

ADDENDUM TO THE SUSTAINABILITY REPORT 2023

1. GHG Emissions Reduction Plans

HAI made a conscious decision to take measures to reduce greenhouse gases back in 2019 and already achieved its target of cutting 25% of Group Scope 1 and 2 emissions by 2025 in 2021. This was accomplished by investing in the most energy efficient technologies.

Intermediary goals on group level are as follows:

- 2025: Reduction of group emission by 25%
- 2040: Reduction of group emissions by 50%
- 2050: Net Zero

Furthermore, HAI procures almost exclusively primary aluminum with a carbon footprint of 4 t of CO₂ / t of aluminum. This cut Scope 3 emissions significantly. Additionally, HAI uses a recycling content of 80% in its cast houses, which is a very high rate within the industry, and buys low-carbon billets where possible. The result can be seen in the aluminum procurement slopes which are below the pre-defined ASI decarbonization curve until mid-2030.

HAI is committed to Net Zero according to SBTi.

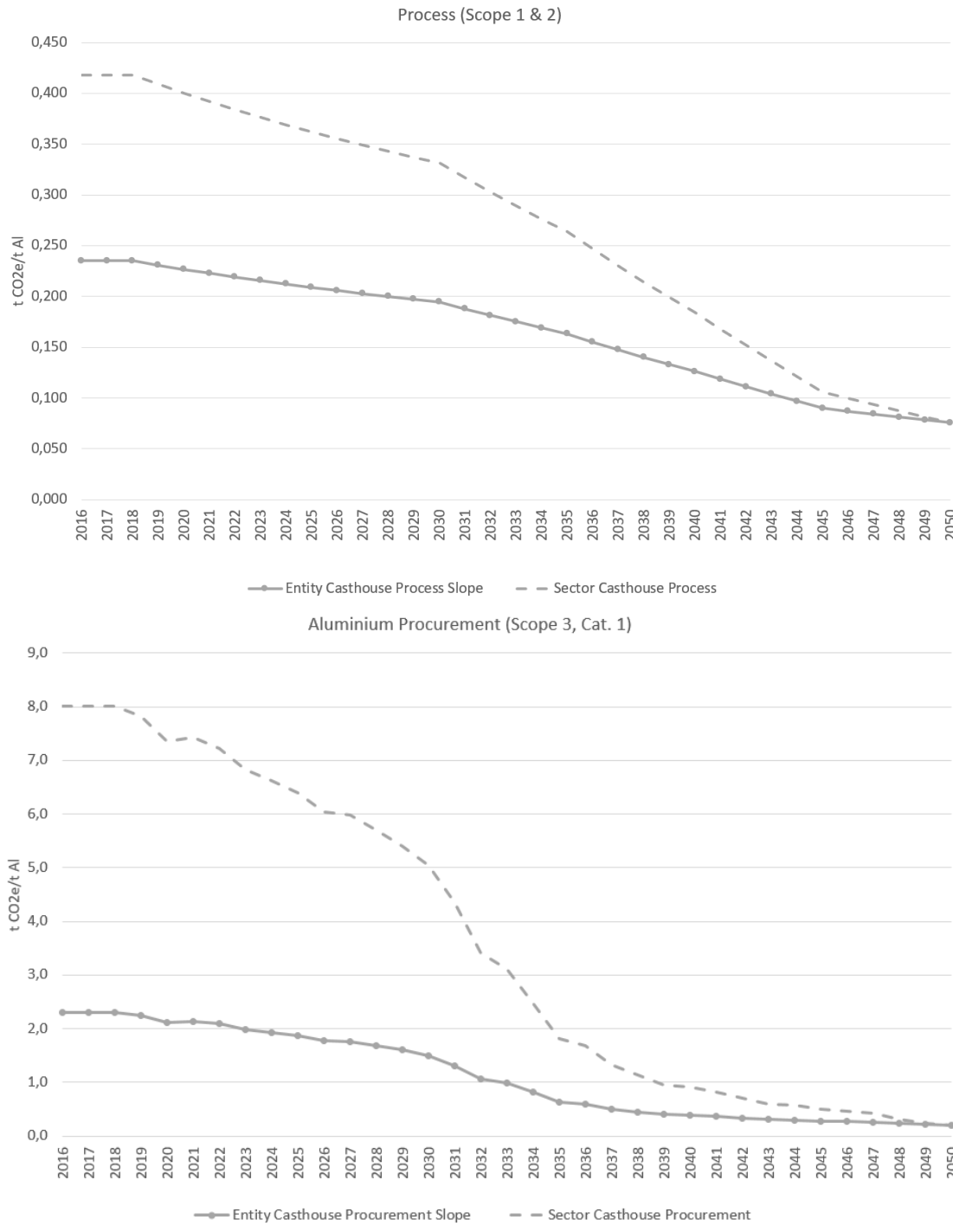
In order to further drive forward decarbonization across all locations, a target and action plan was defined by the management.

However, it must be noted that decarbonization is largely dependent on the development of further technologies, i.e. inert anodes, to generate significant CO₂ savings.

