# SUSTAINABILITY

2022-2023



# SUSTAINABILITY

/ səˌsteɪ.nəˈbɪl.ə.ti /

Sustainable development is a principle that seeks to satisfy fundamental human rights and opportunities for human development while maintaining the ability of natural systems to provide communities and people with natural resources and ecosystem services.



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#### Sustainability Report, Uddeholm 2022/2023

We have reduced our fossil based CO<sub>2</sub> emissions by 50% since 1990. That is good. But it is not enough. We are now stepping up the pace and have decided to achieve fossil free production in Hagfors by 2030, and arrive at a climate neutral lifecycle for our products by 2040. These represent high long-term ambitions to drive development towards a sustainable industry and to meet the growing demand we are seeing from our customers in this area. If we are to succeed in this, we need to go on planning and acting in a focused way. We take our responsibility seriously, both to ourselves and the world around us and to future generations.

We are already using 100% fossil free electricity, and our products are made from 84-98% recycled material. We are convinced that new technical innovations will play an important role in many of the global environmental challenges we face. Our experience, know-how and values will be the key to continued development.

The best energy is the energy that we do not use. On this basis, Uddeholm has launched a major investment of SEK 80 million over the next 18 months (starting in September 2022). This investment further reinforces Uddeholm's energy-saving project, including ultra modern electric heating systems installed in existing facilities, electrification of former natural gas furnaces, an improved process flow for volume products and the introduction of digital tools for process optimisation through measurement, data collection and analysis.

On 1 April 2022, 30% of the company's annual volume of LNG was replaced with fossil free LBG, leading to a 30% decrease in fossil based CO<sub>2</sub> emissions. On 1 April 2023, Uddeholm took the next step by increasing the proportion of fossil free LBG to 50%, which will further reduce fossil based carbon dioxide emissions.

With these measures, together with other activities, we can proudly say that we are following our plan to reduce fossil based CO<sub>2</sub> emissions and that we are ahead of schedule.

Sustainability means so much more than environmental action. Within Uddeholm we are working actively on social sustainability. This means providing a healthy working environment where everyone is happy and healthy, has the chance to develop and is enabled to perform well. Our operations should be conducted in such a way that nobody gets hurt at work and where we care about each other's safety. We also work preventively in relation to our physical and mental health.

Over the last year, the percentage of female employees at Uddeholm has increased. E.g. the proportion of female managers has increased by ten per cent. We are pleased with this because we know that Uddeholm is a good workplace for everyone. We are convinced that a diverse workplace is also the workplace of the future. The most important asset that Uddeholm has is its employees. Employees who bring their knowledge and commitment to bear every day to change the world – where greater equality is clearly the right way to go.

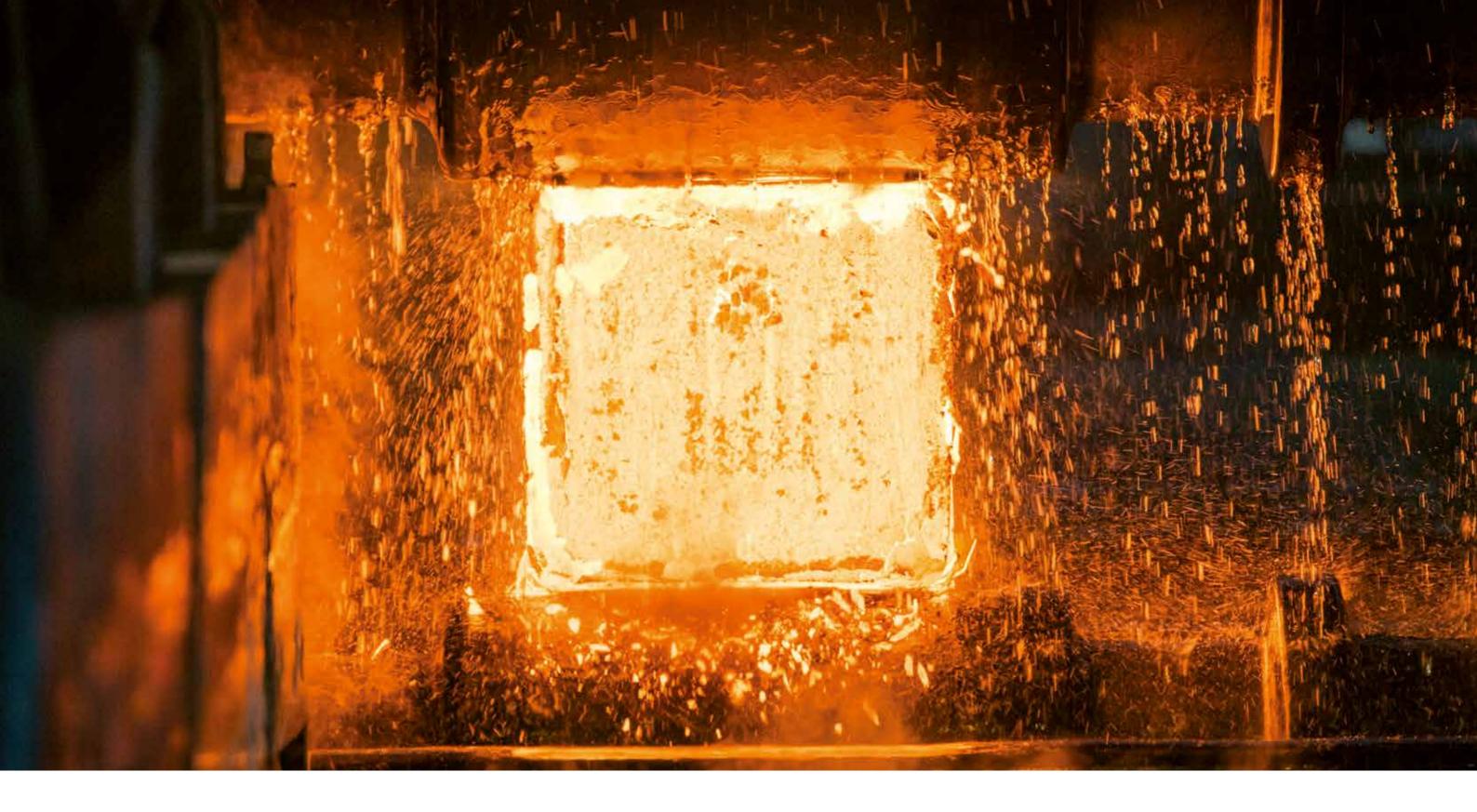
Together, our network of experts around the world strives constantly to create solutions that are sustainable, safe and long-lasting – for our customers and ourselves. In other words, our customers get more from us than just steel. They also get our promise to always produce steel that is as kind to the environment as possible. Achieving this is a constantly ongoing process, and a promise that must be kept every day.

Uddeholm, June 2023

The company management, through Pär Emanuelsson

This is a simplified Sustainability Report, and we would like to refer you to the full Corporate Responsibility Report.





# FOSSIL FREE PRODUCTION AND CLIMATE NEUTRALITY

Uddeholm has already begun its journey towards manufacturing and supplying climate neutral tool steel. Our production system and our location provide us with excellent conditions to be at the forefront of this development. We divide this goal into three steps:

2030 – Fossil free production and a substantially reduced carbon footprint from our distribution

2035 - Climate neutral value chain

2040 - Climate neutral lifecycle

REAL ACTIONS

# ENVIRONMENTAL SUSTAINABILITY

Uddeholm has already reduced its fossil based  ${\rm CO_2}$  emissions by 50% since 1990.

- 1961 Sustainability is not a new concept for us. We have been using an electric arc furnace for the melting process in our steelworks since 1961.
- 2012 Switch from oil and propane to liquefied natural gas (LNG, 20% less fossil CO<sub>2</sub>) compatible with liquefied biogas (LBG).
- 2018 Uddeholm's production runs on LBG for two days.
- 2021 Implementation of a roadmap for energy and climate, with actions including the climate neutral week.
- 2022 Up to 30% of today's annual volume of LNG replaced with fossil free LBG (from 1 April 2022). Electrification of furnaces. 30% reduction in fossil based CO<sub>2</sub> emissions.
- 2023 Up to 50% of today's annual volume of LNG replaced with fossil free LBG (from 1 April 2023). Energy-saving investments, e.g. electrification of furnaces. These activities will substantially reduce fossil based CO<sub>2</sub> emissions.





### REAL ACTIONS

# ECONOMIC SUSTAINABILITY

#### 355 years of economic sustainability

Uddeholm stands for innovation and sustainable production. Our brand has the courage to be constantly at the forefront of developments, including from a sustainability perspective. The Uddeholm brand is our customers' guarantee of quality and sustainability, both now and for future generations. Uddeholm has been in existence for more than 355 successful years, and will be here for at least another 355 sustainable years.



voestalpine High Performance Metals Italia Spa wins the Metef International Innovation Award in the category "Company System Decarbonisation Process"

"The company is the Italian distributor for the Swedish steelmaker Uddeholm, which has made systematic and structured efforts to introduce a number of methods to minimise water consumption, use fossil free electricity mixes and recycled material and constantly reduce the environmental impact of internal transport.

These measures are essential steps in a compellingly laid out plan for sustainability in the environmental sense, with clear and ambitious goals for the years ahead."





#### Vision & Strategy

AT UDDEHOLM WE ARE SHAPING THE WORLD. WE ARE SHAPING THE WORLD TOGETHER WITH THE GLOBAL MANUFACTURING INDUSTRY – BOTH NOW AND FOR FUTURE GENERATIONS.

Our vision reflects our goals and our values, and also guides us on our journey as an organisation. Here at Uddeholm, we manufacture steel that shapes products familiar from our everyday life. We are shaping the world, and we want to shape it in a sustainable manner that is fair to both people and the environment. This will enable us to continue shaping the world – now and for generations to come. This vision is to be communicated to our employees at Uddeholm, but also to our sales companies, our customers and the rest of the world.

Uddeholm has a company-wide strategy, which is divided into five elements:

- Environmental strategy
- HR strategy
- Business strategy
- Product strategy
- Production strategy

Next, these elements are broken down into strategic plans with activities for each part of the organisation that together contribute to Uddeholm achieving its overriding corporate strategy. The Business-, Product- and Production Strategies will only be presented in general terms, because in their entirety they include information not intended for distribution outside of the company. The remaining strategies are reported in more detail.

#### Uddeholm – the company

Uddeholm is a global leader in the development, production and marketing of high quality tool steel for industrial tools. Millions of products are produced annually using those tools. End-consumers operate in most industries. Products such as cars, televisions, computers, mobile phones and white goods all have their origins in tool steel. More than 100,000 customers in over 90 countries purchase tool steel from Uddeholm.

Uddeholm has a history stretching back more than 355 years, and it was a natural resource – a gravity-fed cold water supply from the river Uvån – that led to the business being established in Hagfors in 1878.

Uddeholm has been part of the internationally listed steel group voestalpine AG since 2007. The Group, which has its headquarters in Linz in Austria, has approximately 50,000 employees worldwide. In all, 850 people work in the Hagfors production plant.

#### Environment

The global environment is our collective responsibility. We must do whatever we can to minimise our footprint in this generation. That is why our steel production and our operations must deliver long-term, climate positive effects to ensure that we do not have a negative impact on our local environment. We recognise and will continue to recognise our responsibility to drive the shift towards more sustainable production. Through our environmentally leading operations, which are based on a circular system of reuse and the goal of a sustainable lifecycle for our products, Uddeholm will be an obvious choice for the growing number of climate aware customers.

#### 98-84% RECYCLED MATERIAL



Uddeholm's products consist of 84-98% recycled material

# 100% FOSSIL FREE ELECTRICITY



Uddeholm's electricity mix comes from Nordic power stations with no fossil sources

# 50% FOSSIL FREE INTERNAL TRANSPORT



More than 50% of Uddeholm's internal transport operations are fossil free and use fossil free electricity or renewable fuel

#### 100% RECYCLING OF COOLING WATER



100% of Uddeholm's cooling water is returned to the natural ecocycle

#### Towards a fossil free future

If we look at the climate aspect, our journey towards reducing our impact began decades ago. Uddeholm's electric arc furnace was inaugurated as early as the start of the 1960s. One direct effect of this investment was that carbon dioxide emissions decreased sharply and energy consumption fell by 80% in terms of kWh per tonne of steel produced compared to the earlier ore-based production.

For decades, Uddeholm has adopted a long-term approach to reducing fossil CO<sub>2</sub> emissions. Since the base year 1990, Uddeholm's fossil based CO<sub>2</sub> emissions have fallen by more than 50%. And the journey does not stop there, although it is becoming more challenging and demanding as Uddeholm already has low levels of fossil based CO<sub>2</sub> emissions from the whole business.

UDDEHOLM'S ENVIRONMENTAL WORK – AN EFFORT THAT HAS BEEN GOING ON FOR DECADES WITH THE EMPHASIS ON REDUCED ENVIRONMENTAL IMPACT.

A CROSS-FUNCTIONAL EFFORT THAT PRODUCES REAL RESULTS

Most of the focus today is on the climate aspect, but Uddeholm's environmental work goes further than that. We have been engaged in focused, ambitious and transparent efforts to reduce our environmental impact for decades. Often in collaboration with the wider community, contractors, stakeholder organisations, schools and universities.

The work to obtain ISO 14001 certification requires the company to prioritise its environmental activities and select the most important of them, to be followed up especially closely. These are reduced fossil based carbon dioxide (CO<sub>2</sub>) emissions, zero residual products sent to landfill, no nitrous oxides (NO<sub>X</sub>) emitted into the air, no zinc and oil discharged into the water, and reduced noise for our neighbours.



