00e+0	1.00e+3	0.00e+0	0.00e+0
	Disposal	C4	0.00e+0	0.00e+0	0.00e+0	0.00e+0
Potential benefits and loads beyond the system boundaries	Reuse, recovery, recycling potential	D	0.00e+0	-8.29e+0	0.00e+0	0.00e+0

CRU = Components for reuse;
MFR = Materials for recycling;
MER = Materials for energy recovery;
EE = Exported energy.

Scenarios and additional technical information

Scenarios and additional technical information			
Scenario	Parameter	Units	Results
C1 to C4 End of life	Description of scenario		
C3	NatSteel utilise their own waste pre-processing facility (NSR). Approximately 22% of the throughput of the scrap steel comes from construction and demolition sites, and includes DBIC (deformed bar in coil), Hard Drawn Wire in Coil, Precut Wire in Length and Welded Wire Mesh. After cleaning and sorting, the majority of this then undergoes a further cutting process, where the remainder are already small enough and ready for input to the electric arc furnace.		
C4	Disposal steel waste to landfill (100% scenario)	Kg	1,000
	Disposal steel waste to recycling (100% scenario)	Kg	1,000
Module D	Description of scenario		
	After building demolition, DBIC (deformed bar in coil), Hard Drawn Wire in Coil, Precut Wire in Length and Welded Wire Mesh is transported to NatSteel's pre-processing facility and can be used as an input material for the steelmaking process. Since the composition of the manufactured steel includes 95% recycled content, the pre-processed DBIC (deformed bar in coil), Hard Drawn Wire in Coil, Precut Wire in Length and Welded Wire Mesh can be used as a replacement for the 5% virgin material. Therefore, 1,000 kg of scrap steel waste recovered from building demolition sites can be used to offset the impacts of 45.8 kg of virgin material. The dataset used to represent avoided impacts of the virgin material used in NatSteel's DBIC (deformed bar in coil), Hard Drawn Wire in Coil, Precut Wire in Length and Welded Wire Mesh manufacture was: 'Billet (intermediate), Steel Reinforcing Bar, Coil'.		

Additional information

Interpretation

The scrap-based carbon steel feedstock of NatSteel Holdings Pte Ltd is made via the electric arc furnace (EAF) route. The bulk of the environmental impacts and primary energy demand are attributed to the manufacturing phase, covered by information modules A1-A3 of EN15804:2012+A1:2013.

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