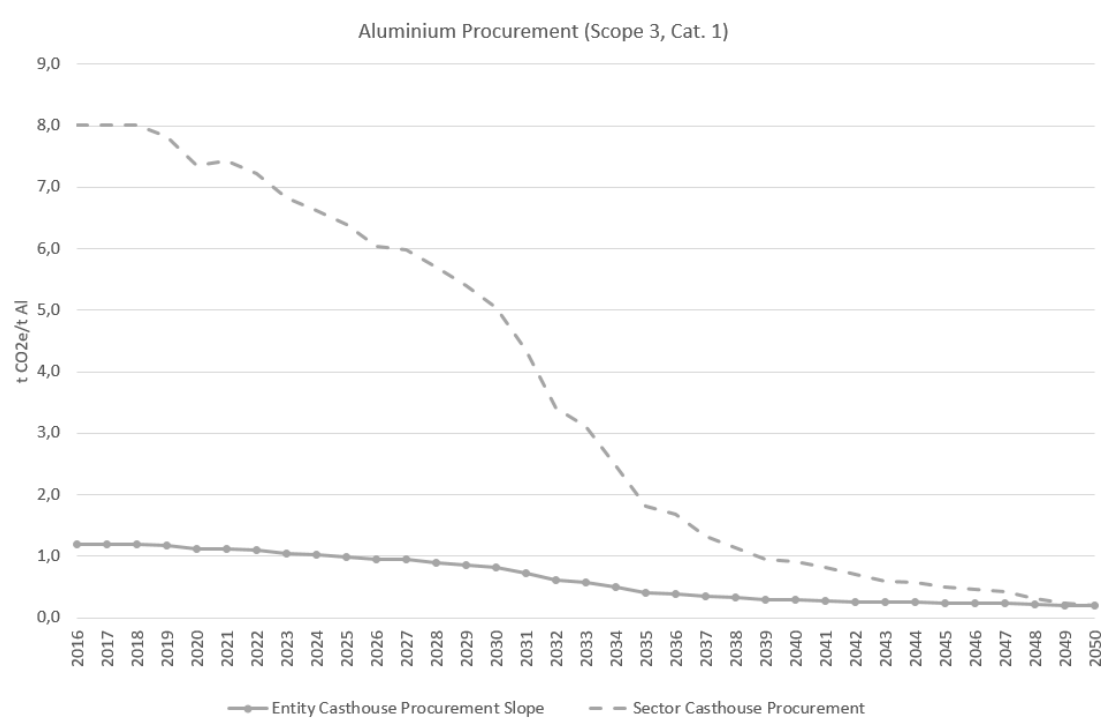
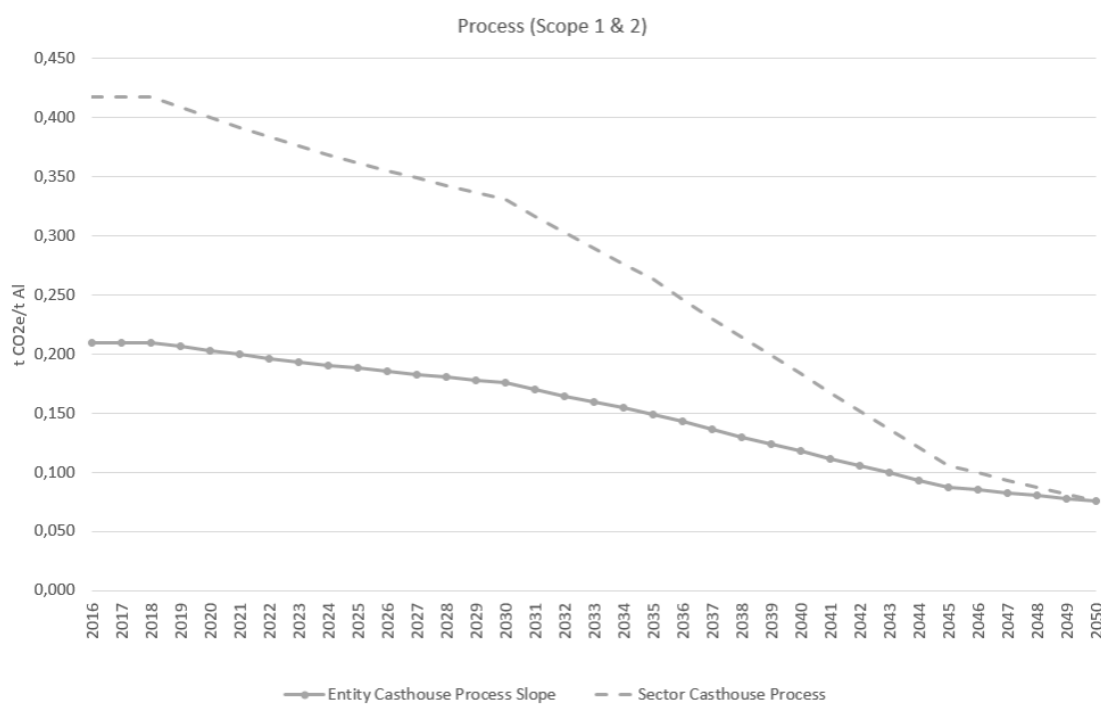
Measure	Expected saving compared to 2023	Deadline
Continuous process improvement	In evaluation	ongoing
All procured billets have a carbon footprint < 4 t CO ₂ / t Al	-15%	2030
Further electrification of production processes	-6%	2033
All procured billets have a carbon footprint < 2 t CO ₂ / t Al	-30%	2035
30% of procured primary material produced with inert anodes	-7%	2035
All procured billets have a carbon footprint < 2 t CO ₂ / t Al	-39%	2040
50% of procured primary material produced with inert anodes	-12%	2040
100% of primary materials produced with inert anodes	-15%	2045

Additional measures are currently being evaluated for the road to net zero.

