Mooring Chain
R3-R3S, R4-R4S and R5 Quality steel for Offshore Industry

CPC CODE	REGISTRATION NUMBER	EPD OWNER
42991	S-P-00476	VICINAY SESTAO S.L.

PUBLICATION DATE	REVISION DATE	VALIDITY DATE
2016/11/11	2019/07/12	2024/07/12

EPD®

VICINAY SESTAO

PCR 2014:10 Fabricated steel products, except construction products, machinery and equipment (Version 2.1)
In accordance with ISO 14025:2006. Based on a Cradle to Gate LCA.

EPD verification and registration programme	The International EPD® System Box 210 60, SE-100 31 Stockholm, Sweden, Email:info@environdec.com
Registration Nº	S-P-00476
Date of publication	2016/11/11
Date of revision	2019/07/12
Date of validity	2024/07/12 (5 years)
EPD valid within the following geographical area	Global
Procedure for follow-up of data during EPD validity involves third party verifier	☐ Yes ☒ No
EPD Type	☒ Cradle-to-gate ☐ Cradle-to-grave
Independent verification of the declaration and data, according to ISO 14025:2006	☒ EPD External verification ☐ EPD Process certification
Third party certification body	ELISABETH AMAT GUASCH eli.amat@tecnaliacertificacion.com TECNALIA R&I CERTIFICACIÓN, S.L.
Third party verifier accredited or approved by	ENAC nº125/C-PR283
Reference Product category rules (PCR)	PCR 2014:10 Fabricated steel products, except construction products, machinery and equipment (Version 2.1) CPC 422-429
Product category rules (PCR) review conducted by	The Technical Committee of the International EPD® System. Chair: Massimo Marino Contact via info@environdec.com
Product category rules (PCR) prepared by:	The Technical Committee of the International EPD® System PCR Moderator: Gorka Benito Alonso – IK INGENIERIA. Contact via g.benito@ik-ingenieria.com
Holder of the declaration	VICINAY SESTAO S.L. Av. de Altos Hornos de Bizkaia, 2. 48910 Sestao • Spain Tel.: +34 944 202 000 www.vicinaysestao.com Contact via dhernandez@vicinaysestao.com
EPDs within the same product category but from different programmes may not be comparable	
The EPD owner has the sole ownership, liability, and responsibility for the EPD	

01 VICINAY SESTAO S.L.

VICINAY SESTAO S.L. (from now VSSL) is located in Biscay (Sestao), northern Spain. It was established in 2013 and belongs to VICINAY MARINE group. With the new advanced management model and infrastructures, VSSL allows to increase the group´s manufacturing capacity in 50.000 tons/year reaching its highest capacity in chain production.

VICINAY MARINE is the first producer of mooring lines worldwide, providing solutions tailored to meet the needs of each customer. Because of the solid experience of Vicinay family over more than 200 years of work and effort, VICINAY MARINE has managed to be a world leader in the supply chain and mooring lines for offshore industry.

VSSL produces high technology chains with a nominal diameter of chain between 70 mm and 220 mm, although enlarged and end links up to 240 mm can be manufactured.

VSSL offers engineering and design services, offshore assistance, chain resistance tests of up to 220 mm immersion and 0.2-0.8 Hz, assistance in loading and unloading chains, particular test specifications (FEA, Fatigue, OPB, Torsion and SCC calculations) and calculation of the permanent life of the chain.

Homologations of all steel grade (R3, R3S, R4, R4S, R5) links are carried out in the plant with a higher diameter approval of 220 mm. The exact composition of this steel is covered by exclusive legal rights including patent and trademarks (steel grades are approved by different Classification Societies (BV, DNVGL, ABS, LR, ClassNK, API).

VSSL is a company focused on the future. It´s very important for the organisation to be recognised as a world leader for its safety, quality, management and innovation. For this reason, in 2013 international management standards were implemented, obtaining the following certifications:

- ISO 9001:2015
- OSHAS 18001:2007
- ISO 14001:2015
- ISO 50001:2011

The management model of the company is based on the proposal by the Euskalit foundation, promoted by the Basque Government: "Advanced Management Model". This model is the result of the consensus of people belonging to different organisations and institutions. Its purpose is to promote the application of its principles in Basque organisations and to contribute to a sustainable development.

We are founding members of the BASQUE ECODESIGN CENTER, an entity unique of this type in Southern Europe, where a limited number of private companies and the Basque Government are committed to design and execute innovative projects in accordance with Ecodesign standard (ISO 14006).

In VSSL we address sustainability in its multiple dimensions: environmental, economic, social, institutional and, above all, as a changing process to set a new style of development-oriented sustainability of the global human and natural system in continuous interaction. Through a transparent information policy and strategy of on-going dialogue, we aim to address our stakeholders' expectations to preserve the environment, in line with the latest Sustainable Development Goals approved by the United Nations (2015-2030).

We have spent many years manufacturing and supplying mooring chains to provide security for the devices floating in the seas around the world, challenging the changing motion of the ocean, the force of the waves and the winds, and the pulsating forces of nature always trying to regain control.

Over this time, our customers have relied on us and on our mooring lines, lines tailored to the circumstances, because no two seas are ever the same. There are seas of great depth and shallow seas, seas with different levels of salinity, temperatures and life. This is the environment for which we build the anchors that attach floating devices to the seabed, always thinking about the unique needs of each customer, both present and future.