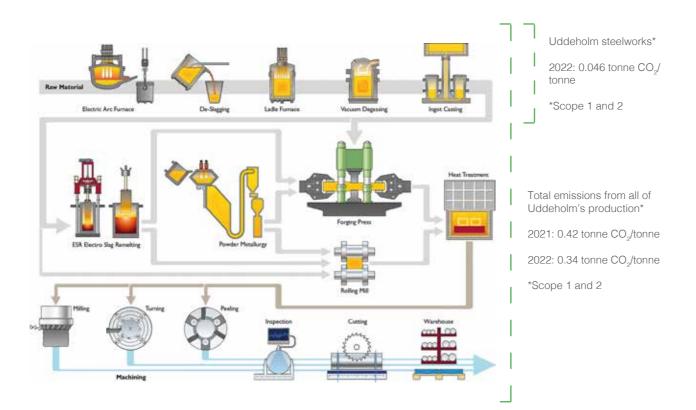
# Uddeholm's fossil based CO<sub>2</sub> emissions from the manufacturing process (Scope 1-2)

Uddeholm's products are high-quality steel with a longer service life, which produces a smaller carbon footprint over the whole lifecycle. Producing steel of the same quality as Uddeholm's requires more energy in the production phase – and yet our footprint is smaller than others' thanks to fossil free electricity and an active choice on our part in 2022/23 to purchase 30% fossil free biogas – which will increase to a mix of 50% fossil free biogas in 2023/24. In parallel with this, there is an ongoing programme of electrification in our furnaces, replacing gas with fossil free electricity, along with efficiency improvements and further investigation into ways of eliminating the remaining natural gas in favour of other fossil free gas. We are serious about this – we aim to get down to zero carbon dioxide emissions.

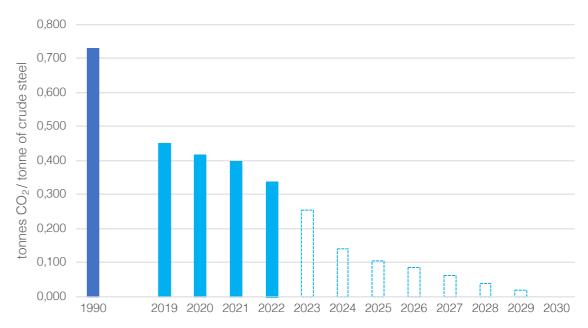
Uddeholm benefits from using scrap as a raw material. The CO<sub>2</sub> emissions from scrap based steel manufacture are less than a tenth of those generated from iron ore based steel manufacture. In addition, the energy requirement is only one fifth of that required for ore based steel manufacture.

In order to achieve Uddeholm's product quality, which delivers a longer service life and high performance, additional heating and heat treatment are required. This process involves burning energy in gas furnaces and accounts for around 94% of our  ${\rm CO_2}$  emissions. Natural gas and biogas are used in many of our furnaces for heating and heat treatment. Small amounts of LPG are used for ladle preheating in the steelworks, for example. The remaining 6% of Uddeholm's  ${\rm CO_2}$  emissions come from the consumption of raw materials in the steelworks and the use of graphite electrodes to melt scrap metal and alloys. It is not possible to be completely fossil free, as there is no available alternative to fossil carbon, and it is technically impossible to melt down scrap metal without today's fossil graphite electrodes.

Uddeholm is a participant in the EU's Emissions Trading System (EU ETS) and has an excellent system in place for monitoring its CO<sub>2</sub> emissions, which are also subject to annual third-party review.



#### TONNE CO<sub>2</sub> EMISSIONS PER TONNE OF STEEL PRODUCED



Note that the figures in the chart include both Scope 1 and 2 without distinction in the plant. The whole of the operation in Hagfors is included, not just the steelworks or a particular flow or sub-process.

#### Low fossil based carbon dioxide emissions from the operations even now

We embarked on the journey towards producing climate neutral tool steel with a fossil free process many years ago. Our production system and our location provide us with excellent conditions for leading developments towards climate neutral steel.

2001	Heating of premises with oil replaced with district heating	
2012	Oil and LPG replaced with liquefied natural gas (20% reduction in fossil based CO <sub>2</sub> ) – compatible with biogas (LBG)	
2018	Natural gas replaced with fossil free biogas (LBG) for 48 hours	
2021	Implementation of Climate and Energy Roadmap, including actions - e.g. "Climate neutral week" and production of climate	
	neutral tool steel for a week	
2021	One natural gas furnace replaced with an electric furnace running on fossil free electricity	
2022	30% fossil free biogas replaces the same proportion of fossil natural gas from 1 April 2022, reducing fossil based CO <sub>2</sub>	
	emissions by 30%	
2022	Second natural gas furnace replaced with electric furnace running on fossil free electricity	
2023	$50\%$ biogas replaces the same proportion of fossil natural gas from 1 April 2023, reducing fossil based $CO_2$ emissions by $50\%$	
2023	Six more gas-fired furnaces replaced with electric furnaces running on fossil free electricity	
2023	Energy-saving project launched, which will reduce fossil based CO <sub>2</sub> emissions across the board	

20 21

1961

Electric arc furnace installed

#### What is the difference between fossil free and climate neutral production?

Fossil free production means a complete absence of fossil carbon which gives rise to fossil based carbon dioxide emissions. From the use of fossil energy to raw materials of fossil origin. Climate neutral production means not having any impact on the climate, i.e. net zero emissions. There is a balance between emissions of carbon dioxide and the absorption of carbon dioxide from the atmosphere into carbon sinks. Here, climate compensation can be used to "offset" emissions by way of actions that take the form of projects.

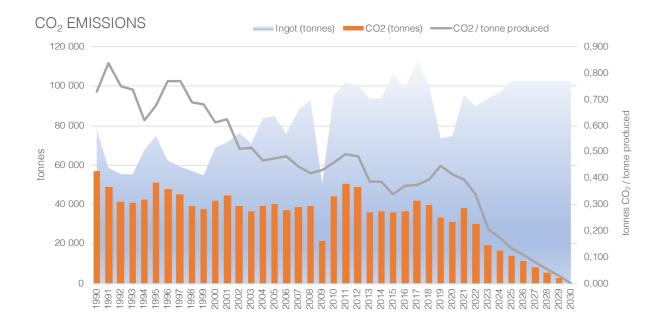
WE REGARD CLIMATE COMPENSATION AS A LAST RESORT AS WE AIM TO TAKE RESPONSIBILITY FOR THE EMISSIONS WE GENERATE AT SOURCE, AND ONLY CLIMATE COMPENSATE WHERE THERE ARE NO TECHNICAL SOLUTIONS FOR OUR OWN EMISSIONS.

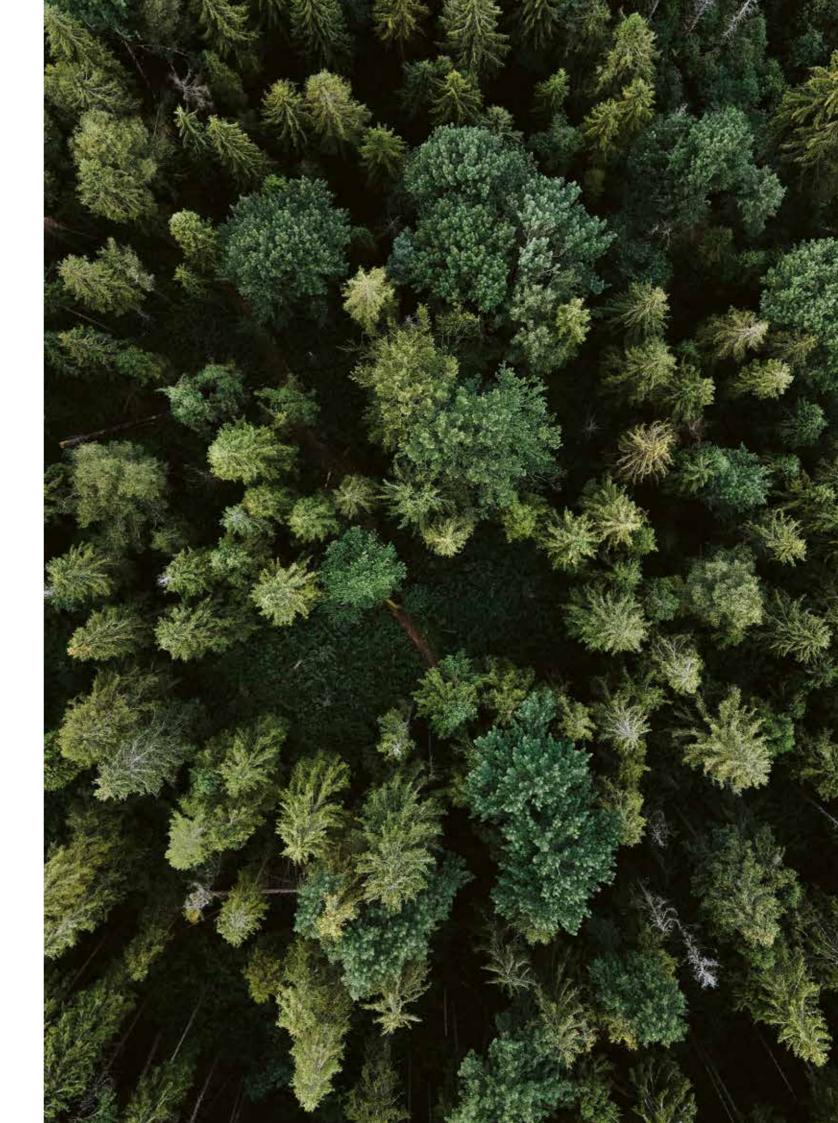
Where climate compensation is needed, it should take the form of carefully chosen projects that generate real benefit elsewhere until such time as we can take measures in our own production process.

Uddeholm currently uses fossil free electricity and natural gas/biogas as its primary energy types, with limited use of LPG and district heating to heat its premises. For strategic reasons, Uddeholm has selected several different energy types as a base in order to minimise risks linked to access and price. Natural gas currently accounts for most of Uddeholm's  $\rm CO_2$  emissions. If upgraded biogas was available at a realistic price and in the required volume, we would be able to replace 94% of our direct emissions with green  $\rm CO_2$  as natural gas and biogas flow in the same energy systems. A full-scale transition is not currently realistic, but our intention is to go on increasing our proportion of biogas. The continued electrification of furnaces is another possible alternative, as Uddeholm's electricity is fossil free. When it comes to eliminating the proportion of fossil  $\rm CO_2$  from raw materials (6%), the solution is not so obvious. There are no alternatives at present, although several research projects are in progress. We are active in this respect, and it is important for us to focus on sustainable solutions at every stage, including a raw material that boasts good quality and functionality.

Internal transport accounts for around 2% of the total fossil based  $CO_2$  emissions for the whole operation in Hagfors. This transport is currently more than 50% fossil free thanks to electric power via fossil free electricity and a 42% admixture of HVO100 (biodiesel).

Since April 2022 we have been able to monitor the proportion of green carbon dioxide on a monthly basis, as Uddeholm chose to replace some of the natural gas with fossil free biogas.







#### Towards fossil free transport

#### INTERNAL TRANSPORT

The goal of fossil free internal transport is another important aspect that we are focusing on. This transport is reported separately as it is not included in emissions trading, and also makes up around 2% of the total fossil based CO<sub>2</sub> emissions from our operations.

Forklift trucks and other transport vehicles used on-site play a key role in Uddeholm's operations. More than 50% of Uddeholm's internal transport operations are fossil free and use fossil free electricity or renewable fuel. There are a total of 154 vehicles, of which 90 run on diesel and the remaining 64 on electricity. The diesel that Uddeholm has purchased since 2018 contains 42% renewable content, being mixed with HVO100 and RME. CO<sub>2</sub> emissions from internal transport operations have thus fallen by 42%. A study is being conducted into how the renewable content can be further increased.

#### ACTIVITIES 2022/23

- Two electric forklifts replaced two diesel powered forklifts. This is a step towards further reducing fossil based CO<sub>2</sub> emissions, and also greatly improves the working environment.
- Discussions with contractors who are frequent visitors to our site on our efforts towards a fossil free future.
- Taxi companies used by Uddeholm have been filling some of their fleet with HVO100 since January 2023.

#### EXTERNAL TRANSPORT (SCOPE 3 UPSTREAM AND DOWNSTREAM)

There is no railway to Hagfors, but cargoes to be taken by train and shipments going further afield by sea are transshipped 90 km from Hagfors.

There is currently no obvious alternative to heavy transport, which is often necessary. In addition, consideration must be given to the conditions for various fuel types in the regions in question through which the transport must pass. As a result, Uddeholm has no formal requirements regarding transport, although we are following trends ahead of future demands. At present, it is important for us to conduct a dialogue and to ensure that other parties are committed and serious about the transition work. In 2022/23 we identified the destinations that generate the greatest emissions. We then broke these down by mode of transport to show where we can make and have made active choices to reduce our impact.

#### Heating of premises – 92.8% fossil free

#### **OPERATIONS IN HAGFORS**

Over 20 years ago, Uddeholm took part in a collaborative project with the municipality of Hagfors and Hagfors Energi which allowed for the replacement of oil used for heating with fossil free district heating. The project also involved modernising sub-stations, with a saving of 7,000,000 kWh/year.

Our premises are now heated mainly by district heating and waste heat from production. However, Hagfors Energi tops up the district heating from fossil sources in the coldest months of the year. In 2022, the heating of premises was 92.8% fossil free.

#### Fossil free cooling – 100%

To provide a good working environment, it is sometimes necessary to cool the premises. Here we use fossil free electricity to produce cooling. In many places we also use geothermal (natural) cooling, where we exploit the low temperature of the rock via bore holes, further reducing electricity consumption. Geothermal cooling works on the same principle as geothermal heating, except that the low temperature is used to cool instead of extracting heat.

Other cooling plants are also fossil free because the electricity is fossil free and so are the coolants that Uddeholm uses. Coolants still contribute to the greenhouse effect through emissions, but these are not fossil based emissions that generate carbon dioxide. Emissions from coolants come from handling and service and, when converted to  $CO_2$  equivalents, Uddeholm's emissions from coolants would make up around 0.05% of the total  $CO_2$  emissions from 2017-2022.

#### UDDEHOLM MANOR - FOSSIL FREE HEATING OF PREMISES WITH THE AID OF RÅDASJÖN

Did you know that Uddeholm Manor is heated by water from the lake Rådasjön? This is made possible by heat pumps running on fossil free electricity. There is an oil fired boiler as a backup if there should be a long period of cold weather in the winter time, but this has not been needed for many years.