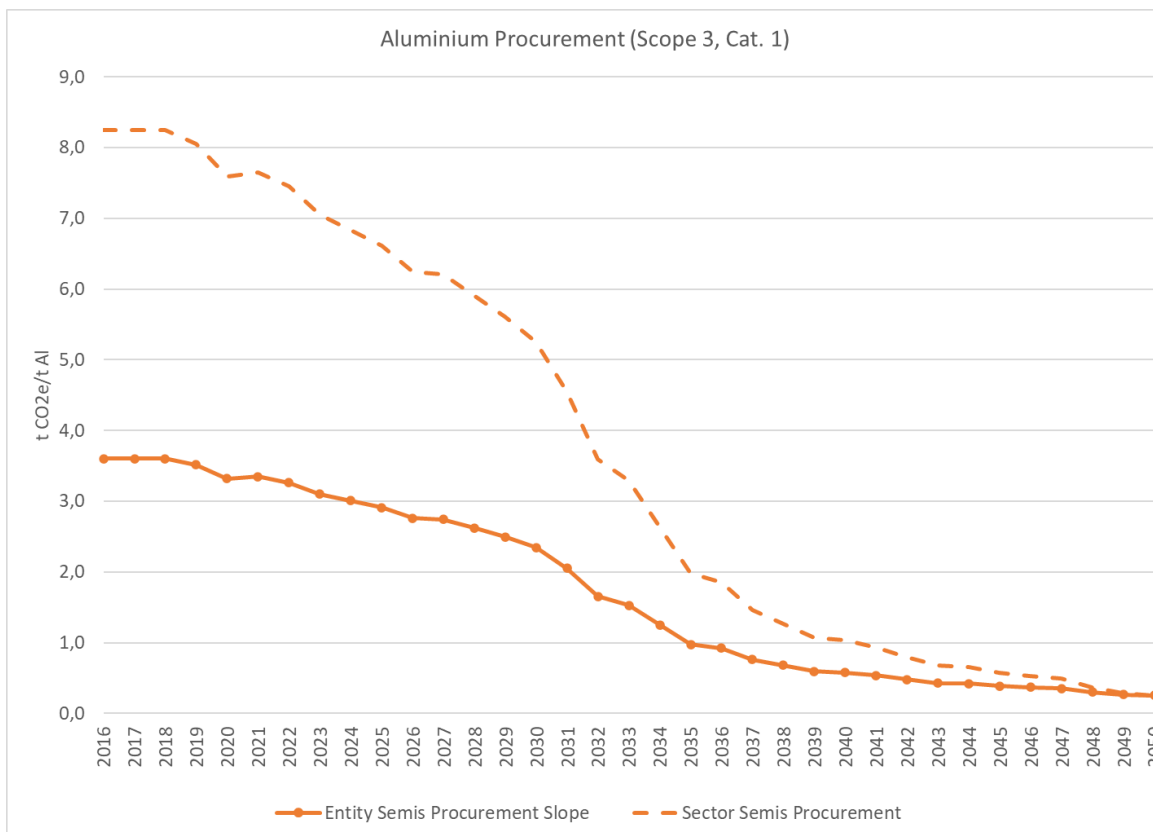
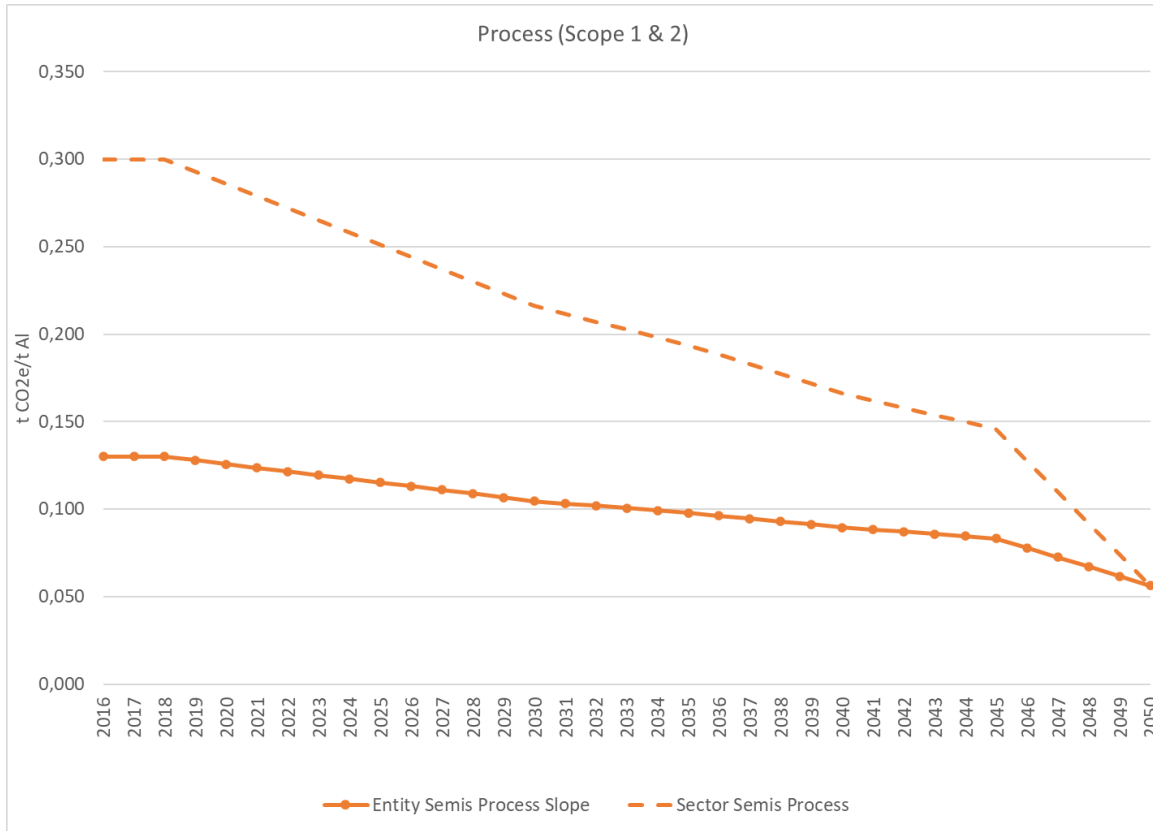
1.1. Casting Ranshofen