We manage to overcome this challenge year after year thanks to the people who are part of Vicinay Sestao S.L.

JUAN IGNACIO VICINAY,
CHAIRMAN OF VICINAY SESTAO S.L.

Vicinay has always been characterised by creating room for continuous improvement, by its ability to overcome the past, its adaptation to change and even for shaping the future, often anticipating the needs of the market.

In VSSL we consider essential that the management strategy, which arises each financial year to ensure that people have safe and healthy conditions in the performance of their duties, is respectful with the environment and sustainable global development.

Vicinay Sestao S.L. wants to be recognized as a company of the future. We shall remain committed to reduce environmental impacts, by participating in renewable energy projects and consistently increasing competitiveness of the company through the continuous improvement and innovation of products, services and processes.

ASIER PINEDO,
DIRECTOR OF VICINAY SESTAO S.L.

VICINAY SESTAO

02 LIFE CYCLE ASSESSMENT

The LCA study was carried out in accordance with the following standards:

- ISO 14040:2006. Environmental management. Life cycle assessment. Principles and framework
- ISO 14044:2006. Environmental management. Life cycle assessment. Requirements and guidelines
- ISO 14025:2010. Environmental labels and declarations. Type III environmental declarations. Principles and procedures
- International EPD System General Program Instruction. (Version 3.0) 2017-12-11
- PCR 2014:10 Fabricated steel products, except construction products, machinery and equipment (Version 2.1) CPC 422-429

VSSL produces high technology chains for the offshore industry. The traditional high quality of our products is well known and preferred by the major oil & gas companies.

The scope and the Declared Unit of the present Environmental Product Declaration is the production of 1.000 kg of offshore mooring chain from 70 mm to 220 mm nominal diameter (small and big diameter chains). There have been considered three different steel grades, in accordance with different ranges of material mechanical properties:

- R3-R3S quality steel
- R4-R4S quality steel
- R5 quality steel

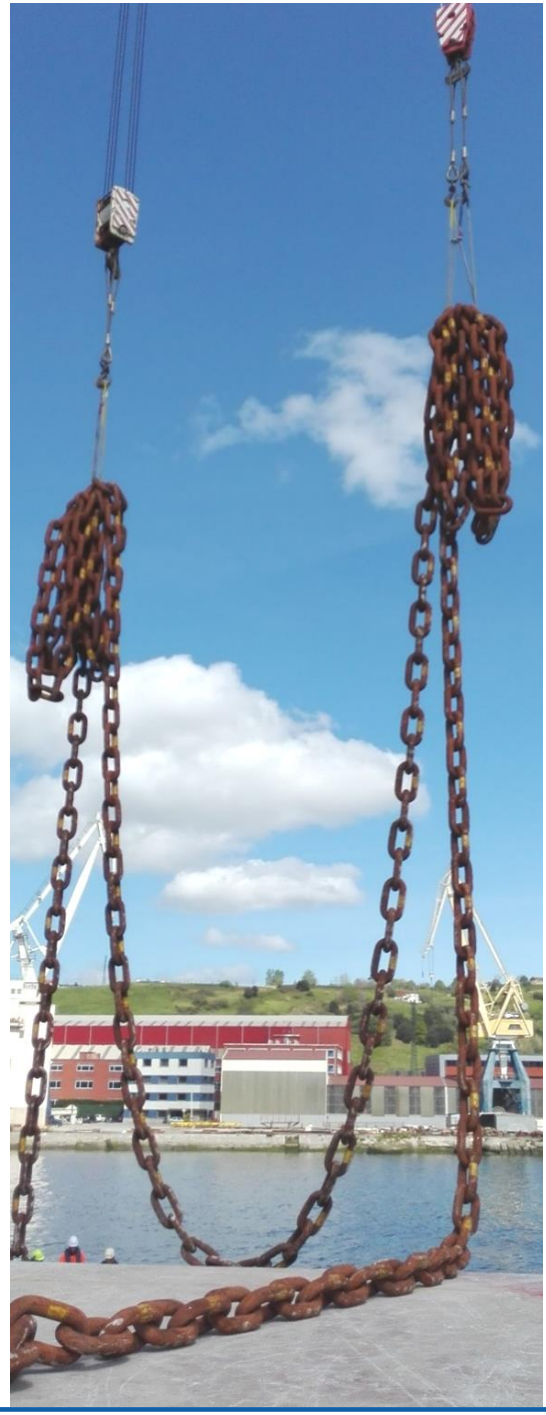
In accordance with the requirements for the reference PCR, similar products have been included in the same declaration but reported as separate results.

This LCA methodology has allowed us to determine the environmental burden of our products in terms of resource consumption, environmental impact and generation of residues from a life-cycle perspective with a “cradle to gate” scope.