#### $NO_x$ has decreased by 60% in the last 20 years

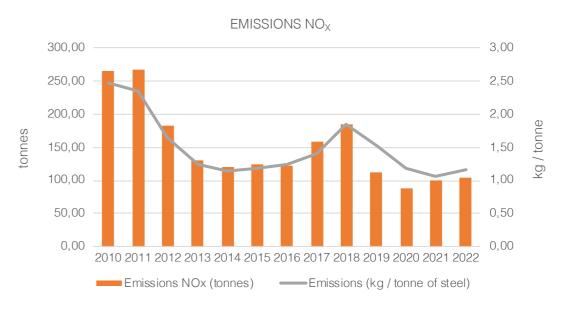
 $NO_{\chi}$  is a collective name for the oxides of nitrogen that form at high temperatures. The most common is nitrogen oxide (NO), which oxidises in air to form nitrogen dioxide (NO<sub>2</sub>). When the nitrogen dioxide reacts with water vapour in the air, it forms nitric acid (HNO<sub>3</sub>), which contributes to acidification in lakes and seas. Nitrogen oxide combines with volatile organic compounds (NMVOC) and sunlight to drive the formation of ground-level ozone.

In Sweden the transport sector is the biggest single source of nitrous oxides. Among the major point sources, the wood pulp, energy and metal industries cause the bulk of the national emissions. Natural sources of nitrous oxides include e.g. forest fires and thunderstorms.

Elevated levels of nitrogen dioxide can have harmful effects on both health and the environment. On days with high nitrogen dioxide levels asthma or respiratory problems can become aggravated.

 $NO_x$  emanates from melting steel in electric arc furnaces, from the consumption of gas in gas-fired heating and heat treatment furnaces and from lesser sources such as flame cutting. Before the conversion from oil and LPG to natural gas, the furnaces accounted for the bulk of the  $NO_x$  emissions from Uddeholm. In conjunction with this conversion, a number of furnaces were modernised with e.g. recuperative or regenerative burner technology, which further reduced emissions and boosted the efficiency of the processes.

 $NO_X$  is now eliminated completely when gas furnaces are converted to electricity, but electricity cannot be used everywhere. When the company purchases new furnaces, it looks at the best possible technology, while for existing furnaces, great emphasis is placed on maintenance. A big reduction through the year can be seen below, thanks to targeted measures. The increase in 2017–2018 coincides with the installation of a new flue gas filter in the steelworks. A major measure which reduced emissions of dust into the air by over 90%. The increase in  $NO_X$  in the first few years of the new flue gas system has to do with initial adjustments to the facility. The increase from 2021 to 2022 is linked to a slightly higher result from measurements of the steelworks. For 2023 this measurement is back in line with the value for 2021. In 2021/22 a gas-fired furnace was converted to electricity in the heat treatment section, reducing  $NO_X$  emissions from this unit by 9%.



#### We have rust-proofed our products with water-based paints for 20 years

Today around 90–95% of the products leaving the plant in Hagfors are rust-proofed. The reason for painting is to allow products to be stored outdoors, to protect the material in transit and also to provide a good base for labelling, and of course to make the product aesthetically appealing when it reaches the customer. The colour is a distinguishing feature of Uddeholm steel.

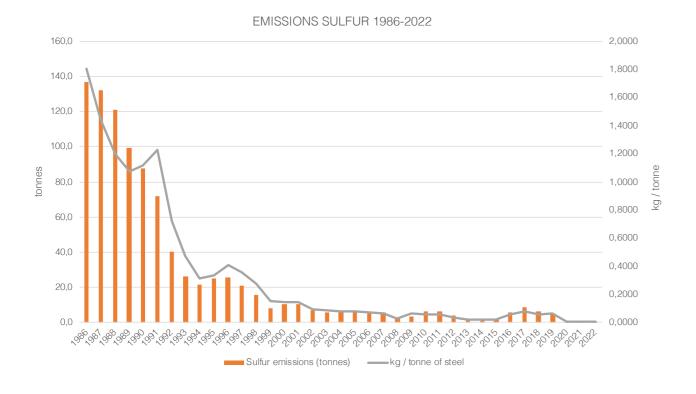
The material used to be finished with solvent-based paint, which generates solvent emissions and is harmful to the working environment. But 20 years ago two new painting facilities were installed to enable the switch from solvent-based to water-based paint with a low solvent content. Total emissions of VOCs from the company then fell by over 90%.

#### Uddeholm was among the first to choose low-sulphur oil

Coal and oil contain small amounts of sulphur, therefore sulphur dioxide ( $SO_2$ ) is formed when these fossil fuels are burnt. When the sulphur dioxide reacts with water and oxygen, it forms sulphuric acid ( $H_2SO_4$ ) which contributes to acidification of lakes and soil.

Sulphur emanates from melting, heating and heat treatment furnaces. The amount of sulphur emitted is measured in flue gases from the steelworks. For other installations, theoretical sulphur emissions are calculated from the quantity of fossil fuel consumed.

Uddeholm was among the first to replace oil with low-sulphur oil, drastically reducing emissions. When the conversion from oil and LPG to natural gas took place, sulphur from the operations decreased by a further 70%.





#### Scope 1,2,3

We have found it hard to communicate clearly how far we have come. Within Uddeholm we use the Scope system to define our fossil based climate footprint.

What is meant by Scope? It is important to have an awareness of the entire value chain, from raw material extraction up to the point when the product has been fully used and is going to be scrapped. We have opted to base our efforts on the GHG protocol with its definitions of the parts of a lifecycle, set out as 'scopes'.

- Scope 1, which relates to direct emissions from the company's own facilities
- Scope 2, which relates to emissions from purchased electricity and heating.
- Scope 3, which relates to indirect greenhouse gas emissions, in addition to purchased energy, that take
  place outside of the operation's boundaries. The greenhouse gas emissions in Scope 3 are divided into
  'upstream' and 'downstream' greenhouse gas emissions, depending on whether they take place before
  or after our own operation in the chain.

BE SOURCE CRITICAL AND NOTE WHICH CLIMATE FOOTPRINT IS BEING SHOWN

— IS IT THE WHOLE PROCESS OR PARTS OF IT?

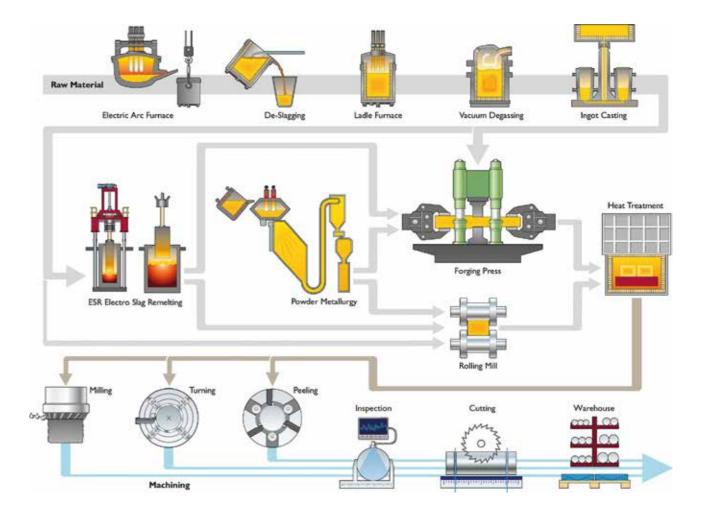
2030 **Scope 3 Indirect** Scope 2 Indirect **Scope 1 Direct** Scope 3 Indirect **STEELMAKING PRODUCTION OF PURCHASED FUEL COMBUSTION** PRODUCT USE **PURCHASED ELECTRICITY USE OF RAW MATERIALS** FOR OWN USE **MATERIALS FOR** DISTRIBUTION STEEL PRODUCTION **RAW MATERIALS** INTERNAL **TRANSPORTS UPSTREAM UDDEHOLM DOWNSTREAM** 2035 2040

Scope 1 and Scope 2 are entirely concerned with the enterprise where production takes place. Scope 3 is harder to influence as it is outside our direct control. We can affect things through active choices, enhanced collaboration and laying down requirements.

In our case, Scope 1 covers the footprint of the whole production process in the form of carbon dioxide emissions from combustion of gas, and the process emissions generated. All process steps are therefore included - from melting of raw materials in the steelworks, remelting in ESR for further processing in our hot sections (forging press, rolling mill, heat treatment etc.) and internal transports.

If we include Scope 2 in our reporting, we show the whole footprint from the business and the footprint from purchased electricity. In Sweden we have a great competitive advantage from our fossil free electricity, which means that including Scope 2 gives the same result as Scope 1 alone.

The table on the next page shows the different forms the reporting can take.



EXAMPLES OF DIFFERENT REPORT TYPES	DESCRIPTION	UDDEHOLM'S FOOTPRINT 2022/23
Scope 1	Covers the company's carbon dioxide emissions from "inside the gates at Hagfors", excluding Scope 2 which is purchased energy.	0.34 tonne CO <sub>2</sub> / tonne produced
Scope 1 and 2	Cover all of the company's carbon dioxide emissions from "inside the gates at Hagfors", including Scope 2 which is purchased energy (Uddeholm: fossil free electricity and district heating).	0.34 tonne CO <sub>2</sub> / tonne produced
Scope 1, steelworks (from melting to finished casting)	Limited to the steelworks' carbon dioxide emissions from "inside the gates at Hagfors", excluding Scope 2 which is purchased energy.	0.046 tonne CO <sub>2</sub> / tonne produced
Scope 1 and 2, steelworks	Limited to the steelworks' carbon dioxide emissions from "inside the gates at Hagfors", including Scope 2 which is purchased energy (Uddeholm: fossil free electricity and district heating).	0.046 tonne CO <sub>2</sub> / tonne produced

#### We know we are in the forefront of world steel production

The electricity that we buy is 100% fossil free, and 30% of our gas consumption in 2022/23 was also fossil free. From all of our production activities (Scope 1 and 2, all process steps/departments in the business including internal transports and heating of premises etc.) emissions of carbon dioxide are just:

#### 2021 0.42 TONNE CO<sub>2</sub> / TONNE PRODUCED -> 2022 0.34 TONNE CO<sub>2</sub> / TONNE PRODUCED

The figures are low, but we will continue to work proactively to reduce fossil based emissions from production, with the aim of bringing the figure down to zero by 2030. Everything needed for fossil free steel production is not yet possible – carbon in raw materials (scrap metal, alloys and powdered charcoal) is of fossil origin. So are the graphite electrodes used as conductors in the electric arc furnace. There are currently no substitutes for these, but we are actively involved in research studies to find solutions that are compatible with our process and the requirements we have for the quality of our end-product – including the use of biochar.

#### CO<sub>2</sub> emissions in a broader perspective, Scope 3

The Group has adopted targets from the SBTi (Science Based Targets initiative) to limit global warming to no more than 1.5 degrees. Activities undertaken by the Group should support this target, and it covers the whole value chain.

Scope 3 includes all emissions of carbon dioxide in the company's value chain which are not directly derived from its own activities. Upstream in the value chain are suppliers and shipments to the company, and downstream are shipments to customers and their own use of energy. Our work on lifecycle analyses (LCAs) gives a good picture of the carbon footprint from our products, and where it originates. There are LCAs for a number of our products, and this work is moving forward to include more products and improve the data quality.

#### UDDEHOLM'S CARBON FOOTPRINT IN SCOPE 3

Viewed from a lifecycle perspective, i.e. 'cradle to grave' for a product from Uddeholm, the actual production represents a small footprint. For Uddeholm in particular, this is especially true as we use fossil free electricity and a large admixture of biogas and are also working towards a zero fossil footprint. Most of the climate footprint is linked to the raw materials. That is why it is important to engage in dialogue and place requirements on suppliers of raw materials, which Uddeholm is doing.

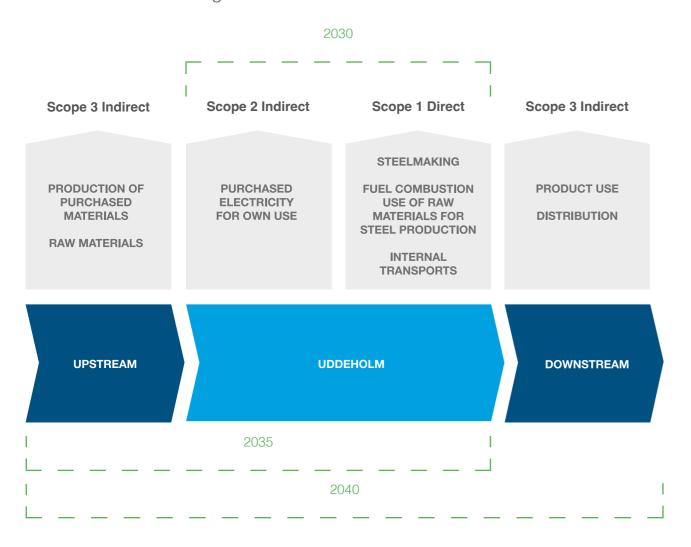
#### SCOPE 3 UPSTREAM

When we carry out an LCA, we find that products supplied from outside, such as our raw materials, give rise to most of Uddeholm's carbon footprint. Uddeholm's own production accounts for a much smaller part of the carbon footprint, which is decreasing every year thanks to our active measures, and the footprint should fall to zero by 2030. The proportion that is down to raw materials is therefore increasing year by year, so Uddeholm is making active efforts to reduce this figure through a series of measures including active choice of materials, collaboration with suppliers, increased reuse and review of specifications for newly developed and existing products.

Uddeholm's purchasing department works proactively in consultation with our major suppliers to encourage them to reduce CO<sub>2</sub> emissions within Scope 3.

- Dialogue meetings with over 40 suppliers, focusing on a sustainable value chain
- Active choice of suppliers who have products with a lower carbon footprint
- Analysis of emissions data and improvement activities by key suppliers

#### Uddeholm's climate targets



#### WE DIVIDE OUR CLIMATE TARGETS INTO THREE STEPS:

- Step 1: Fossil free production and a clearly reduced carbon footprint from our distribution by 2030
- Step 2: Climate neutral value chain by 2035
- Step 3: Climate neutral lifecycle by 2040

#### IN THE PERIOD UP TO 2027/28, WE WILL:

- Reduce emissions of fossil based carbon dioxide to max. 5,900 tonnes for the business, Scope 1 and 2.
- Implement annual energy efficiency projects corresponding to at least 4% of our energy use, of which at least half comes from fossil sources.
- Make a plan for the supply and distribution of goods and services to enable the Step 1 target to be attained. This should take place in consultation with our customers, suppliers and carriers.