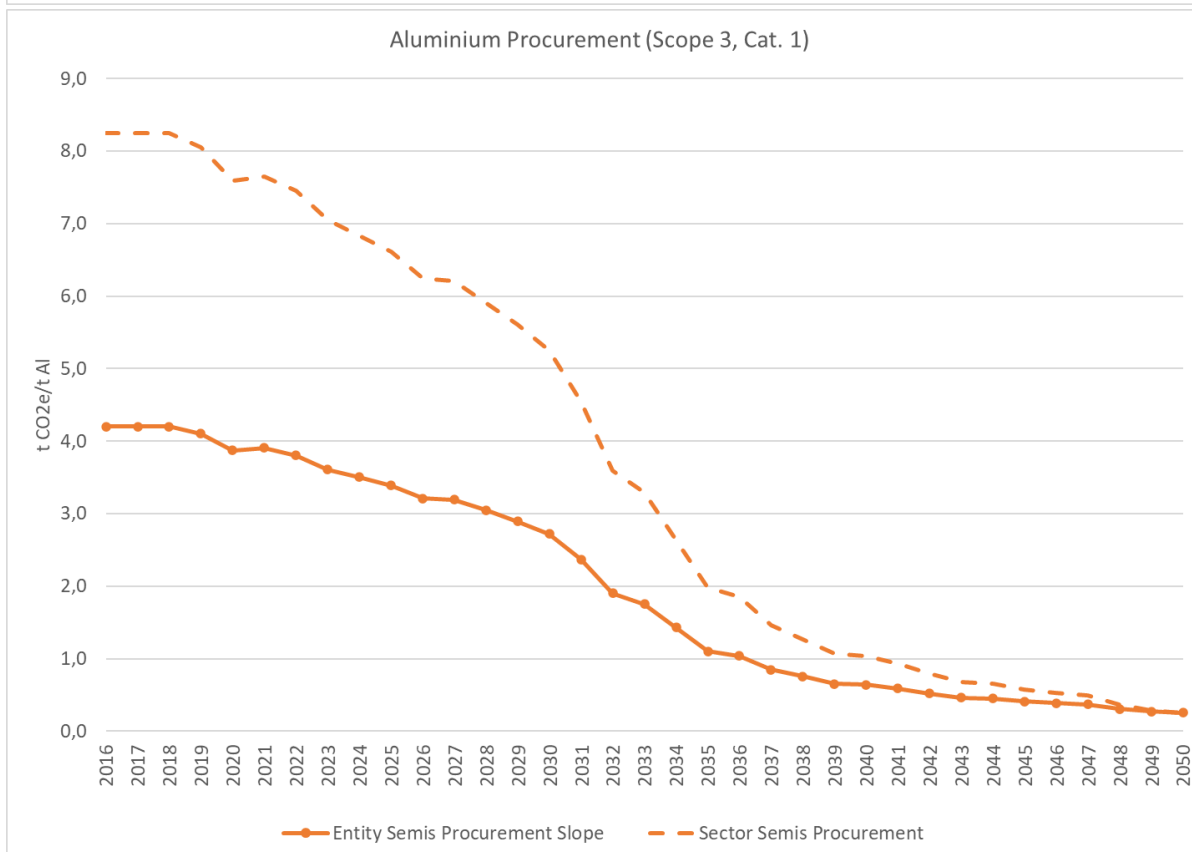
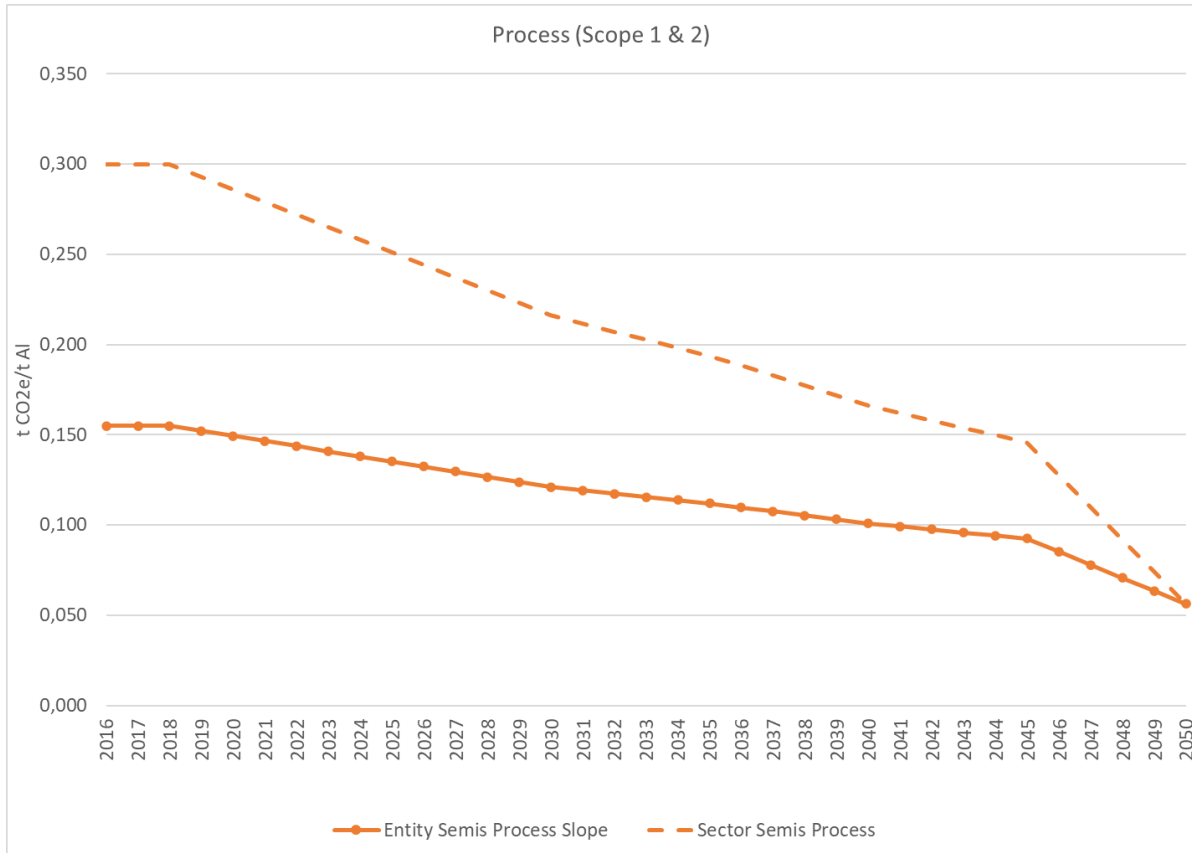
1.2. Casting Santana