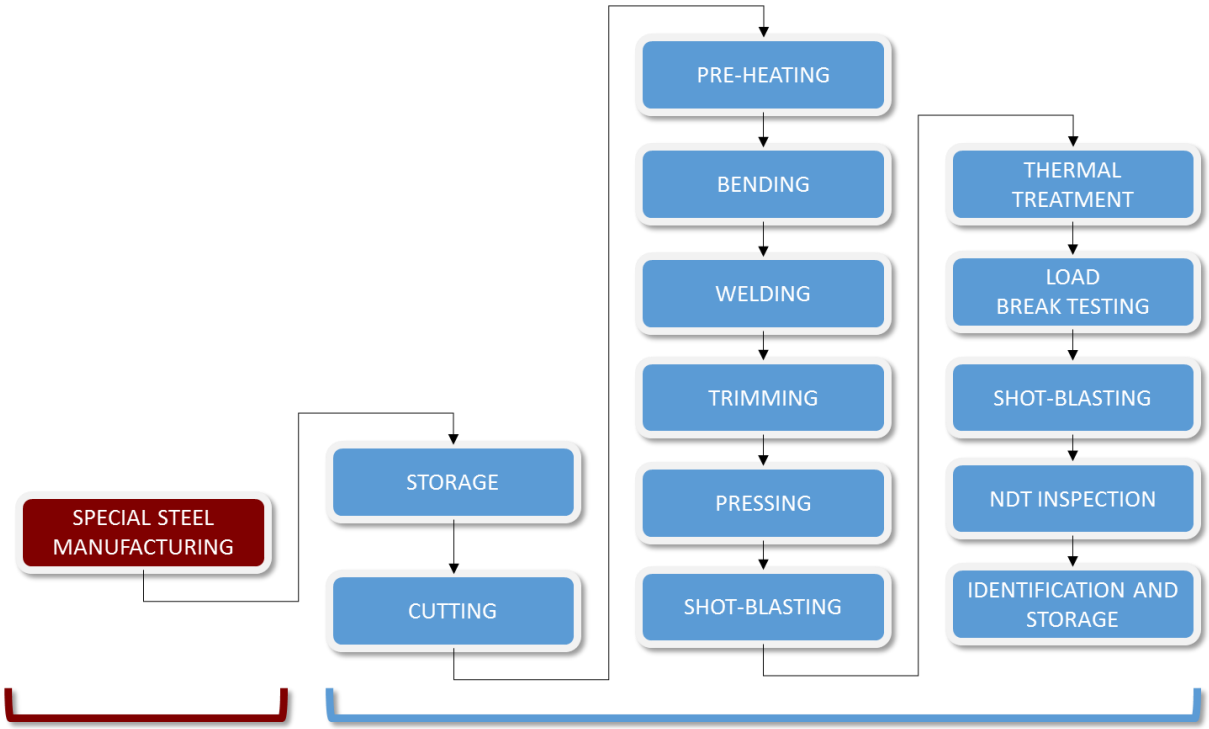
A “cradle-to-grave” EPD requires a development of detailed information that defines the function of the product and scenarios for handling the usage and end of life stage in order to meet comparability within the specific application of the product group. As there are many possibilities for the use and end of life phases of our offshore mooring chains (type of element to be moored, its location, environmental use conditions, climatic, end of life management of the mooring chains by the customer…) no relevant use phase and end of life scenario could be defined. As the objective of this LCA and EPD is to cover a large variety of steel products, all the available steel grades have been included in the study applying a “cradle to gate” scope. Declared unit: 1000 kg fabricated chain.

The offshore mooring chain manufacturing plant included in the LCA study is located in Sestao (Biscay), in the north of Spain.

Additionally to those impact categories requested by the reference PCR, ozone layer depletion potential environmental impact assessment will be included, as it is considered relevant to the society.



SYSTEM BOUNDARIES



UPSTREAM

- Extraction and production of raw material for all main parts of the product
- Recycling process of recycled material used in the product
- Transportation of raw material to the manufacturing plant

CORE

- Inflow of raw materials and energy consumptions needed for the production
  - Material consumption
  - Energy production and consumption
  - Impacts due to electricity production according to the proper energy mix hypothesis (year 2018 as reference and data taken from the renewable electricity supplier of the company)
  - Emissions to air, water and soil…
- Assembly of the final product
- Waste treatment of waste generated during manufacturing

PRODUCTION OF CHAINS

The chain fabrication facility produces chains from 70 mm diameter up to 220 mm diameter in five different steel grades without restrictions in length or weight with an annual capacity of 50.000 tons.

R3-R3S, R4-R4S and R5 steel grades used for the manufacturing are achieved through the alloy of different elements such as silicon, manganese, copper, carbon, vanadium, chrome, nickel or molybdenum. **The steel used for the manufacturing is 100% recycled content.**

VSSL steel specification gives detailed information regarding the chemical composition, tests for quality control, delivery method (dimensional requirements and packaging) and mechanical characteristics. The exact composition of this steel is covered by exclusive legal rights including patent and trademarks, so no content declaration or list of materials and chemical substances is included in the EPD (as the reference PCR states and allows).

Manufacturing plant is equipped with the latest advances in the robotic handling of large links (851,84 kg of a 220 mm diameter link) for welding, with maximum guarantees of safety and quality. We also have continuous heat treatment furnaces with the latest control technology, test machines until 4.000 tons capacity and the most advanced NDT technology for inspection by Phased Array.

The principal function of produced chain is the mooring of floating installations such as oil & gas extracting and/or storing platforms, buoys, vessels, etc. Mooring with this type of chain allows for minimal movement of the installation when any type of climatic condition is faced, which ensures the necessary conditions for a preventive management of safety and environmental risks.

The organization’s business is the Design, Manufacturing and Supply of high technology chains for the oil & gas and wind industries.