Definition using Scopes have been fundamental for our strategic work, but when it comes to realisation measures, we are choosing not to follow the scopes as separate steps, rather we are dividing up the work in accordance with our potential to influence the outcome. Even in Step 1, which covers Scope 1 and 2, we aim to go a good way towards reducing the impact in Scope 3 to make our ambitions clear to our suppliers.

Steps towards attaining Uddeholm's environmental goals

#### STEP 1 - 2030

## FOSSIL FREE PRODUCTION AND A CLEARLY REDUCED CARBON FOOTPRINT FROM OUR DISTRIBUTION BY 2030 FROM GATE TO GATE.

Net zero CO<sub>2</sub> emissions in Uddeholm's plant in Hagfors (Scope 1 and 2)

- Electrification and use of fossil free energy in the company's furnaces (e.g. biogas/hydrogen gas)
- Use of fossil free carbon in the Steelworks, as far as possible
- Analysis of measures taken to reduce the footprint from our distribution (Scope 3 downstream)
- Improved energy-efficiency for smart use of the energy we consume, and reduced actual needs

#### STEP 2 - 2035

#### CLIMATE NEUTRAL VALUE CHAIN BY 2035 FROM CRADLE TO GATE.

Net zero CO<sub>2</sub> emissions from the purchase of raw materials until the finished product leaves the operation in Hagfors (Scope 1 and 2)

- Analysis of and possible measures to address Scope 3 upstream
- Carbon offsetting for remaining fossil based CO<sub>2</sub> emissions

#### STEP 3 - 2040

#### CLIMATE NEUTRAL LIFECYCLE BY 2040 FROM CRADLE TO GRAVE/CRADLE.

Net zero CO<sub>2</sub> climate footprint throughout the lifecycle, from raw material to end product (Scope 1-3)

A fossil budget has been produced which places a ceiling on the fossil based emissions allowed from the operation in Hagfors. This is monitored by senior management and production on a monthly basis to ensure that we are following the climate and energy roadmap.



Physical biogas is not available in the volumes we need – so how can we still be part of the green transition?

Today, biogas is not physically available in Sweden in the volumes we want. There are large amounts of raw materials, but the refining capacity for bioproducts is still limited. To switch to green gas as well, it is possible to purchase biogas via certificates. All biogas purchased comes with an ISCC certificate. This certificate guarantees sustainability and traceability throughout the supply chain, and by that confirms that the biogas Uddeholm purchases meets the demands regarding its origins and is not double-counted (where the same volume is sold multiple times).

ISCC (International Sustainability & Carbon Certification) is a voluntary certification of sustainable bioenergy and a guarantee that the raw materials from which the biogas is made have been processed sustainably, and for example do not contribute to wiping out the forests and biodiversity in accordance with RED (the EU's renewability directive). The supply chain also contributes to reducing CO<sub>2</sub> emissions to the benefit of the climate. The ISCC certification includes:

- Application of criteria for social and ecological sustainability
- Monitoring supply chains that are free from deforestation
- Avoiding the transformation of biodiverse grasslands
- Calculating and reducing greenhouse gas emissions
- Development of traceability in global supply chains
- Working conditions
- Responsible relations with society

Since 2022, Uddeholm has had a sustainability notice for the biogas purchased, which guarantees that the sustainability criteria in the Renewables Directive (as mentioned above) have been met. The purpose of the sustainability criteria is to ensure sustainability throughout the production chain. For instance, this means that biofuel should lead to a reduction in greenhouse gas emissions, that the raw materials must satisfy soil criteria, and that the fuels must be traceable back to their origin.

#### A circular economy – our core business

A circular economy is the exact opposite of a linear economy. Instead of manufacturing, purchasing and scrapping items, everything that has been manufactured is used for as long as possible. When the items are eventually spent, as much as possible is reused and recycled time and time again.

A circular economy is based on circularity, which involves optimising economic and environmental values, primarily by reusing materials, but also recycling them. Humans have been extracting and processing metals for around 9,000 years. In the case of steel manufacture, the iron ore is processed by means of refining. Cold oxygen gas is blown against the heated pig iron to get rid of carbon and contaminants and to make the steel durable. Metals are durable, malleable and have conductive capacity. The metal people have been aware of for longest is gold. Another metal is copper, which was previously used to make axes and can now be found in electric cables, for example. Steel is now the most important metal product, both from a technical and an industrial perspective. Iron is an element and steel is an alloy (mixture) of iron and carbon. The properties of iron are determined by how much carbon it contains. Iron with a lower carbon content is malleable, while iron with a higher carbon content that is not malleable is known as pig iron or cast iron. If the carbon content exceeds 0.4%, the steel can be hardened. Hardening is a method that makes the steel harder. One of the most important innovations in medieval iron production was the blast furnace, which was a more effective method for extracting iron from ore. There have been a number of different refining methods, which is the process for reducing the carbon content in the iron to make it malleable.

Iron and steel constitute society's most recycled and recirculated construction material. They can be recycled and reused again and again. Steel forms part of a cycle in which just about everything can be recycled. In the case of scrap-based manufacture, scrap that has been discarded in an earlier stage is reused. Around a third of the world's steel production is based on recycling and scrap based processes. Electric arc furnaces are primarily used to melt the steel scrap, and require electric energy. When using scrap as the raw material, the specific energy consumption, i.e. calculated in kWh per tonne of produced steel, is only a fifth of that required for ore-based steel manufacture.

But we are not only good at our core business based on recycling. The production process gives rise to almost 30,000 tonnes of waste products. Most of the falling waste products such as slag, brick and oxide scale are reused. Only a small part goes to landfill. How have we managed this? Through long-term cross functional work in the plant, and with society, with careful sorting and knowledge of the properties of the products.

#### WHAT ARE UDDEHOLM'S PRODUCTS MADE OF?

Iron based scrap metal and alloy substances in the form of various metals provide the raw materials for steel production at Uddeholm. During manufacture, scrap and in-house process scrap make up more than 80%. Alloys are added, depending on the product to be manufactured, such as slag formers that form the residual slag containing unwanted elements in order to increase purity. The scrap metal is alloyed with various metals to achieve the correct composition. The scrap metal comes from rejected products as well as from residual products from output from the engineering industry. It may already contain some alloy substances, but these normally need to be supplemented with new metals, such as molybdenum, chromium, vanadium, nickel and manganese.

Uddeholm melts reused scrap in an electric arc furnace and adds alloys depending on which product is to be manufactured. Scrap is made up of various scrap fractions, which can primarily be divided into alloyed and unalloyed scrap. Purchased scrap maintains a high quality, as part of Uddeholm's product strategy. From an environmental perspective, these demands provide considerable benefits, as impurities and unwanted elements are minimised, both in the end product and in emissions and residual products. In-house scrap originates from materials that fall from the process during manufacture. This can include e.g. cutting waste from finishing, lathe or milling chips, box cuttings or material that has to be scrapped due to errors in the production process. This means that parts of the product, in various stages, reduce in volume as a result of being cut, ground, milled or, in some instances, simply go directly to scrap to ensure that the product being delivered maintains the right quality. E.g. parts that are cut or milled off are recycled and remelted.

Internal challenges include maintaining the ambitious sorting of scrap to optimise the content, as well as reducing the addition of alloys at a later stage. The challenges outside our gates are to get scrap delivered in the required scrap fractions, as well as to economise in the reuse of Uddeholm's steel worldwide.



#### High proportion of recycled material in Uddeholm's products

Our operation is based on a circular system of reuse, and along with high quality requirements for the finished products, this reduces the burden on the environment. The scrap we recycle has to be of high quality – and clean. It has to be well sorted to ensure the best return from the included metals.

A circular economy is based on circularity, which involves optimising economic and environmental values, primarily by reusing materials, but also recycling them. Our entire operation is based on a circular system of reuse, in which we melt scrap metal and create new products. Any metal atom that can be recycled in this way means we can avoid having to mine new ore.

Uddeholm's products consist of recycled material. Recycled material helps us all to avoid virgin material, i.e. we are conserving the planet's natural resources.

The chart below shows that the recycled portion averaged 92.1% for Uddeholm's products in 2022.

Virgin raw materials 7.9%

Purchased scrap metal 43.0%

Internally recycled material 49.1%

#### HOW DOES UDDEHOLM CALCULATE ITS RECYCLED CONTENT?

To calculate the recycled content of our products we first have to determine what counts as recycled material. According to ISO 14021, only pre-consumer and post-consumer material counts as recycled material (see definitions on the next page). It does not include material from the process which is then reused/recovered as recycled material.

Falling scrap from the steelworks is a natural part of the process and arises in the casting process in the moulds used. The scrap metal is naturally picked up and returned to the process. According to the standard, this portion should not be counted as recycled material as it is reused in the same process where it arose. But we prefer to see it as recycled material, as it would be a waste not to make use of it.

TOTAL INPUT RECYCLED MATERIAL = RECYCLED CONTENT
TOTAL INPUT (METALLIC MATERIAL)

#### EXAMPLES OF THE RECYCLED CONTENT IN SOME OF OUR PRODUCTS (CALENDAR YEAR 2022):

STEEL GRADE	RECYCLED CONTENT
Uddeholm Compax Supreme	97.9%
Uddeholm Impax Supreme	96.4%
Uddeholm Orvar 2M	95.9%
Uddeholm Orvar Supreme	95.9%
Uddeholm Bure	95.9%
Uddeholm Sleipner	94.5%
Uddeholm Stavax ESR	86.5%
Uddeholm Mirrax 40	86.0%

#### DEFINITIONS WITHIN RECYCLING, PRE-CONSUMER AND POST-CONSUMER RECYCLING

**Pre-consumer** is material that is left over from production - waste or material that has been produced but never used. Waste and by-products come from various production processes, e.g. recycled steel, shavings, process scrap from industry and roofing sheets, which we use as raw material.

**Post-consumer** consists of previously used material that has served its purpose and is now being recycled to create a new product. Used and spent products are recycled to recover material or energy.

Classic waste products that are reused in production are oxide scale and steelworks dust.

#### Sustainable supply chain

The raw materials included in the steel we manufacture are important from a sustainability perspective. We are aware that this is a complex area, and we have high ambitions in this respect that will be further raised in future years. These suppliers have a considerable impact in the lifecycle assessments we carry out regarding the climate impact, and the social aspects are of central importance as these materials originate from many different parts of the world.

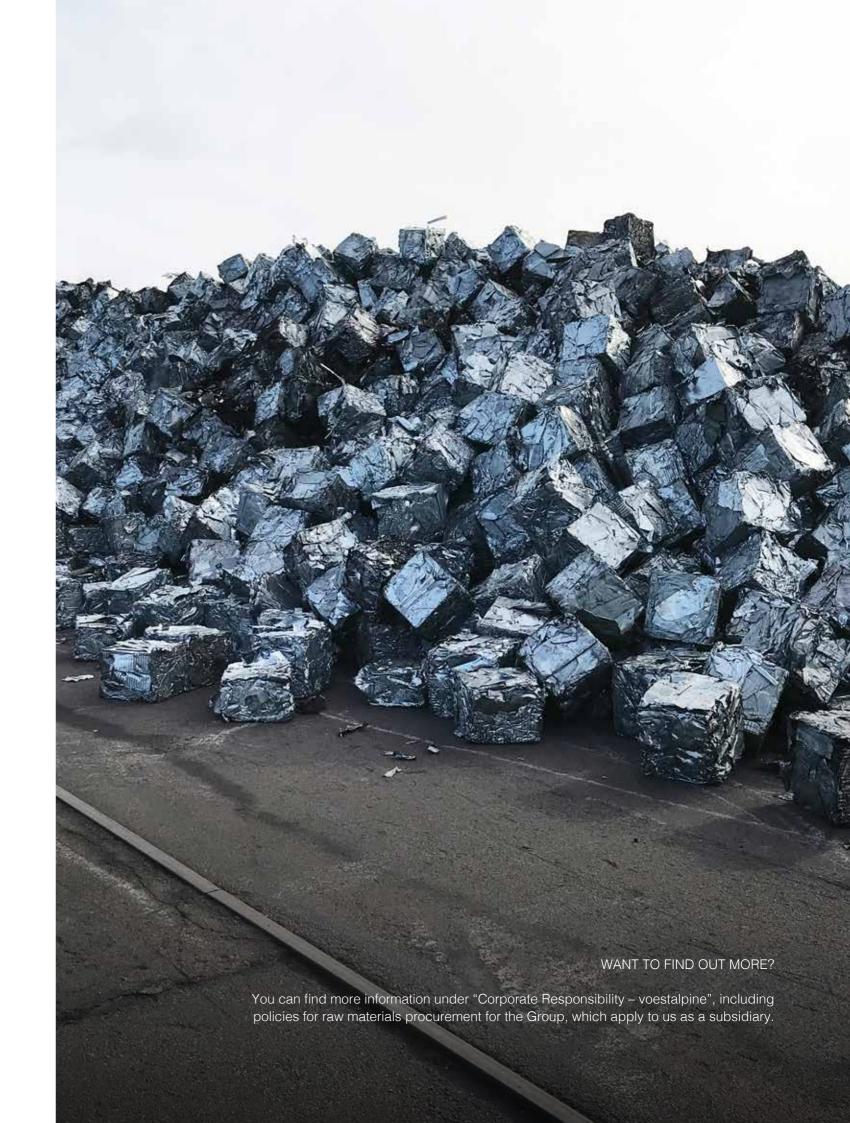
The quality of the raw materials and their price have historically been important aspects in relation to purchasing. More recently, social and human aspects have become important, such as the risk of child labour and difficult working conditions. These are now supplemented with a climate aspect, which represents a major challenge since the mining and refining of the alloy substances often take place in countries that have fossil based energy systems. We are actively looking for sustainable purchases, as well as collaborating with various players in order to map and develop our suppliers based on various sustainability criteria. We do this in order to feel confident that our raw materials really are sustainable in all respects, and for our customers to be able to feel the same. We can see that our entire society is going to be facing major challenges in this respect, and our aim is to lead the way in this development. In order to be resource efficient, we are striving to use recycled alloys as much as possible, with the aim of avoiding the mining of new, virgin material.