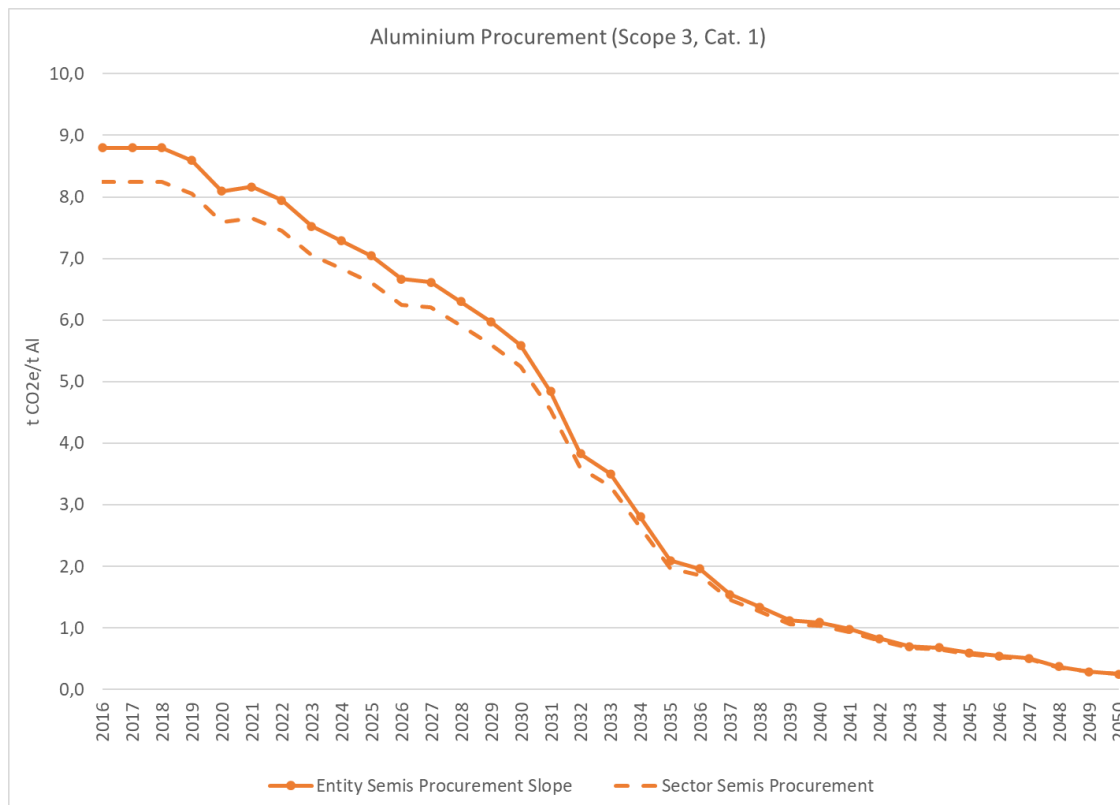
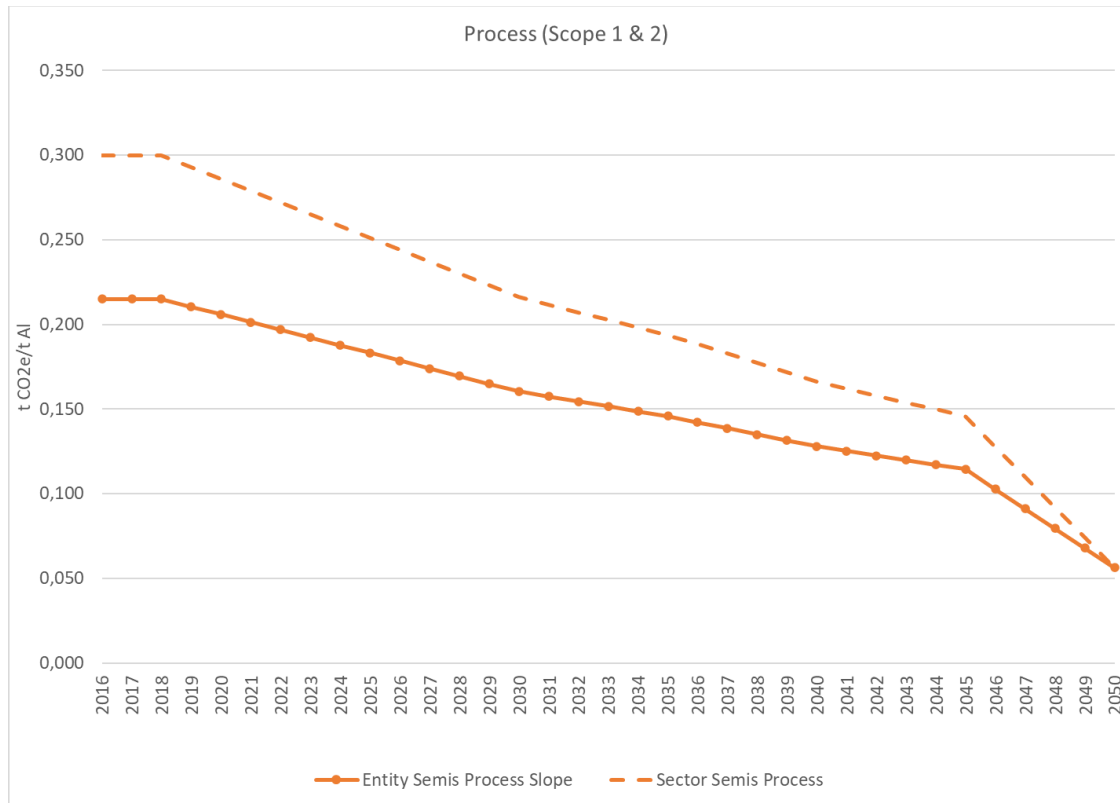
1.3. Extrusion Ranshofen



1.4. Extrusion Soest



1.5. Extrusion Cris



2. Scope 3 Emissions

The Scope 3 emissions were calculated by an external third party, which review and checked the data for plausibility ahead of the calculations.

Data on scope 3 emissions were collected for the first time for the year 2023. The scope 3 emissions include all emissions of the respective location.

Location	Scope 3 emissions in t CO _{2e}
Ranshofen	251.650
Soest	112.714
Santana	221.620
Cris	245.937

3. Emissions to Air

3.1. Casting Ranshofen

Cast oven 13

Schadstoff	Einheit	Messwert		Beurteilungswert	Grenzwert
		Mittelwert	Maximalwert		
Stickstoffoxide bei 3 %d.Vol. O ₂	[mgNO ₂ /m ³]	119	195	156	500
	[kgNO ₂ /h]	0,418	0,635		
Kohlenstoffmonoxid bei 3 %d.Vol. O ₂	[mg/m ³]	5	15	14	80
	[kg/h]	0,017	0,056		

Cast oven 12

Schadstoff	Einheit	Messwert		Beurteilungswert	Grenzwert
		Mittelwert	Maximalwert		
Stickstoffoxide bei 3 %d.Vol. O ₂	[mgNO ₂ /m ³]	63	115	92	150
	[kgNO ₂ /h]	0,071	0,124		
Kohlenstoffmonoxid bei 3 %d.Vol. O ₂	[mg/m ³]	2	3	3	80
	[kg/h]	0,002	0,003		

Cast oven 11

Schadstoff	Einheit	Messwert		Beurteilungswert	Grenzwert
		Mittelwert	Maximalwert		
Stickstoffoxide bei 5 %d.Vol. O ₂	[mgNO ₂ /m ³]	260	367	294	400
	[kgNO ₂ /h]	0,864	1,066		
Kohlenstoffmonoxid bei 3 %d.Vol. O ₂	[mg/m ³]	1	3	3	80
	[kg/h]	0,002	0,010		