Each of the processes from the buying of the raw material to the sale of the final product are covered by internal procedures included in HSEQ integrated management system, which is subject of periodical audit by third party certification bodies such as DNV-GL (Det Norske Veritas and Germanischer Lloyd) and LR (Lloyd´s Register).

The products designed and made by VSSL are prepared to be able to withstand stringent technical requirements and adverse environmental conditions during their calculated useful life-span of 20 years.

In the countries where VSSL products are operating, company does not know about any environmental legislation to which the final product is affected by.

VSSL´s Health and Safety, Quality and Environmental policies are kept up to date and are available for inspection by any interested party. These policies guarantee the fulfillment of both the client and the legal and environmental requirements applicable to its processes.

The life-cycle of the offshore mooring chains begins with the production of the steel bars at the main supplier located in Reinosa, Basauri and Azkoitia, northern Spain. At these lants, starting from selected scrap metals, the steel is produced using electric arc furnace, to produce the raw material in ingot or continuous casting as per VSSL required composition. Once the steel is rolled into bars these are packaged and transported by lorries, belonging to the steel manufacturer, to the chain manufacturing plant in Sestao.

When the steel bars arrive to the plant, they are classified and stored in metallic racks in the reception area. When it is required for manufacturing, they are moved using a crane to a conveyor system which feeds the sawing machines, where each bar is cut to the required length. Any left-over after the cutting process (usually between 2% and 5% of the total mass) are managed as revalued waste, trying to minimize this percentage at the time of the purchasing order.

An automatic guided vehicle takes the steel bars to the manufacturing machines, where they are introduced into the induction furnaces or electric heaters as a first stage of the manufacturing of the link. After the pre-heating, the bar goes to the bending machine, where it is automatically bent in two times and joined previous link. Then it is subject of a flash butt welding process, where two sides are welded with no material addition. Once the link is welded it is trimmed in order to remove the excess material from the welded area. The last stage of the carousel is the pressing, in order to reach the proper shape and dimensions.

After leaving the carousel, when preliminary inspection is to be performed in big diameter chains, the link’s surface is shot-blasted (non-hazardous waste) in order to prepare it for non-destructive testing. Process is made using a robot, just shot-blasting the link surface to make the process as much profitable as possible. These shot-blasting equipment have a system to separate the used grit from dust making non-hazardous waste segregation and reuse easier.

After non-destructive inspection any material that it is not according to quality standards is painted blue and is cut and removed from the chain. This cut material is classed as revalued waste.

After having undergone these processes, the chain then passes on to the heat treatment phase in order to give the material the final mechanical properties. This treatment consists of double quenching followed by tempering. Between each step, the chain is cooled by immersion in a closed water circuit which is not emptied externally.

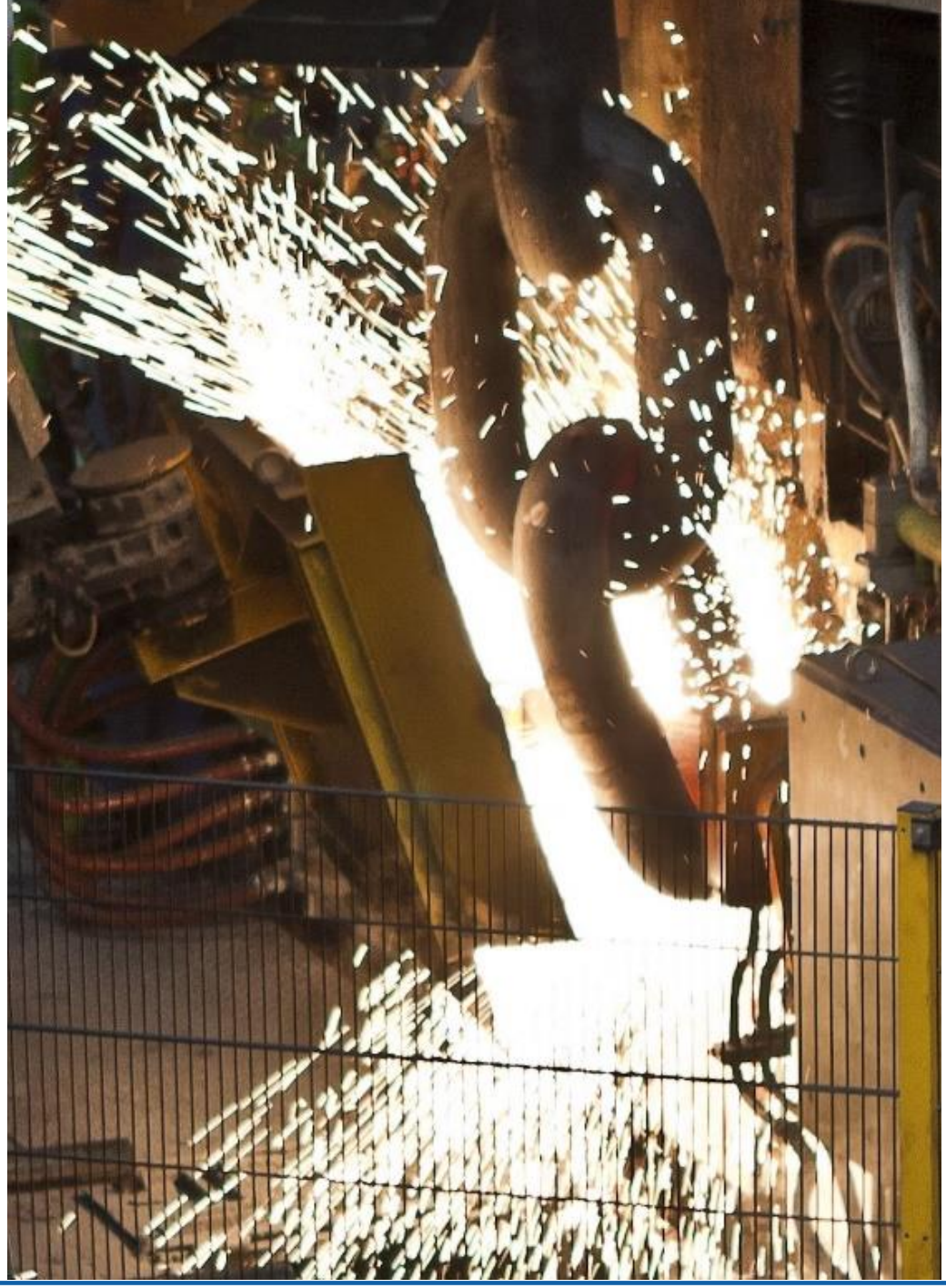
After heat treatment the chain is proof load tested to verify its resistance to traction using proof load test bench with loads rigorously determined according the chain's dimensions and quality. 100% of the links are tested in a proof load test bench after which the elongation of the link is evaluated. This is done to make sure that the load and dimensions are in accordance with the standards and specifications.