When purchasing scrap, we follow guidelines for deliveries that have been drawn up by a number of suppliers and users of steel and cast iron scrap in the "Swedish Scrap Book: Provisions for the delivery and classification of steel scrap and cast iron scrap". This handbook is a compilation of the requirements and rules that steelworks and the scrap industry have developed jointly for deliveries of various scrap classes to Sweden's steelworks. It can be viewed as a national Swedish standard for the classification of scrap. For example, it presents delivery provisions, the classification of various types of scrap, as well as the types of impurities in scrap that are not acceptable. The Swedish Scrap Book has been adopted by Uddeholm and the majority of other steel industries in Sweden. However, acts and regulations issued by e.g. the Swedish Work Environment Authority and the Swedish Radiation Safety Authority must always be observed, whatever is laid down in the Scrap Book.

All suppliers must study the Group's Code of Conduct to ensure compliance with legislation and the UN's Human Rights Conventions, pursue an anti-corruption policy, etc. As far as conflict minerals are concerned, we observe the requirements in accordance with the "Dodd Frank Act of 2010" and the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas".

We require that all products and raw materials that are supplied to us must be free from radioactivity. This is ensured through contracts and certificates, as well as by all transports undergoing a radioactivity check prior to the material being unloaded. In addition to this, radioactivity checks are also performed on smelt, slag, flue gases and dust in the steelworks. See extracts from the Swedish Scrap Book:

ALL IN ALL, THIS MEANS THAT WE HAVE A SAFE, COST-EFFECTIVE AND SUSTAINABLE SUPPLY CHAIN.





#### Towards zero waste

Waste produced by the business is systematically sorted and there is continuous improvement work to ensure that this is done safely.

The company has a central waste management station which is staffed in the daytime and also engages in improvement work and support to the units. With correct handling, we ensure that neither people nor the environment are exposed to unnecessary or hazardous risks from harmful substances; an important piece of the puzzle if we are to achieve sustainable production. Together, we also foster greater opportunities for reuse of the waste as an energy or material resource, and so contribute to a circular economy. The proportion of waste sent to landfill should decrease.

#### RESIDUAL PRODUCTS TURNED INTO NEW PRODUCTS

Uddeholm started sorting its slag 20 years ago. Sorting is based on the inherent properties of the material and the scope for reuse or recycling.

Our largest residual product fraction is slag. It is divided into various categories depending on its properties. We reuse one fraction as a slag former in the electric arc furnace, but the slag is predominantly used by Hagfors Municipality as building material at its Holkesmossen landfill site as a top surface - rather than purchasing virgin material. This was launched as a research project in 2003 under the auspices of Luleå University of Technology. The first trial surface was laid at the landfill site in 2005. In 2010, the research project was integrated into the regular work, but with continued monitoring by the University. An excellent example of "industrial symbiosis". Industrial symbiosis is a way of cooperating where companies work in innovative collaborations to identify opportunities to use waste from one company as raw material for the other. The word symbiosis is normally associated with relationships in nature where two or more species mutually benefit from exchanging materials, energy or information. Industrial symbiosis can reduce the need for both raw materials and waste management, thereby closing recycling loops – a fundamental feature of the circular economy and a driving force for green growth and innovative environmental solutions. It can also reduce emissions, lower energy consumption and generate new income streams.

But slag is not the only residual product to be reused. Uddeholm now makes use of residual products in various ways. We place great emphasis on not sending residual products to landfill. Slag is an excellent material. All reuse complies with the law including contact with the relevant authorities.

Examples of how Uddeholm's residual products are reused – instead of going to the dump or landfill:

- Bricks from different types of furnace can be turned into new fireproof material
- Oxide scale is used in the steelworks process and sold to alloy manufacturers
- To make the base course for roads
- Dust from 25 filter units is processed to recover zinc

#### UDDEHOLM REPLACED DISPOSABLE PLASTIC CUPS WITH CHINA CUPS BACK IN 2018

The EU countries produce around 25 million tonnes of plastic waste each year, and only about 30% of this is collected. If we do not change our way of producing and using plastic, there will be more plastic than fish in our seas in 2050, as 11 million tonnes of plastic waste are dumped into the oceans every year (source: WWF). With this in mind, Uddeholm was quick to phase out single-use plastic in favour of china cups that can be reused. This also reduces the volume of waste.

The operation also gives rise to a quantity of residual products, such as slag, dust, oxide scale and bricks. Uddeholm has worked hard to find sustainable solutions for these new 'products'.

#### Future sustainability reporting, with more key figures shown

Sustainability reporting in the next few years will be developed in line with requirements being drawn up right now, with the emphasis on demonstrating corporate sustainability. There is a lot going on in this area and we will adapt to meet the requirements that are laid down and the wishes of our various stakeholders. We will monitor developments in this area.

UDDEHOLM'S THIRD-PARTY AUDITS VIA ISO CERTIFICATION:
CERTIFIED FOR 30 YEARS ACCORDING TO THE ISO 9001 QUALITY STANDARD
AND 20 YEARS ACCORDING TO THE ISO 14001 ENVIRONMENTAL STANDARD

That is why Uddeholm participates in the EU ETS (Emissions Trading System) and undergoes an annual third-party audit of the carbon dioxide emissions covered by this:

#### PROCESS EMISSIONS:

- Monitoring of CO<sub>2</sub> emissions from the steelworks: steel production from melting raw materials (scrap metal and alloys) in electric arc and ladle furnaces.
- Monitoring of CO<sub>2</sub> emissions from the steelworks: use of graphite electrodes.

#### **EMISSIONS FROM COMBUSTION:**

Monitoring of CO<sub>2</sub> emissions from burning fuels: LPG, natural gas and biogas in production and for heating the premises.

#### WHAT DOES ISO CERTIFICATION ENTAIL?

ISO certification entails compliance with a set of regulations known as a standard within a specific area drawn up by the ISO (International Organization for Standardization). The purpose of an ISO certification is to continually develop operations to make them better. The fact that a company has been awarded an ISO certification means that a management system has been implemented in the company. A management system is a tool for planning, managing, checking, following up and evaluating the work of the organisation. Using the management system, the senior management ensures that the operation is run in accordance with established procedures that support the employees in their day-to-day work. Gaining ISO certification means that the company undergoes an independent third-party review to demonstrate that it complies with the requirements in the standards for which the company has opted to seek certification. Following an approved inspection, a certificate is awarded as evidence that the requirements for the ISO standard have been met. Subsequent audits are conducted annually to check continued compliance with the requirements.



ISO 9001 - ISO 14001 ISO 45001 - ISO 50001

> ISO 9001 1992 ISO 14001 2002 ISO 45001 2021\* ISO 50001 2013

> > \* (formerly OHSAS 18001, 2014)



#### Energy consumption within Uddeholm

A reduced carbon footprint and smart energy use go hand in hand. Increased awareness of energy use, impacting factors and resource efficient energy use are and must be a matter of course going forward.

Energy is required to melt scrap metal and to create new products with a long service life. Achieving the quality requirements imposed for the end product requires considerable amounts of energy, particularly in processes involving the manufacture and machining of tool steel. Uddeholm's operations are energy intensive and include a number of heavy industrial processes, such as melting scrap metal in an electric arc furnace, remelting in ESR furnaces, forging, rolling, heat treatment and machining. Producing steel of the same quality as Uddeholm's requires more energy in the production phase – and yet our footprint is smaller than others' thanks to Sweden's fossil free electricity and an active choice on our part to purchase 30% fossil free biogas – which will increase to a mix of 50% fossil free biogas in 2023/24.

Uddeholm is subject to the Swedish Act (2014:266) on Energy Audits in Large Enterprises.

To tie these areas together, there is a Climate and Energy Strategy that sets out the company's efforts and route to achieving Sweden's climate goals for 2045.

Several measures in the Climate and Energy Strategy were brought forward in 2023.

#### An extra SEK 80 million invested in energy saving projects for Uddeholm

The extra SEK 80 million will allow the energy-saving projects to be expanded to cover e.g. installation of ultramodern electric heating systems in existing facilities.

- Electrification of previously natural gas-fired furnaces
- Improved process flow for larger formats of Uddeholm Orvar 2 M
- Implementation of digital tools for process optimisation through measurement, data collection and analysis

The main result of all of this will be to reduce energy consumption and lower Uddeholm's fossil based  $CO_2$  emissions by 30%, but it will also improve productivity, increase furnace capacity in production and facilitate energy analyses to provide greater scope for continued optimisation of energy use.

Measures to improve energy efficiency will also help a lot towards achieving fossil free production as early as 2030.



#### Work to reduce energy consumption and transition to fossil free manufacturing

Over the coming years Uddeholm shall, as part of our long-term endeavour, achieve fossil free manufacture and distribution of our products by 2030. A Climate and Energy Roadmap that will take us to our 2030 goal is currently under development, and many activities are already being implemented. In order to reduce energy consumption and switch to climate neutral production, Uddeholm is working along three main lines:

#### **ELECTRIFICATION**

Electrification of natural gas furnaces is the best option in those cases where it is technically feasible, as it delivers the best efficiency. The first conversion of a furnace from natural gas to electricity took place in 2021, in accordance with Uddeholm's electrification plan, and another followed in 2022.

A further six units are scheduled for 2023, which is more than planned as Uddeholm has chosen to bring forward measures in the Climate and Energy Roadmap.

We consider ourselves to be a natural part of the work to remedy the situation in the Swedish grid, which is heavily loaded. We are doing this by participating in the frequency control market, which is a precondition for Sweden as a country being able to carry out electrification to the planned extent. We have initiated the work of expanding the capacity of electric power coming into the plant, alongside the regional grid owner.

#### CONVERSION

Uddeholm was the first steel producer in Scandinavia to switch from oil and propane to liquefied natural gas, which enabled the use of upgraded biogas (vehicle gas). Natural gas is supplied to the facility in liquid form by tanker from Norway and is gasified on site within Uddeholm. In 2018 we decided to accept a higher cost and conducted a two-day trial with the entire furnace operation running on biogas to show that it could be done.

The process to upgrade biogas for use as a substitute for natural gas is expensive, however. In order for the industry to achieve fossil free production, options are required where the cost of renewable fuels is lower, to maintain competitiveness. Against this background, we are attempting to safeguard our energy supply in future by working along several different lines: electricity, natural gas, biogas and possibly hydrogen gas.

#### STREAMLINING

Over the past three years, Uddeholm has drawn up a challenging strategic plan to reduce our energy consumption and climate impact. The company's goal is to carry out annual energy saving projects that will generate savings equivalent to at least 4% of our energy consumption in a selected reference year. At least 50% of these savings must come from fossil fuels.

This is an ongoing process, including energy mapping and the identification of losses in the operation, in order to support the organisation with proposed activities. This is also an important aspect that needs to be considered when purchasing equipment and making investments generally. However, it is also important to look after the equipment we already own and to endeavour to be as energy efficient a business as possible, which we do, for example, through work to optimise operating conditions. Our yield is also a highly impacting factor in production – reducing waste and doing things right first time are important for us.

During 2022/23, energy saving projects were carried out that are producing savings of more than 10 GWh of energy and 1070 tonnes of fossil based  $CO_2$  emissions. The biggest savings come from converting furnaces from gas to electricity and process control of furnaces.

For future streamlining, the biggest energy efficiency measures will be:

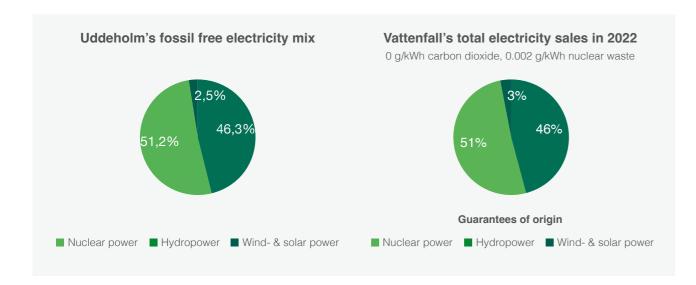
- Electrification
- Digital tools for monitoring and energy optimisation
- Replacement or renovation of furnaces

The energy strategy going forward is to electrify low-temperature furnaces and replace fossil gas with a mix of fossil free energy gases. We have started work on digitalising our energy monitoring process (Energy Mind). This will give us significantly better control of our consumption and allow us to deploy AI (artificial intelligence) to introduce smart functions, with the aim of optimising energy consumption and power output.

#### Our competitive advantage – fossil free electricity

The types of energy in use today are electricity, LPG, natural gas, biogas and district heating. It is important for there to be a balance between the different types of energy, which is something that has been addressed in our upcoming Climate and Energy Roadmap and our endeavours to become a fossil free company. Our electricity and the majority of the district heating currently come from fossil free sources. The natural gas and the small amount of LPG used are of fossil origin, which we are endeavouring to minimise, with a view to complete substitution in the long term. Since 1 April 2022, 30% of the fossil natural gas has been replaced with fossil free biogas, and this will be increased to 50% from 1 April 2023.

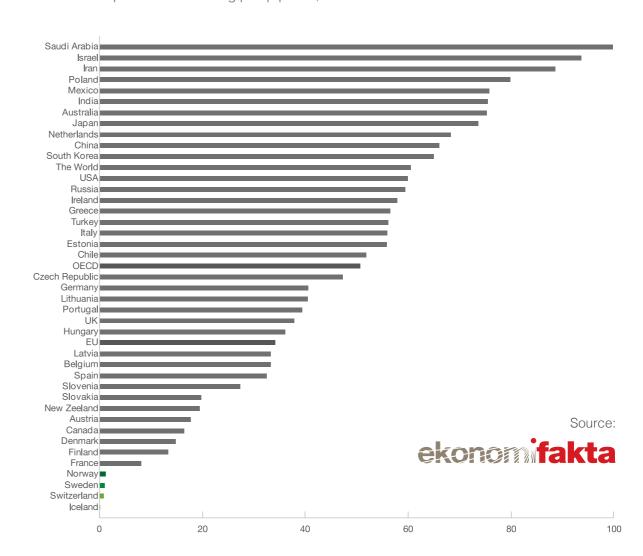
The fossil free electricity mix that is supplied to Uddeholm comes from Nordic power stations. Fossil free electricity represents a unique advantage for Sweden and the other Nordic countries.