Central dedusting

Schadstoff	Einheit	Messwert		Beurteilungswert	Grenzwert
		Mittelwert	Maximalwert		
Staub	[mg/m ³]	0,4*	0,6	0,4	4
C _{org}	[mgC/m ³]	5	14	10	30
Wasserstoffchlorid (HCl)	[mg/m ³]	0,0*	<< 0,2	0,0	10
Wasserstofffluorid (HF)	[mg/m ³]	0,02*	0,02*	0,01	1
Cyanide (CN ⁻)	[mg/m ³]	0,03*	0,05*		
Benzo(a)pyren	[mg/m ³]	0,0000*	<< 0,0001	0,000	0,05
PCDD/-F	[ng/m ³]	0,0023	0,0029	0,001	0,1
Dampf- und partikelförmige Emissionen					
Quecksilber (Hg)	[mg/m ³]	0,001	0,001	0,001	0,05
Thallium (Tl)	[mg/m ³]	0,000*	<< 0,001	0,000	0,05
Cadmium (Cd)	[mg/m ³]	0,000	0,000		
Antimon (Sb)	[mg/m ³]	0,000	0,000		
Arsen (As)	[mg/m ³]	0,000	0,000		
Blei (Pb)	[mg/m ³]	0,000	0,000		
Chrom (Cr)	[mg/m ³]	0,000	0,001		
Kobalt (Co)	[mg/m ³]	0,000	0,000		
Kupfer (Cu)	[mg/m ³]	0,001	0,002		
Mangan (Mn)	[mg/m ³]	0,004	0,005		
Nickel (Ni)	[mg/m ³]	0,003	0,004		
Vanadium (V)	[mg/m ³]	0,000	0,000		
Selen (Se)	[mg/m ³]	0,000	0,000		
Tellur (Te)	[mg/m ³]	0,000	0,000		
Zinn (Sn)	[mg/m ³]	0,000	0,000		
Zink (Zn)	[mg/m ³]	0,003	0,003		

Metal filter

Schadstoff	Einheit	Messwert		Beurteilungswert	Grenzwert
		Mittelwert	Maximalwert		
Chlor (Cl ₂)	[mg/m ³]	0,4*	< 0,7	0,3	3
	[g/h]	0,43			

HAI currently uses best available technology in Ranshofen to keep emissions as low as possible. We continuously track technological progress and are dedicated to adopting the latest and best technologies as they become available.

3.2. EXT Ranshofen

Bolzenanwärmofen P40

21.03.2023	Einheit	17:17 – 17:47	17:47 – 18:17	18:17 – 18:47	Mittelwert
Sauerstoff	Vol.-%	15,2	15,2	15,4	15,3
Kohlenstoffmonoxid	mg/m ³	121	130	114	122
Stickoxide	mgNO ₂ /m ³	23	24	23	23
Kohlenstoffmonoxid	kg/h	0,015	0,016	0,014	0,015
Stickoxide	kgNO ₂ /h	0,003	0,003	0,003	0,003

Bolzenanwärmofen P41

21.03.2023	Einheit	14:45 – 15:15	15:15 – 15:45	15:45 – 16:15	Mittelwert
Sauerstoff	Vol.-%	11,1	10,0	10,4	10,5
Kohlenstoffmonoxid	mg/m ³	149	119	117	128
Stickoxide	mgNO ₂ /m ³	41	43	43	42
Kohlenstoffmonoxid	kg/h	0,028	0,023	0,024	0,025
Stickoxide	kgNO ₂ /h	0,008	0,008	0,009	0,008

Bolzenanwärmofen P25

21.03.2023	Einheit	11:00 – 11:30	11:30 – 12:00	12:00 – 12:30	Mittelwert
Sauerstoff	Vol.-%	18,9	16,6	16,2	17,2
Kohlenstoffmonoxid	mg/m ³	41	54	52	49
Stickoxide	mgNO ₂ /m ³	< 3	7	10	6
Kohlenstoffmonoxid	kg/h	0,019	0,021	0,020	0,020
Stickoxide	kgNO ₂ /h	< 0,001	0,003	0,004	0,003

Alterungsöfen 2

21.03.2023	Einheit	09:42 – 10:12	10:12 – 10:42	10:42 – 11:12	Mittelwert
Sauerstoff	Vol.-%	17,5	17,9	17,9	17,7
Kohlenstoffmonoxid	mg/m ³	< 6	< 6	< 6	< 6
Stickoxide	mgNO ₂ /m ³	13	12	13	13
Kohlenstoffmonoxid	kg/h	< 0,025	< 0,026	< 0,026	< 0,026
Stickoxide	kgNO ₂ /h	0,054	0,053	0,057	0,055

Alterungsöfen Processing

21.03.2023	Einheit	13:14 – 13:44	13:44 – 14:14	14:14 – 14:44	Mittelwert
Sauerstoff	Vol.-%	18,1	14,7	13,9	15,6
Kohlenstoffmonoxid	mg/m ³	13	13	12	13
Stickoxide	mgNO ₂ /m ³	31	70	81	60
Kohlenstoffmonoxid	kg/h	0,001	0,003	0,002	0,002
Stickoxide	kgNO ₂ /h	0,002	0,018	0,012	0,011

3.3. EXT Soest

Anlage	2023		
	CO Grenzwert [mg/m ³] 110	NOx als NO ₂ Grenzwert [g/m ³] 0,15	Abgasverlust Grenzwert [%] 9
Heizungskessel 1	99	0,096	7
Heizungskessel 3	44	0,11	7