Once the chain is proof load tested is shot-blasted in order to prepare the surface for final non-destructive inspection. This operation starts with a visual inspection of each and every link. After identifying any possible flaws (metallic deposits which were not eliminated during shot-blast cleaning) on the surface of the link these defects are removed by manual soft grinding.

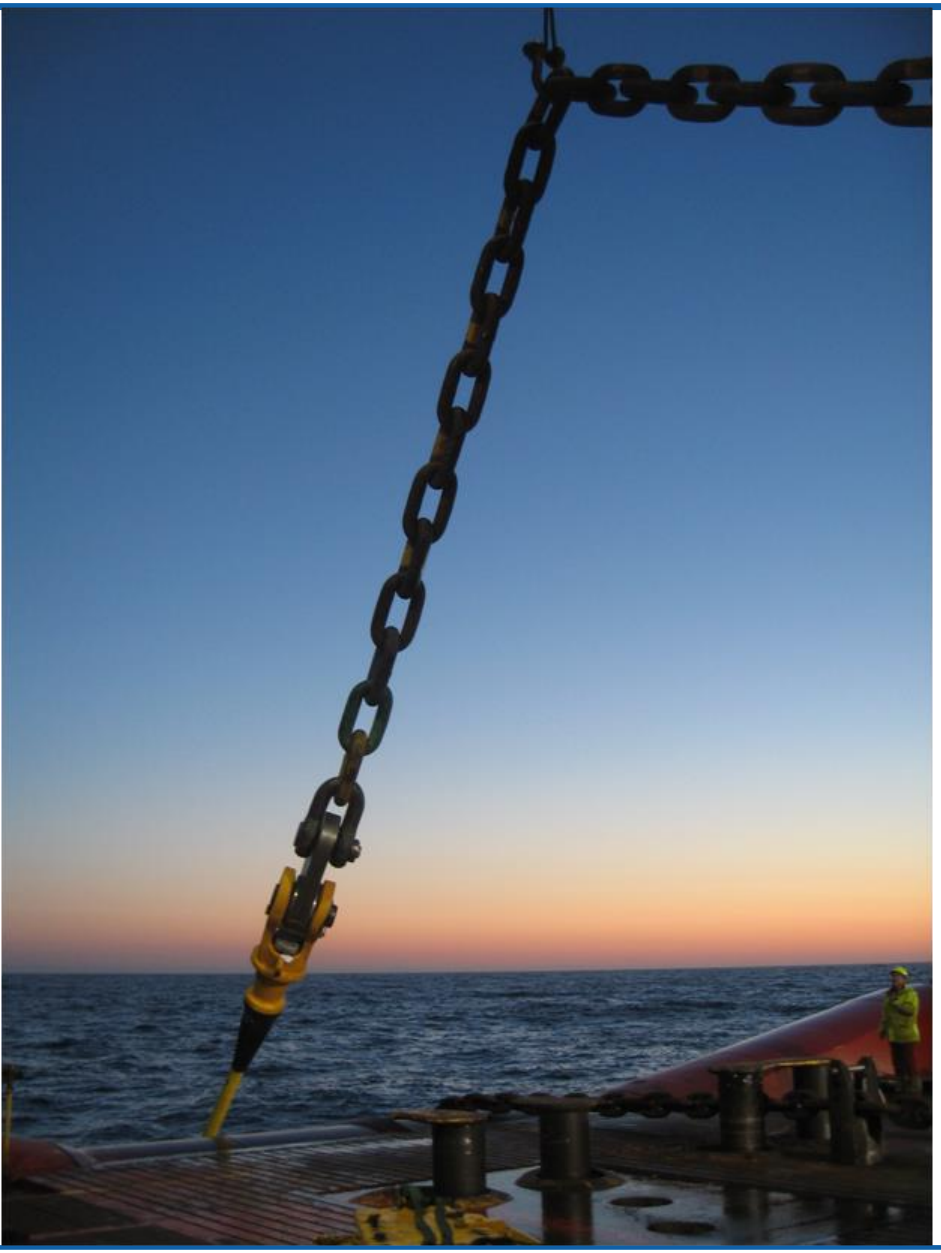
Once the surface is prepared the link is superficially inspected through fluorescent magnetical particles and weld internally inspected using Phased Array ultrasonic testing. In case that any relevant defect is discovered according to acceptance criterias, the link shall be removed as scrap metal and considered as revalued scrap waste.