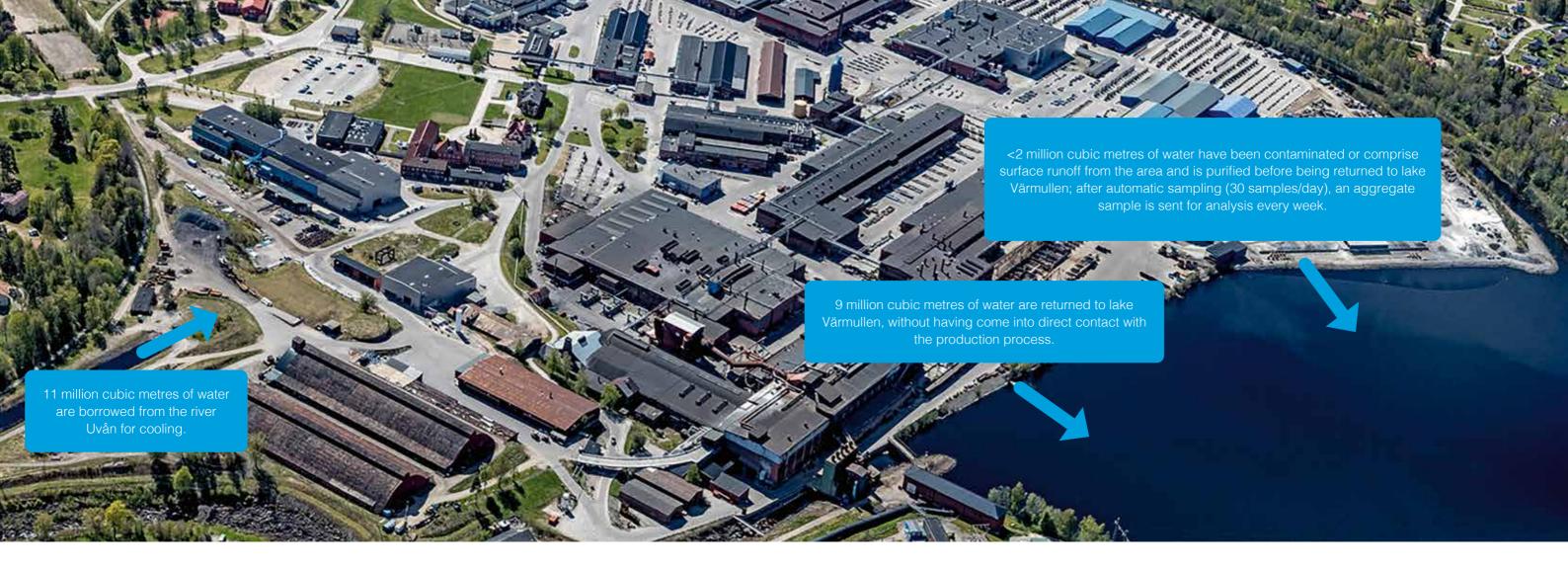
Uddeholm's existing electricity mix comprises nuclear power (51.2%), hydropower (46.3%) and wind power and solar power (2.5%). Approximately 49% is renewable energy. We have continued the implementation of power regulation with the option to shut down electricity intensive processes when electricity prices are high or there is a shortfall in the Swedish grid.

#### ELECTRICITY PRODUCTION USING FOSSIL FUELS

Share of net production including pump power, 2020







#### Water consumption within Uddeholm

Over time, Uddeholm's environmental work has focused primarily on our own environmental impact on the air, land, water, etc. – not on our dependence on the actual ecosystem and its services. The company's reliance on the natural resource that is water, for example, has been taken for granted. After all, access and proximity to water was once one of the basic preconditions for the establishment next to the 'Hagfors rapids'. This water falls freely, cold water that does not need to be cooled before we use it and that maintains a highly level of quality.

In 2022, Uddeholm borrowed 11 million cubic metres of water to cool our processes. More than 80% of this water was borrowed and returned without having been affected by any direct contact with Uddeholm's production process. The remainder undergoes treatment before being returned to lake Värmullen. Before we return the water, it is carefully checked. More than 30 water samples are taken every day, which are sent off on a weekly basis for analysis. These are then matched against the flow to ensure both concentration levels and total volumes.

In 2012, a student from the Stockholm Resilience Center completed their masters thesis comprising an ecosystem analysis within Uddeholm. We were able to establish that water is used to a far greater extent than is generally realised. It is well known that we have to cool large furnaces and mechanical equipment. But we also cool several smaller analysis instruments within the R&D department. This resulted in us having a system perspective of the environmental work with a new type of risk analysis. We therefore always try to add a dependence perspective in our environmental discussions, even when it comes to the stakeholder perspective. We do this in order to look after the things we are dependent on – not just focus on reducing our impact in general.

#### ZINC AND OIL TO WATER

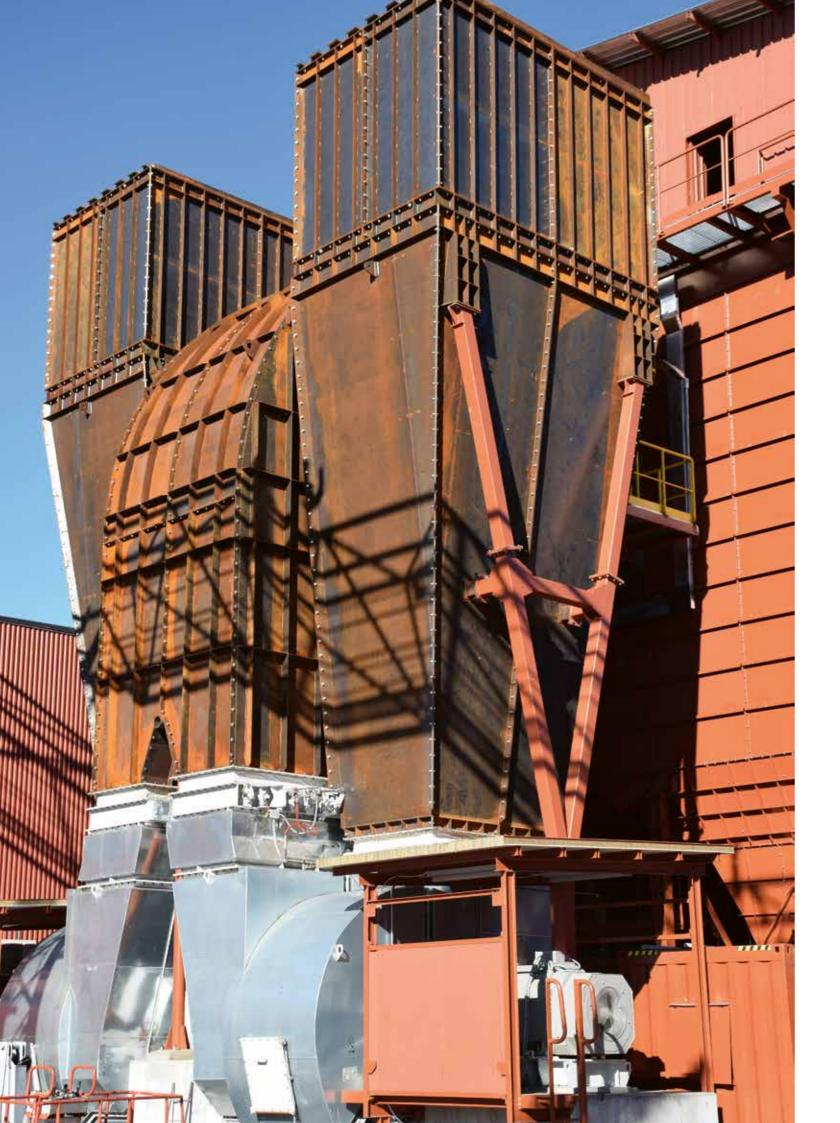
We have identified zinc and oil as major environmental concerns, and work is underway in line with an action plan that includes both short and long-term activities.

#### RECIPIENT MONITORING

Monitoring of Värmullen lake and other bodies of water around our plant is carried out by the Klarälven water management association. This is a grouping of municipalities, companies and organisations with interests in water management in the Swedish part of the Klarälven drainage basin and the area closest to its outlet into Lake Vänern. Uddeholm has been a member from the outset.

The purpose of the association is to promote good water management within the industrial area with the emphasis on:

- · Administering and carrying out the necessary inspection work.
- Based on their own and other members' analyses, provide members, relevant authorities and other stakeholders with general details of the results of these studies each year and of other matters of interest to water management, and:
- Act as a point of contact and consultation for different stakeholders within the industrial area.



#### Work to minimise emissions into the air

Emissions into the air from Uddeholm's activities are mainly carbon dioxide, which we covered earlier in this report, and nitrous oxides, small amounts of sulphur oxides and dust.

### REDUCED ENVIRONMENTAL IMPACT AFTER INVESTING IN A NEW FLUE GAS SCRUBBER WAS VERIFIED BY LOWER LEVELS IN MOSS AROUND THE BUILT-UP AREA

One of the biggest environmental and health and safety investments ever made by Uddeholm is a new flue gas scrubber for the steelworks. This project totalled SEK 80 million in investment costs. A new filter was commissioned after the summer holidays in 2016. Step two involved further improvements indoors. The results show that dust from the business decreased from at least 20 tonnes a year to well under 1 tonne – with no diffuse emissions from windows or other openings. Following the conversion work, it was found that the filters connected to the electric arc furnace and the casting shop could both be replaced with the new unit. This means reduced energy use and less maintenance, and the noise level for neighbours was also lower as the older filters were close to homes to the north of the plant. The most important thing, however, is a substantial improvement to the work environment, as confirmed by indoor measurements.

## PRECIPITATION OF DUST OVER HAGFORS HAS BEEN MUCH REDUCED – AS CONFIRMED BY ANALYSES OF MOSS.

Thanks to the big flue gas investment in 2016/17 and earlier, less extensive measures, dust emissions have come down sharply. The ferrous metals – chromium, nickel, zinc and iron – that come from operations in the steelworks, are efficiently captured in the new dust filter. Measures have also been taken at the national level; for example, there is no longer any lead in petrol and the use of cadmium in batteries has almost completely stopped. In collaboration with the municipality and the Klarälven water board, we made a study to see how this reduction can be seen in our local environment.

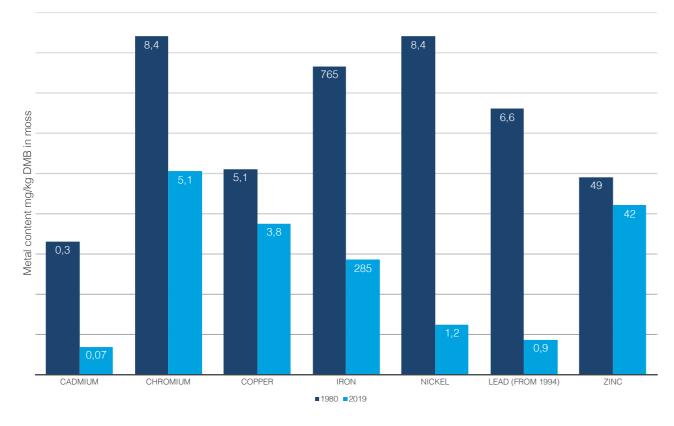


A good way of seeing the precipitation of metals is to examine moss. Moss has no roots, and picks up nutrients and metals from the air. Moss was collected from 22 locations around Hagfors most recently in 2019. Twelve of these measurement points were exactly the same as those examined in 1980, 1994 and 2010.

#### Metal levels at the measurement sites have decreased almost everywhere

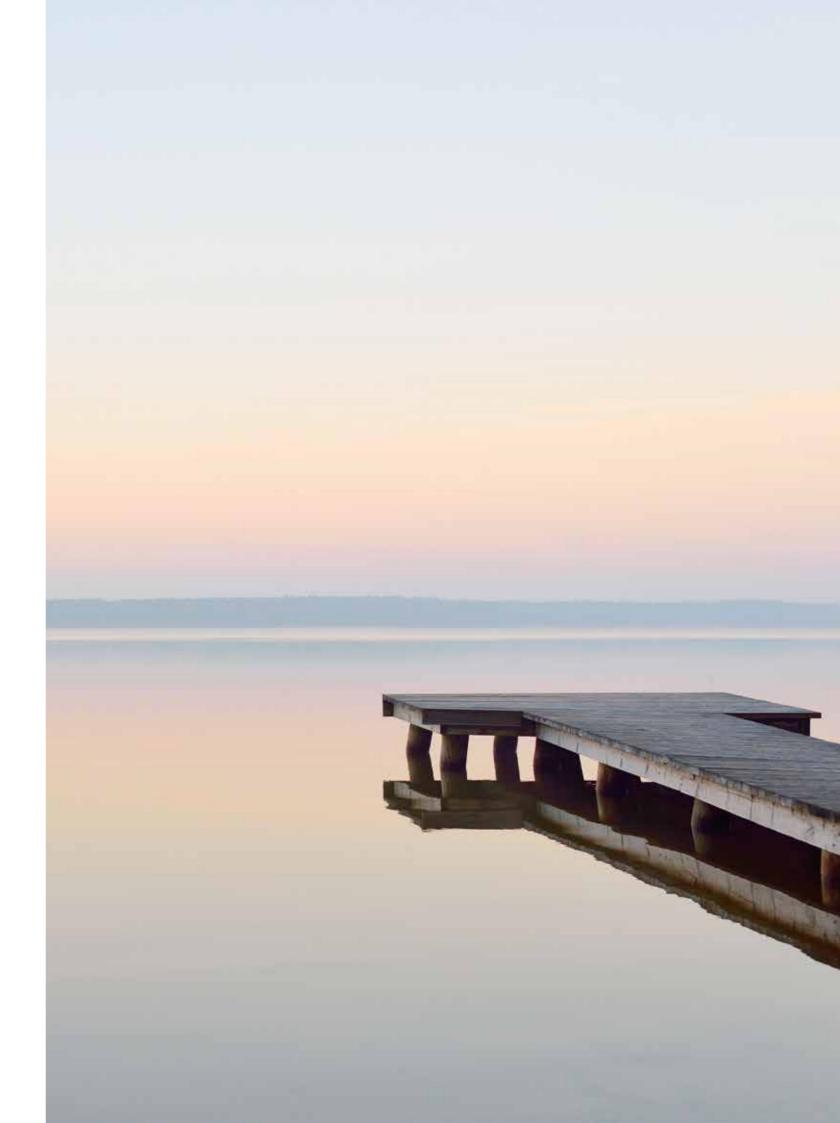
The decreases are clearest for lead, nickel, cadmium, and iron. By linking the metal levels to those in the air, we can now calculate the change in precipitation over the surface of the lake Värmullen – as confirmed by measurements of metal levels in perch and pike, which are both down; see section on water. The metal analyses that we did in the autumn of 2019 in sediment samples from Värmullen also show big decreases in chromium and other metals.