3.4. EXT Cris

Quelle	Schadstoff	Einheit	Konzentration					Mittelwert	SOLL
			Det 1	Det 2	Det 3	Det 4			
Kessel 1/49.1	CO	ppm	9	10	8	9	9	-	
		mg/Nmc cu 3% O ₂	13	14,4	11,6	13	13	17,72	
	Nox	ppm	16	14	15	16	15,25	-	
		mg/Nmc cu 3% O ₂	37,8	33,1	35,7	37,8	36,1	49,24	
Kessel 2/49.2	SO ₂	ppm	1	1	1	1	1	-	
		mg/Nmc cu 3% O ₂	3,4	3,4	3,4	3,4	3,4	4,62	
	CO	ppm	12	10	11	12	11,25	-	
		mg/Nmc cu 3% O ₂	18,2	14,8	16,6	18	16,9	24	
Kessel 3/49.3	Nox	ppm	18	20	15	17	17,5	-	
		mg/Nmc cu 3% O ₂	44,9	48,6	37,1	34,85	41,3625	62,34	
	SO ₂	ppm	1	1	1	1	1	-	
		mg/Nmc cu 3% O ₂	3,6	3,5	3,5	3,5	3,525	5,09	
Reife-Ofen 1/49.4	CO	ppm	9	8	7	9	8,25	-	
		mg/Nmc cu 3% O ₂	13,7	12,2	10,6	13,7	12,55	15	
	Nox	ppm	20	21	22	20	20,75	-	
		mg/Nmc cu 3% O ₂	49,9	52,7	54,5	49,9	51,75	60,35	
Reife-Ofen 2/49.5	SO ₂	ppm	1	1	1	1	1	-	
		mg/Nmc cu 3% O ₂	3,6	3,6	3,5	3,6	3,575	4,16	
	CO	ppm	12	13	14	12	12,75	-	
		mg/Nmc cu 3% O ₂	19	21,2	22,3	18,6	20,275	61,14	
Reifung im Backofen 3/49.6	Nox	ppm	22	23	24	26	23,75	-	
		mg/Nmc cu 3% O ₂	57,2	61,5	62,8	66,2	61,925	186,53	
	SO ₂	ppm	1	2	1	1	1,25	-	
		mg/Nmc cu 3% O ₂	3,7	7,6	3,7	3,6	4,65	14,11	
Reife-Backofen 4/49.7	CO	ppm	18	17	15	16	16,5	-	
		mg/Nmc cu 3% O ₂	30	28,5	24,5	26,7	27,425	72,57	
	Nox	ppm	32	33	36	34	33,75	-	
		mg/Nmc cu 3% O ₂	87,5	90,9	96,3	92,9	91,9	243,19	
Reife-Backofen 4/49.7	SO ₂	ppm	2	2	1	2	1,75	-	
		mg/Nmc cu 3% O ₂	7,8	7,9	3,8	7,8	6,825	18,08	
	CO	ppm	22	24	20	19	21,25	-	
		mg/Nmc cu 3% O ₂	35,9	38,3	33,3	31,2	34,675	243	
Reife-Backofen 4/49.7	Nox	ppm	55	56	54	52	54,25	-	
		mg/Nmc cu 3% O ₂	147,1	146,6	147,6	140,1	145,35	1020,25	
	SO ₂	ppm	1	1	1	1	1	-	
		mg/Nmc cu 3% O ₂	3,8	3,7	3,9	3,8	3,8	26,89	
Reife-Backofen 4/49.7	CO	ppm	16	14	18	17	16,25	-	
		mg/Nmc cu 3% O ₂	25,4	22,3	29,1	27,1	25,975	200,1	
	Nox	ppm	48	46	47	45	46,5	-	
		mg/Nmc cu 3% O ₂	124,7	120,4	124,8	117,8	121,925	936,1	
SO ₂	ppm	1	1	1	1	1	-		
	mg/Nmc cu 3% O ₂	3,7	3,7	3,8	3,7	3,725	28,87		

Konzentration von Schadstoffen in der Umgebungsluft an der Grenze des Gehäuses					
Schadstoff	Perioada	UM	Concenctaratie	Zulässige Grenzwerte nach	
				Legea 104/2011 (ug/m3)	STAS 12574-87 (g/m2/luna)
PM10	2023.08.1	ug/m3	35	50	-
Pulberi sedimentabile	02.30.03.2	g/m2/luna	6,43	-	17

3.5. CAST Santana

Gaze de ardere Emisii

(1) IL-14-02, SR EN 15259:2008, SR ISO 10396:2008

Cod probă	Determinare	U.M.	Rezultate				Limita conform AIM Nr. 3/25.03.2010 rev. 29.06.2021
			1	2	3	Media	
31946	Temperatura ⁽¹⁾	°C	56	55,9	56	56	-
	Oxigen ⁽¹⁾	%	19,43	19,38	19,35	19,38	-
	Dioxid de carbon ⁽¹⁾	%	1,86	1,89	1,93	1,89	-
	Oxizi de azot ⁽¹⁾	mg/Nm ³	4,10	4,10	6,15	4,78	300
	Dioxid de sulf ⁽¹⁾	mg/Nm ³	20,0	14,3	22,9	19,06	100
31947	Temperatura ⁽¹⁾	°C	56,6	57	58,2	57,3	-
	Oxigen ⁽¹⁾	%	19,4	19,91	19,85	19,72	-
	Dioxid de carbon ⁽¹⁾	%	1,89	1,28	1,36	1,51	-
	Oxizi de azot ⁽¹⁾	mg/Nm ³	8,20	4,10	4,10	5,46	300
	Dioxid de sulf ⁽¹⁾	mg/Nm ³	14,3	8,58	17,2	13,3	100
31948	Temperatura ⁽¹⁾	°C	57,7	59,4	57,6	58,2	-
	Oxigen ⁽¹⁾	%	19,56	19,75	19,23	19,51	-
	Dioxid de carbon ⁽¹⁾	%	1,7	1,48	2,1	1,76	-
	Oxizi de azot ⁽¹⁾	mg/Nm ³	6,15	6,15	8,20	6,83	300
	Dioxid de sulf ⁽¹⁾	mg/Nm ³	14,3	11,4	25,7	17,1	100

Carbon Organic Total (TOC) Emisii

(1) IL-12-01, SR EN 12619:2013, SR EN 15259:2008

Cod probă	Determinare	U.M.	Rezultate	Limita conform AIM Nr. 3/25.03.2010 rev. 29.06.2021
31949	Carbon organic total ⁽¹⁾	ppm	15,5	-
	Carbon organic total ⁽¹⁾	mg C/Nm ³	24,9	30,0
31950	Carbon organic total ⁽¹⁾	ppm	16,7	-
	Carbon organic total ⁽¹⁾	mg C/Nm ³	26,9	30,0
31951	Carbon organic total ⁽¹⁾	ppm	16,8	-
	Carbon organic total ⁽¹⁾	mg C/Nm ³	27,0	30,0

HAI currently uses best available technology in Santana. We continuously track technological progress and are dedicated to adopting the latest and best technologies as they become available.

4. Risks for spills and leakages

In our cast house in Sântana the highest possible risk of pollution is the cracking of the diesel fuel tank. The consequence would be the pouring of rainwater together with the fuel through the oil separator and discharging into the natural water channel.

During the annual review of environmental aspects, the risk was assessed, and it was evaluated as minor due to specific safety elements that are included into the fuel tank construction.

5. Statement on Responsible Sourcing

HAI is committed to responsible sourcing practices that ensure sustainability, ethical conduct, and transparency throughout our supply chain.

We evaluate our suppliers based on the following criteria:

- **Environmental Impact:** Assessing the environmental management practices and sustainability initiatives of our suppliers.
- **Labor Practices:** Ensuring fair labor practices, including safe working conditions, fair wages, and the prohibition of child and forced labor.
- **Ethical Conduct:** Verifying adherence to ethical business practices, including anti-corruption measures and respect for human rights.
- **Compliance:** Ensuring compliance with all relevant local and international laws and regulations.