After final inspection the chain is identified according to the client's specifications and is stored waiting for delivery. Delivery is usually carried out by vessel.

During each of the production phases the chain is moved using a system of cranes and fairleads which make the moving of such heavy items possible.



LCA DATA SOURCES



The data used in modeling the processes refers the period January-December of the year 2018 and it reflects the activities carried out by the company in the production of the mooring chain. Primary data concerning the energy consumption, resource consumption and waste production on VSSL plant is taken from the consumption control tables created by the company using information from natural gas, electricity and water from supply companies, the weight control by means of a properly calibrated scale and delivery notes of the diverse supplies reported according to the Environmental Management System certified according to ISO 14001:2015 procedure “Measuring and Follow-up”.

The data provided by VSSL are not broken down by the selected declared unit, but they are provided for the total of the company in the year selected. Therefore, distinction has been made between the specific characteristics of each process, the quantity of material processed, and based on calculations it has been estimated the allocation of the proportional part the environmental aspects per ton of manufactured chain.

In the same way, primary data concerning the energy consumption, resource consumption and waste production from the intermediate manufacturing supplier have been taken for the same period of time. This data has been “transformed” into LCA Declared Unit data by comparing the collected data with the manufacturing capacity (separated in R3-R3S, R4-R4S and R5 qualities steel) for the same period.

In those cases where no data is available regarding specific processes and/or materials, theoretical calculations have been made, using for estimation internationally recognized databases of life cycle inventories (**Ecoinvent 3.4**).

The analyzed life-cycle includes the gathering of scrap metal by the supplier for the production of the special steel and transportation from their manufacturing plant to VSSL plant, where the steel bars are processed and the chains which are the subject of this declaration are produced.

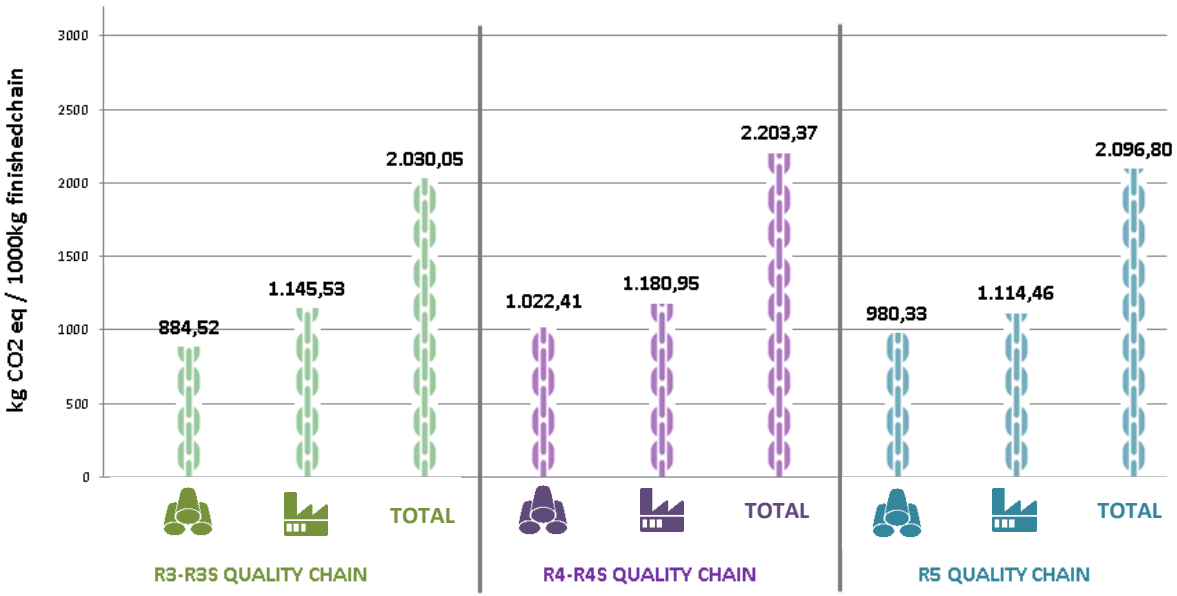
No cut off rule has been taken into account on this study, so all the data compiled has been used for the LCA.