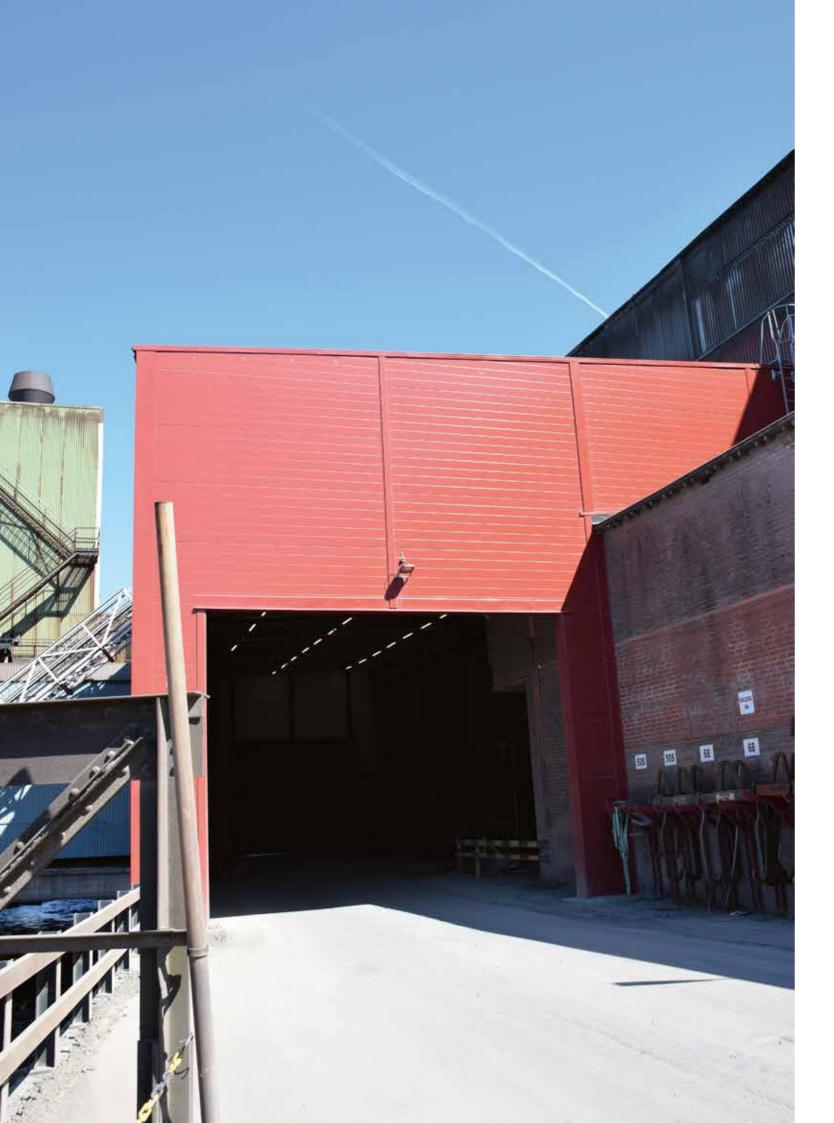




#### UDDEHOLM IS A MEMBER OF VÄRMLAND COUNTY AIR QUALITY ASSOCIATION

Uddeholm is a member of the Värmland county air quality association - a non-profit body comprising approximately 50 member organisations. The members are companies, municipalities, government authorities and other parties with an interest in air quality. The main purpose of the association is to take measurements of air pollution and contaminated precipitation (rain and snow), and see how these pollutants affect the groundwater. Through the association, we can help to disseminate knowledge and information while sharing experience with other members on air quality issues.





#### Reduced noise for neighbours

The community of Hagfors grew up around the Uddeholm plant, so we have neighbours living close to our operations. Many measures have been taken over the years to reduce the noise level from the plant, although this is already well below the threshold values for traffic noise in Sweden.

In 2022 a 'noise lock' was installed at the steelworks. We saw a need for this as the gate often needs to be open for shipments in and out. When scrap metal is melted down, it results in higher noise levels for neighbours. The noise lock means that there is never an open gate to the outside but a restricted passage which catches some of the noise.

Since making this investment, we have had a lot of positive feedback from the area to the north of the works, and also from residents to the west, on the other side of the lake. We also undercut new and more stringent limits for noise by as much as 2 dB(A) in the night-time. During night-time melting operations, the value at the measurement point designated by the supervisory authority is now just 46 dB(A).

#### NEIGHBOURHOOD GROUP

Twice a year (and since 2010) Uddeholm has arranged meetings with a neighbourhood group consisting of several representatives from different associations in the town. The meetings are always attended by the local environment and planning office. The group as a whole chooses various topics for the meetings. Noise has been one of these, and measures have been taken after discussions in the group.

One example that led to actions being taken was where the group mentioned that they found reversing signals from forklift trucks annoying. The reversing signals are a necessary safety measure, but after further investigation most of the loud beeps have now been replaced with a hissing sound which adjusts its volume to the surroundings.

Other momentary noises that can be a nuisance come from loading scrap metal. Therefore, we monitor the operations with noise meters, which are used to provide feedback to the loaders.

#### Work for biodiversity

Biodiversity is closely connected to our risk work. If we lose biodiversity, we lose vital and irreplaceable ecosystem services, which both humans and society depend on to function. Nature provides us with ecosystem services such as timber, bio energy and drinking water, as well as raw materials to produce medicines and other innovations based on biological material. For example we are dependent for our food supply on insects that pollinate our crops, bacteria and grubs that make the soil fertile, and insects that are natural enemies of unwanted pests in our crops. All companies are naturally dependent on the services of nature such as clean water and raw materials like timber and bio energy. Companies also have an impact on nature and a responsibility to manage the Earth's resources in a sustainable way. Uddeholm has run several different projects, together with the municipality and the Klarälven water board, about biodiversity. We plan to step up this collaboration in the upcoming years to address more fundamental issues and identify relevant and necessary actions in our local area. Apart from its own site, Uddeholm also owns other areas both around the works and elsewhere in the municipality. Some examples of joint projects are the many activities linked to the action plan to improve the water quality in Värmullen lake, including studies of fish health, identifying species and individual fish in the lake, and the possibility of dispensing with culverts carrying stormwater to remove obstacles to fish migration.

#### WHAT IS BIODIVERSITY?

Biodiversity is a collective term for all of the variation that exists between and within species and habitats on the Earth, and means that nature is rich in variation. It is a necessary condition for all life on Earth and the basis for human well-being and existence. We obtain food, fresh air and clean drinking water and our societies are better able to withstand global changes, threats to health and disasters.

#### WETLANDS ARE IMPORTANT FOR BIODIVERSITY

Viable ecosystems with great biodiversity are crucial to our ability to limit global warming and achieve our climate targets. Wetlands are among the most species rich environments in Sweden, which makes them important for biodiversity. Wetlands clean the water and protect against both drought and flooding while also capturing carbon, which is helpful from a climate perspective.

#### DID YOU KNOW THAT UDDEHOLM OWNS NATURAL WETLANDS?

As far as we know, this is unique. It is also unique to find a natural wetland area in a town. There are various valuable biotopes in the area including the Hagälven river, surrounding wetlands, riparian forest and mixed woodland. The area covers around 50 hectares.

Hagälven is judged to fall into conservation class 2, high natural value, with populations of freshwater pearl mussels and brown trout. The freshwater pearl mussel is a protected species and is classed as "acutely threatened" on the Swedish red list. In a survey of natural assets, beavers, whooper swans and mallards were also observed along the watercourse. The watercourse is also a source of natural value for surrounding wetlands and provides a habitat for other aquatic organisms and birds.

The wetlands vary between more open, sedge-covered wetland with individual birch trees and dense reed beds with single copses. Large populations of bog arum and dwarf birch, birds such as common snipe and meadow pipit, and old world swallowtails. The old world swallowtail belongs to the Papilionidae family and is declining in numbers right across northern Europe as the large damp meadows and bogs are drained or are filled up.

The natural value of wetland forest is based on the way some of the trees have raised roots, indicating that at least some of them are quite old. The soil conditions are soft with rich stands of bog arum, an indicator species for wetland forests. Wetland forests also contain excellent spawning grounds for frogs.

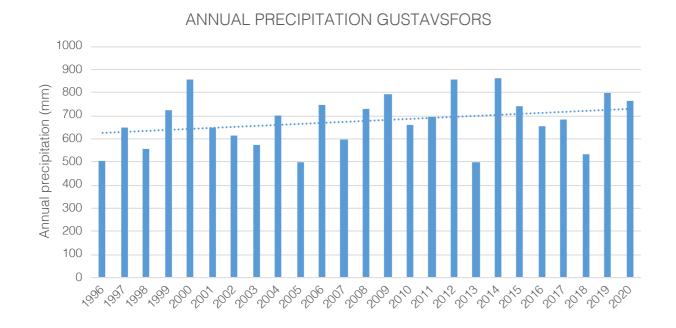


Great spotted woodpeckers and black woodpeckers have been observed in the mixed woodland. Great spotted woodpeckers are good for other hole-breeding species which can take over the nest hole the next year. In one part of the forest there are old sallows which are a major pollen resource for insects. In the forest we also find goldcrests, which are Europe's smallest bird, around nine centimetres long and weighing five to six grams.



#### Climate change – preventive work

Limiting CO<sub>2</sub> emissions is an important part of the transition work. As a company, we also need to review and take into account the anticipated effects of climate change, such as more and heavier rainfall generating more stormwater and higher flows in the Uvån and Hagälven rivers. Planning for the removal of dams may happen in the future, which will entail poorer back-up in the systems and greater variation in the flows. From SMHI's statistics, it is already possible to see a slight increasing trend regarding annual precipitation between 1996 and 2020, at Gustavsfors measuring station:



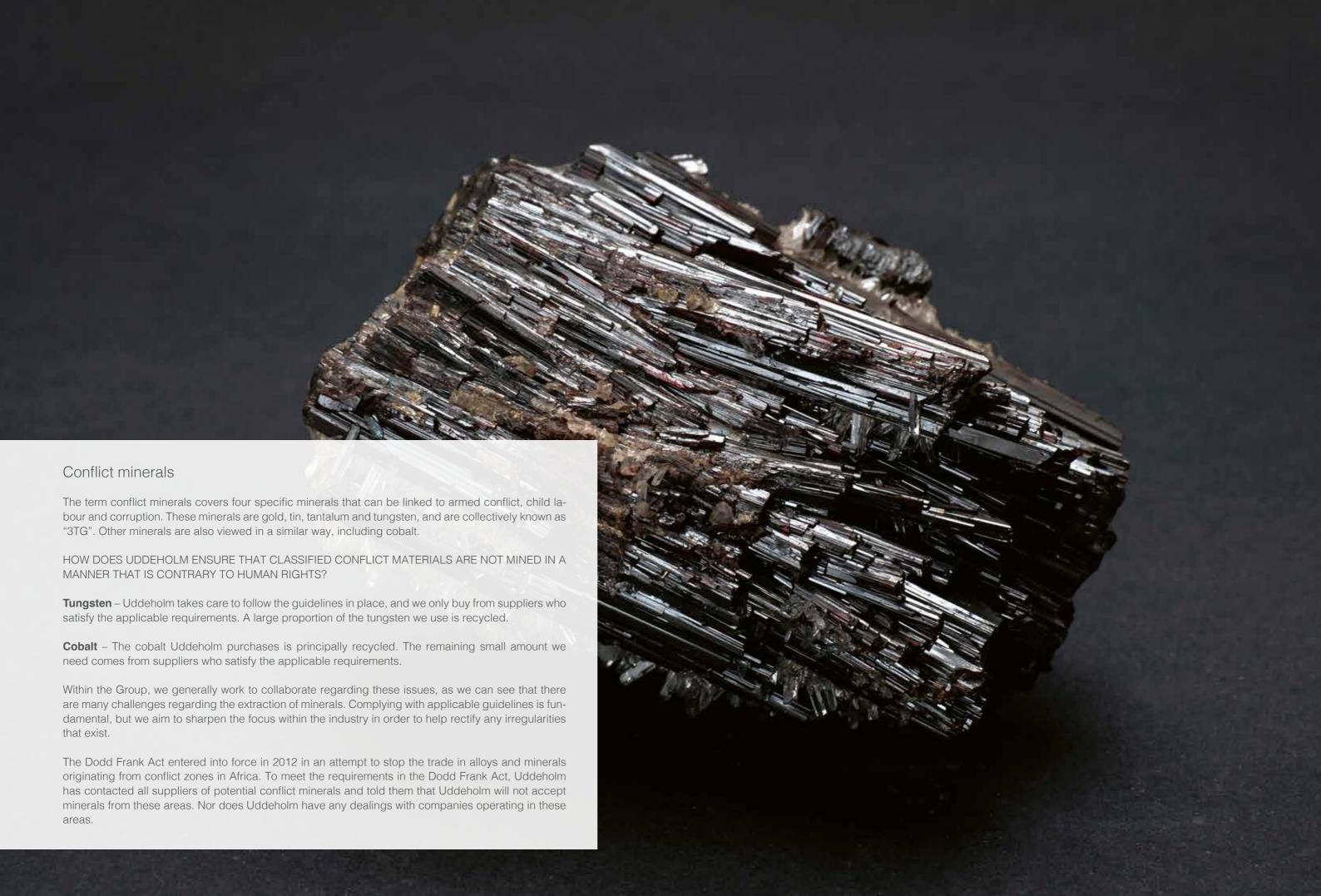
#### MEASURES FOR ADAPTING THE BUSINESS TO CLIMATE CHANGE

During renovation work and investments in an improved stormwater network, consideration is being given to the higher flows that are expected as a result of climate change.