In 2023, we have found no issues or risks with our suppliers.

6. Statement on Modern Slavery and Human Trafficking

PREAMBLE

The purpose of this statement is to set out all measures that the HAI Group has already taken, or will continue to take in the future, to prevent modern slavery and human trafficking within its own organisation and supply chain. Modern slavery includes the exploitation of labour, child or forced labour and debt bondage.

All decisions are based on our three corporate values of trust, opportunity and dynamism.

Mutual trust is the basis for satisfied employees and business partners. The HAI Group also stands for a wealth of opportunities that contribute to personal and corporate development. Ultimately, all decisions within the group of companies are made quickly and responsibly. This is the value of dynamism within our company.

RESPECT FOR HUMAN RIGHTS

We endeavour to secure the future of the HAI Group's sites and thus also the jobs of our employees in the long term. We believe that trusting our employees, colleagues and managers, working with them and treating them with respect, supporting their progress and development and focusing on continuous improvement and occupational health and safety are important to ensure the long-term satisfaction of all employees and a safe working environment. Values are a top priority at the HAI Group. Our employees are treated with dignity, respect and courtesy at every level. This is reflected in the loyalty and sense of belonging of all employees.

Our business partners undertake to ensure that the applicable standards of the International Labour Organization are observed. The human rights of all employees must be respected. This includes, in particular, requirements and measures in the following areas:

Prohibition of child or forced labour

It is prohibited to employ people against their will, regardless of their age, or to require them to provide identification documents or deposits as a condition of employment. We categorically reject all forms of child labour, forced labour and involuntary labour.

We also impose these requirements on our business partners. If they are unable to fulfil these standards, we will refrain from entering into a future business relationship or terminate an existing one.

Non-discrimination

Discrimination of any kind is not tolerated in the HAI Group. This includes, in particular, discrimination

on the basis of gender, ethnicity, religion, world view, age or sexual orientation. We also do not tolerate any form of sexual harassment. Equal treatment is a top priority for us at all levels. We therefore only enter into business relationships with companies that can also fulfil these standards. The workplace should be a safe place where there is no room for marginalisation based on the above criteria.

Occupational safety

The applicable laws, regulations and agreements on working hours, regular holidays and appropriate and timely remuneration must be complied with and a healthy and safe working environment must be provided. All employees must be aware of work hazards and safe practices and be able to refuse or stop unsafe work without fear of negative consequences.

INTERNAL MEASURES

Whistleblower system

All employees and business partners are encouraged to report circumstances that suggest a violation of laws or internal policies. Concerns about business processes can also be raised or information can be requested without fear of reprisals.

We have also set up a whistleblowing system on our website (Compliance Line). This system serves as a preventative function. Equal treatment of all complaints is ensured throughout the entire handling process. Reports can be submitted anonymously. A small team within the Compliance department processes the reports in a protected environment. A corresponding process has been developed in the event that irregularities or illegal behaviour are identified. The reports are checked and appropriate action is taken if necessary.

Code of Conduct

The Code of Conduct for Suppliers describes our beliefs and values. The HAI Group is committed to internationally recognised and endorsed principles for ethical and compliant business practices and to supporting responsible and sustainable production and sourcing. We have therefore implemented a systematic approach to applying this Code of Conduct to our business partners in the supply chain, including suppliers, contractors, consultants and agents.

The HAI Group Code of Conduct describes our beliefs and values. Our values are standards of daily work and behaviour towards our colleagues, customers, suppliers, business partners, government institutions and all other persons within the scope of our activities. The Code of Conduct serves as a basis and guide for achieving our goal of making decisions in a fair, responsible and respectful manner.

Both codes of conduct can be downloaded from the download centre on our website.

MEASURES IN THE SUPPLY CHAIN

Our supply chain principles are anchored in our Supply Chain Policy. This policy underpins the HAI Group's commitment to respect human rights, avoid contributing to the financing of conflict and comply with all relevant UN resolutions, regulations and laws. In addition, we are committed to using our influence to prevent abuse by others through risk-based due diligence in the supply chain.

The HAI Group has taken steps to ensure that our Code of Conduct is an integral part of all new contracts to protect human rights. All business partners are required to recognise our Code of Conduct. If we receive internal or external information that a possible human rights violation has occurred or that our Code of Conduct is being disregarded by business partners, we initiate investigations. If the investigations confirm the suspected cases, we draw the consequences and suspend the orders for the time being.

SUMMARY AND OUTLOOK


The HAI Group is consistently opposed to all forms of modern slavery and human trafficking. As mentioned above, numerous measures have already been taken in this regard. This will continue to play a major role in our corporate culture in the future and we are constantly trying to optimise our measures.

7. Statement on payments to governments and/or political parties

HAI has not made any payments or financial contributions to any government entities or political parties in 2023.

8. Health & Safety Figures

Employee Survey		Annual accident rate		Ice Berg Number		Implemented Measure per Security Incident	
Ranshofen	Participants: 429 Quota: 59%	Ranshofen	EXT 2,75% PROC/LOG 1,26% CAST 1,22%	Ranshofen	EXT 96% PROC/LOG 98% CAST 98%	Ranshofen	EXT 1,6 PROC/LOG 2 CAST 2,1
Soest	Participants: 203 Quota: 45%	Soest	2,13%	Soest	93%	Soest	1,5
Cris	Participants: 310 Quota: 84%	Cris	0,28%	Cris	99%	Cris	1
Santana	Participants: 89 Quota: 59%	Santana	0,06%	Santana	99%	Santana	2
Goal	>50%		<1%		>95%		>1,95

Annual accident rate: reportable accidents at work / (number of employees / 100) 

Iceberg number: number of safety incidents - reportable accidents / total number of safety incidents

Statement on GHG Emissions Data Verification

I, Marlene Johler, a first-party independent verifier with no role in the collection of the GHG data, have conducted the following verification process on the GHG emissions data presented in the HAI Sustainability Report 2023.

The verification process includes the following steps:

- i) Consistency check after the receipt of the data to determine whether the data is stringent with the data from previous period.
- ii) Review of the calculation sheets to check the formulas
- iii) Review of the conversion factors.

Based on the verification procedures undertaken and to the best of my knowledge, the data presented in the sustainability report represents a fair and accurate representation of GHG emissions across HAI's entities in 2023.

Ranshofen, August 2023.