VICINAY SESTAO

03 ENVIRONMENTAL PROFILE

ENVIRONMENTAL PROFILE [1.000 kg fabricated chain]	R3-R3S QUALITY CHAIN			R4-R4S QUALITY CHAIN			R5 QUALITY CHAIN		
	UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL
ENVIRONMENTAL IMPACT									
Global Warming Potential (GWP) (fossil) kg CO_2 eq	8,82E+02	1,14E+03	2,02E+03	1,02E+03	1,18E+03	2,20E+03	9,78E+02	1,11E+03	2,09E+03
Global Warming Potential (GWP) (biogenic) kg CO_2 eq	1,31E+00	1,32E+00	2,64E+00	1,50E+00	1,36E+00	2,86E+00	1,46E+00	1,29E+00	2,75E+00
Global Warming Potential (GWP) (land use and land transformation) kg CO_2 eq	7,71E-01	3,25E+00	4,02E+00	8,94E-01	3,36E+00	4,25E+00	8,72E-01	3,17E+00	4,05E+00
Global Warming Potential (GWP) (total) kg CO_2 eq	8,85E+02	1,15E+03	2,03E+03	1,02E+03	1,18E+03	2,20E+03	9,80E+02	1,11E+03	2,10E+03
Acidification potential (AP) kg SO_2 eq	4,20E+00	3,91E+00	8,11E+00	5,65E+00	4,03E+00	9,68E+00	5,81E+00	3,81E+00	9,62E+00
Eutrophication potential (EP) kg PO_4^{3-} eq	3,25E+00	7,99E-01	4,05E+00	7,84E+00	8,24E-01	8,66E+00	9,47E+00	7,78E-01	1,02E+01
Photochemical oxidant formation potential (POCP) kg NMVOC eq	3,75E+00	2,19E+00	5,94E+00	5,17E+00	2,26E+00	7,43E+00	5,41E+00	2,13E+00	7,54E+00
Abiotic depletion potential (ADP) (elements) Kg Sb eq	3,35E-02	2,80E-03	3,63E-02	1,41E-01	2,89E-03	1,44E-01	1,81E-01	2,72E-03	1,83E-01
Abiotic depletion potential (ADP) (fossil fuels) MJ, net calorific value	1,11E+04	1,59E+04	2,70E+04	1,25E+04	1,64E+04	2,89E+04	1,18E+04	1,55E+04	2,73E+04
Ozone layer depletion (ODP) kg CFC-11eq	9,04E-05	1,51E-04	2,42E-04	9,89E-05	1,56E-04	2,55E-04	9,07E-05	1,47E-04	2,38E-04
Water scarcity potential m3 eq	6,06E+02	2,85E+02	8,91E+02	6,82E+02	2,94E+02	9,76E+02	6,64E+02	2,78E+02	9,42E+02

GLOBAL WARMING POTENTIAL



GLOBAL WARMING POTENTIAL

Greenhouse effect emissions into the atmosphere absorb some of the infrared solar radiation reflected on the earth's surface resulting in a troposphere temperature increase. The global warming potential is an index, in equivalent kg of CO_2, to measure the global warming contribution of a substance released into the atmosphere in a span of 100 years.

ACIDIFICATION POTENTIAL

Acidification results from the emission of sulphur dioxide and nitrogen oxides. In the atmosphere, these oxides react with the existing steam, forming acids which fall back to the earth in the form of rain or snow, or as dry deposits. Its effect on the earth generally shows itself in the form of reduced forest development and in aquifer ecosystems affects to the disappearance of some living organisms. Acidification potential measures an emitting substance's contribution to acidification expressed in sulphur dioxide equivalents (SO_2).

EUTROPHICATION POTENTIAL

Eutrophication results in the enrichment of water ecosystems with organic compounds and nutrients, which give rise to an increased production of plankton, algae and other water plants with the resulting reduction in water quality. In this case the main sources related to this phenomenon are nitrogen and phosphorous. A secondary effect is the decomposition of dead organic material, a process which consumes oxygen and may result in anaerobic environments. The eutrophication potential, expressing in equivalent PO_4^{3-}, quantifies nutrient enrichment via the release of a substance in water or land.

OZONE PHOTOCHEMICAL FORMATION / PHOTOCHEMICAL OXIDATION POTENTIAL

The photochemical formation of the ozone in the troposphere is mainly provoked by the decomposition of volatile organic compounds (VOCs) in the presence of nitrogen oxides (NO_x) and light. The formation of ozone by means of this process can be quantified by using the so-called ozone photochemical formation potentials (POCPs) expressed in equivalent kg of ethylene (C_2H_4).

OZONE DEPLETION POTENTIAL

The ozone layer in the atmosphere protects the flora and fauna from harmful ultraviolet radiation from the sun. Some substances emitted into the atmosphere deplete this layer resulting in a higher level of UV radiation on the earth. The ozone layer depletion potential is the contribution of a substance compared with the impact caused by CFC-11.

USE OF RESOURCES [1.000kg fabricated chain]		R3-R3S QUALITY CHAIN			R4-R4S QUALITY CHAIN			R5 QUALITY CHAIN		
		UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL
RENEVABLE RESOURCES	**UNIT**									
Use as energy carrier	MJ	1,60E+03	2,26E+03	3,86E+03	2,08E+03	2,33E+03	4,41E+03	2,14E+03	2,20E+03	4,34E+03
Use as raw material	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
TOTAL	**MJ**	1,60E+03	2,26E+03	3,86E+03	2,08E+03	2,33E+03	4,41E+03	2,14E+03	2,20E+03	4,34E+03
NON RENEVABLE RESOURCES	**UNIT**									
Use as energy carrier	MJ	1,53E+04	2,18E+04	3,71E+04	1,71E+04	2,25E+04	3,96E+04	1,62E+04	2,12E+04	3,75E+04
Use as raw material	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
TOTAL	**MJ**	1,53E+04	2,18E+04	3,71E+04	1,71E+04	2,25E+04	3,96E+04	1,62E+04	2,12E+04	3,75E+04
OTHER RESOURCES	**UNIT**									
Secondary material	kg	9,67E+02	0,00E+00	9,67E+02	9,57E+02	0,00E+00	9,57E+02	9,52E+02	0,00E+00	9,52E+02
Renewable secondary fuels	MJ, net calorific value	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
Non-Renewable secondary fuels	MJ, net calorific value	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 use of fresh water	m^3	1,95E+01	6,74E+00	2,63E+01	2,19E+01	6,96E+00	2,88E+01	2,12E+01	6,56E+00	2,78E+01

WASTE PRODUCTION [1.000kg fabricated chain]		R3-R3S QUALITY CHAIN			R4-R4S QUALITY CHAIN			R5 QUALITY CHAIN		
		UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL	UPSTREAM	CORE	TOTAL
Hazardous waste disposed	Kg	2,59E-02	2,03E-02	4,62E-02	2,86E-02	2,09E-02	4,95E-02	2,72E-02	1,97E-02	4,70E-02
Non-hazardous waste disposed	Kg	3,86E+02	9,57E+01	4,81E+02	5,04E+02	9,87E+01	6,02E+02	5,02E+02	9,30E+01	5,95E+02
Radioactive waste disposed	Kg	6,72E-02	7,14E-02	1,39E-01	7,31E-02	7,36E-02	1,47E-01	6,77E-02	6,96E-02	1,37E-01
Components for reuse	Kg	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
Material for recycling	Kg	0,00E+00	1,35E+02	1,35E+02	0,00E+00	1,39E+02	1,39E+02	0,00E+00	1,31E+02	1,31E+02
Materials for energy recovery	Kg	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
Exported energy, electricity	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
Exported energy, thermal	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

The differences versus previous versions of the EPD, shows the work philosophy of VSSL, the organization manages to improve its benefits over the years.
This fact can also be seen through the EPDs of its chains, which it has been carrying out since 2008. Through the optimization of its processes, it has achieved important environmental improvements, such as the reduction of the environmental impact towards climate change in all its chains.
It has also achieved the optimization of resources, being able to be more efficient in the use of the component steel of the chains and thereby reducing the associated material losses.

04 A SUSTAINABLE VISION OF FUTURE

VSSL factory has been designed taking into account the most advanced energy efficiency principles and systems; soundproofing to minimize noise pollution, and also the management of waste, which is separated out in our own waste gathering point.

At VSSL we have implemented the ISO 50001:2011. We use less polluting energy sources, such as electricity and induction systems, instead of fuel oil, in order to generate a lower carbon footprint. We also use heat from the furnaces to warm up the domestic hot water, through heat exchangers that are specially designed for our facilities. Currently an R+D+I project is being developed to take advantage of the ability to collect data from manufacturing installations of VSSL and to guide the organization towards predictive maintenance. The principal objectives of the project are to reduce the carbon footprint, increase the energy efficiency and reduce energy costs.
The qualities of steel designed specifically for chains, with an optimal behavior with respect to erosion and corrosion, contributed in the past to the elimination of bitumen based finishing paints which were never considered favorable to the environment. Today, continuing with a highly creative policy of R+D+I in collaboration with prestigious steel manufacturers and Vicinay Marine Innovación R+D department, we are developing new steel grades which composition, shaped and subsequent specific treatment lead to restricted and controlled mechanic properties, optimizing the costs to the maximum and reducing the environmental impact by using lower alloy factors.

In VSSL we follow a responsible management protocol based on the identification, storage, and transportation of all waste, which our productive process generates. With regard to hazardous waste, we maintain a responsible policy regarding the choice of materials, machinery, and equipment we use and leakage control. All these measures allow our environmental footprint to continually reduce.

VSSL clearly expresses in its “Mission, Vision, Values and Policy” statement its vocation of being a local company with a world-wide projection. 85% of our suppliers are from our regional area, which means that we generate wealth in the area and also minimize the use of transport, with the consequent reduction in environmental impact.

For VSSL to be socially sustainable is to promote the construction of a company focused on global welfare. We are members of the global corporate sustainability network, Global Compact, which entails the promotion of actions that allow the fulfillment of human, labor and environmental rights and the fight against corruption in regions where our organization operates. The principle 7, which states that businesses should support a precautionary approach to environmental challenges, is the one which binds the company to be proactive in its approach to environmental challenges.

Interchanging best practices with other companies which have a proven track-record of being eco-friendly has allowed VSSL to become a member of Izaite, the Association of Basque Companies for Sustainability, a group which is fully committed to Sustainable Development and Corporate Social Responsibility (www.izaite.net).

We are founding partner of The Basque Ecodesign Center, entity based in the Basque Country and structured pursuant to a partnership framework between companies from the private sector and the Basque Government, and whose scope is to design and execute ecodesign innovative projects. Actually we are measuring the OEF, Organisation Environmental Footprint, which allows us to evaluate the environmental performance of the organization.

One of our last steps has been to calculate the Organizational Environmental Footprint (OEF) using ISO / TS 14072: 2014 standard to give credibility and assurance to the calculations and reports. Through this methodology, VSSL can applied Life Cycle Thinking concept to all its organization.


VICINAY
SESTAO