In a collaboration (in 2020-2023) between the municipality of Hagfors, Klarälvens Vattenråd and Uddeholm, information regarding the stormwater network has been improved, as has the risk scenario for where flooding could occur in the event of heavy rain. Monitoring in the area primarily covers the flow in the river Uvån, as this represents the greatest risk in the event of higher flows, with the potential to divert water or employ culverts. Other checks that are performed regularly are linked to issues such as the risk of erosion.



Risk areas, high flows



# The Employee

In order to continue the development of our company and achieve our ambitious objectives, we need employees with the right skills, experience and drive. In our organisation, we consider it obvious that everyone is of equal value and that diversity is a strength. Our employees are expected to contribute to the realisation of our strategy, and they should also feel that they enjoy the right conditions to do a good job. Through good performance and the right attitude, there should be development opportunities and the potential to take on new challenges within the company/Group. In order to be successful, we must succeed in creating job satisfaction, a high level of commitment, good forms of collaboration and a clear sense of involvement. Those of us who work at Uddeholm should find going to work both fun and enriching, with the result that we want to stay here and that there is always strong demand as regards people wanting to join the company.

We aim to be a value driven organisation where we define ourselves and act according to our values:

- Trust
- Respect
- Customer focus
- Value creation

Uddeholm's values are the foundation on which our organisation rests. It is essential that we have a common definition of our values with as equal a meaning as possible within the company, so that we all live and act in line with our common values. We believe in a dynamic, equal and inclusive workplace that is created by taking advantage of the fact that we are all different.

Our work environment must be safe and healthy:

- Our operation that is conducted in such a way that nobody gets hurt at work and where we care about each other's safety.
- The LTIFR will be no more than 3 by 2026/27.
- We work preventively with our physical and mental health.
- By 2026/27, we aim to have an attendance level of at least 96%.



Focus on physical and mental health

34% FEMALE MANAGERS



34% female managers within Uddeholm

200 PROFESSIONS



200 different professions within Uddeholm



## Uddeholm's values – the foundation on which the organisation is built

It is essential that we have a common definition of our values with as equal a meaning as possible within the company, so that we all live and act in line with our common values. We treat and work with each other in line with our values. There is participation and inclusion in all our groups. Discrimination, bullying or harassment are not acceptable at any time. Uddeholm has four values.

TRUST, RESPECT, CUSTOMER FOCUS AND VALUE CREATION

Our values are the foundation on which our organisation is built. Our values describe who we are and how we think and act. The values must permeate our organisational culture and provide the basis for our work on safety, quality, delivery reliability, productivity, sustainability, objectives and strategies. However, words can mean different things to different people. It is therefore essential for us to have a common definition for our values and as similar a meaning as possible within the company, to ensure we all are, think and act in line with our shared values. These are Uddeholm's definitions:

#### TRUST / trʌst /

- 1. Delivering on our commitments and trusting in one another's deliveries
- 2. Openness and honesty in our day-to-day work and in our communication
- 3. Standing up for one another and for our shared goals and constructively challenging one another to be better
- 4. Daring to ask one another for help and daring to put our ideas to the test

The definition of the value Trust is that it is natural for us to deliver in accordance with our commitments and that we trust in one another's deliveries. Our day-to-day work and our communication are characterised by openness and honesty, and we routinely share relevant knowledge and information. Daring to ask one another for help is about having trust. We stand up for one another and our shared goals. We endeavour to offer a stimulating environment where we constructively challenge one another to be better. We show trust by assigning clear goals, roles and responsibilities, and also delegate the necessary mandates and powers to be successful in this. Trust is about us being able to take responsibility and daring to put our ideas to the test.

#### RESPECT / rɪsˈpɛkt /

- 1. Zero tolerance of victimisation and bullying
- 2. Treating everyone equally and regarding our differences as an asset
- 3. Seeing and hearing each and every colleague and actively trying to understand one another
- 4. Providing constructive, value-creating feedback in order to be better together

There is zero tolerance of victimisation and bullying within our organisation. It goes without saying that we treat everyone equally and that we regard our differences as a major asset. It is noticeable that we see and hear each individual and colleague and that we actively seek to understand one another's views and challenges. We all contribute to the company's success and must therefore provide one another with the best possible conditions to do a good job. For us to develop as a company and as individuals, it is important that we give one another constructive and specific value-creating feedback. Together we can be even better. Shared, complex challenges are addressed through the creation of cross-functional teams, where we draw on one another's knowledge, background and experience to deliver effective and sustainable results.

#### CUSTOMER FOCUS / 'knsteme 'feukes /

- 1. An understanding of the fact that the customer's success is our success
- 2. Seeking a deeper understanding of the customer's needs and challenges
- 3. An awareness of the fact that all our processes have a customer need to satisfy
- 4. Always delivering the right quality, in the right quantity, at the right time and in a safe manner

The customer's success is our success and in the long-term relationship with our customer, we proactively seek to develop a deeper understanding of the customer's needs and future challenges. We will use our expertise and technical sales skills to continually identify the right solution and so, with the customer's input, develop the customer's business and increase their competitiveness. We are conscious of the fact that all our processes have a customer need to satisfy, which is why we always deliver the right quality, in the right quantity, at the right time and in a safe manner.

#### VALUE CREATION / 'vælju: kri'eɪʃən

- Being aware that everyone's efforts are important when it comes to the company's results and development
- Taking ownership of our work and doing our utmost every day to deliver according to the tas
- Creating our own future by using our skills, creativity, innovation and entrepreneurship

Value creation means that we are aware that all our efforts are important when it comes to the company's results and development. We acknowledge ownership of our actions by doing our utmost every day to deliver on our promises. Tomorrow, we will try to do that little bit better, for instance, by eliminating any waste we identify. We create long-term profitability by being the global market leader, and in that role we have to continually define and shape our future. We therefore actively seek out fields with stringent requirements, that are challenging and can benefit from our expertise, creativity, innovation and entrepreneurship.



## Development of control rooms for a more pleasant workplace

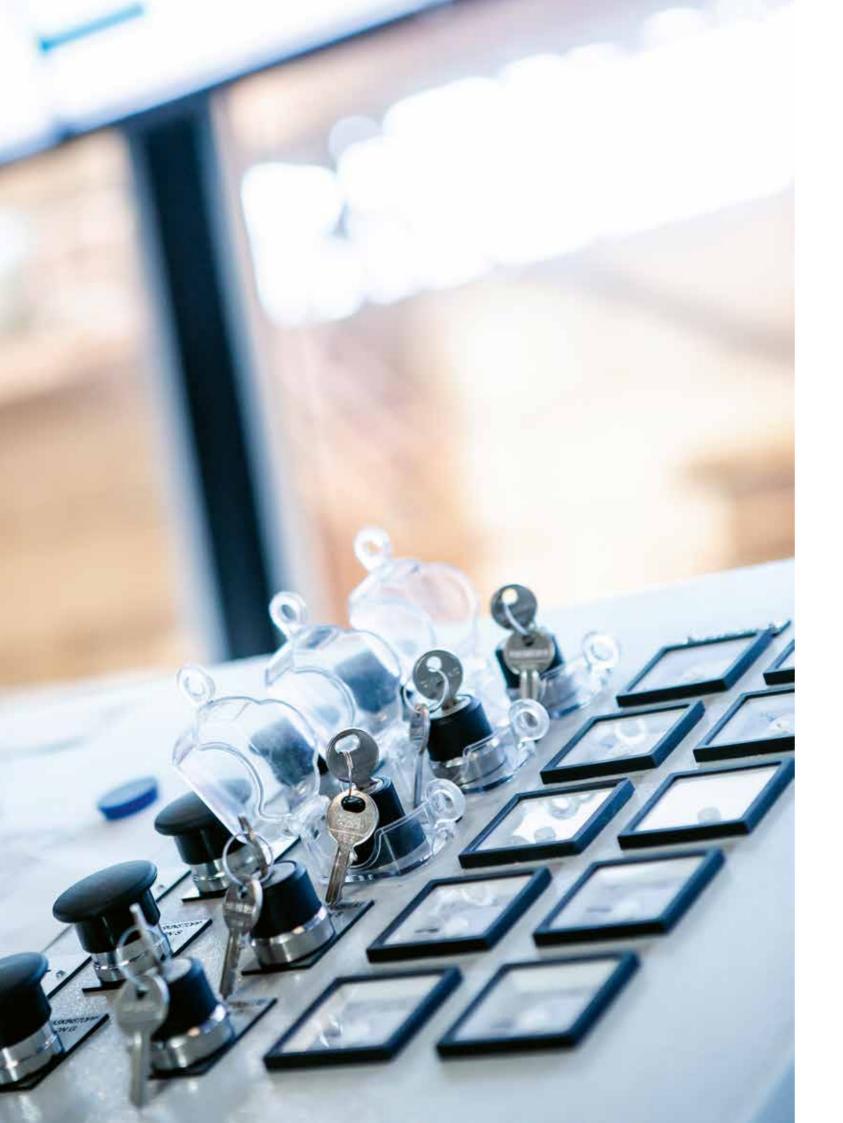
The work of creating a sustainable workplace involves the Digitalisation- and Health- and Safety departments working closely together with Production to maximise efficiency from the investment in new control rooms. The aim is to be able to inspect, video monitor and manage the business in a planned environment with adjustable lighting, minimal noise and good ergonomics. By including ergonomics and user experience (UX) in the design process, we can create a control environment which is not only sustainable but also comfortable and safe for our operators.

#### IN 2022/23 THE HEAT TREATMENT DEPARTMENT GOT A NEW CONTROL ROOM

The new control room in the Heat Treatment unit improves collaboration, workflows and even the physical and digital environment. The control room is a better, safer and simpler environment to work in, as well as being

up-to-date and attractive. One wall is covered with big screens, providing detailed information about the furnaces in Heat Treatment. On the other side of the screens is a large table where the shift teams can meet and plan together without any distracting noise. The control room is ultra-modern with navigation systems and cameras providing real-time images to support the shift teams. The control room is also equipped with a mobile-compatible solution for monitoring temperatures, trends and alarms. The user has been at the heart of the new control room in the Heat Treatment unit, where all systems used by operators are gathered together in one place. Users are given the right information at the right time to enable them to make the right decisions.

The ESR unit also got a new control room in 2021, along with a new video monitoring system to Uddeholm's standard design. Similarly, the Maintenance department has gathered various types of production monitoring into a digital control room which allows managers to quickly check the status of different installations from home.



# Interview with Alvaro Cordova

Alvaro Cordova from Uddeholm's Digitalisation department was a project manager and member of project groups developing the control room.

#### How long have you worked at Uddeholm?

I have worked at Uddeholm for just over five years; I started in October 2017.

# What did you do before that? What route did you take before you came to us?

My background is in IT. I studied systems development at home in Bolivia, followed by graphic- and web design in Spain. I came to Sweden for love and worked in multicultural marketing online for a few years before deciding to study. Just before I started working at Uddeholm I had a go at starting my own company with a concept I developed for my thesis in automation engineering in Karlstad, in 2016.

#### What was your reason for choosing Uddeholm?

The position seemed very open in terms of working on both automation and digitalisation. I thought it would be exciting and motivating to be challenged, to be creative and work as a problem solver with everything centred around the user. I was attracted by the innovative culture that Uddeholm has, which was communicated to me at the interview.

#### What do you appreciate most about working at Uddeholm?

Constant development. The overarching strategy at Uddeholm, striving to keep its leading position, which means that all parts of the organisation are involved in development. The Technical department plays a big part in this, and that has been very good for me, both professionally and personally.



## Long-term work to deliver a sustainable workplace

Uddeholm's HR strategy stresses the health aspect and is based in continuing development of a safe, secure and healthy work environment for all of the staff. Uddeholm wants every employee to be treated with respect. There is zero tolerance of discrimination, bullying or harassment. Our objective is always zero. Any deviation from this results in an action plan being produced. Uddeholm also aims to be a healthy workplace. Through active preventive work, we aim to stay above our long-term target for attendance of at least 96%.

Uddeholm's health and safety work is based on the applicable laws and the rules of systematic work environment management (SAM). We are guided by the SAM wheel set up by the Swedish Work Environment Authority as a set of requirements for employers to aim at.

This tool covers the group and individual levels, and followed the SAM wheel as below:

- **Investigation:** Health inspection assisted by the occupational health service.
- Risk assessment: Report on and discuss the results of the inspection in the group
- **Action:** Produce a joint action plan with the group
- Control: Follow up on the action plan that has been produced



The health policy is continually revised to live up to the standard required for a sustainable workplace. The policy looks at our work on systematic work environment management and identifying ill health at an early stage. During the financial year, a great many activities have focused on mapping developments, producing action plans and developing working methods, as well as forums to reduce the risk of different types of ill health and exposure. We work preventively with our physical and mental health.

#### BY 2026/27, WE AIM TO HAVE AN ATTENDANCE LEVEL OF AT LEAST 96%

2022/23	94.6%		
2021/22	94.6%		
2020/21	95.0%		
2019/20	95.2%		
2018/19	95.5%		

## Improvement Awards

Every year we nominate our best improvements for the High Performance Metals improvement awards. This year we put forward the following improvement measures from Uddeholm:

- Gantry in the cutting shed, which has reduced work in progress.
- Conversions of Orvar Superior to Uddeholm Orvar Supreme, reducing storage costs.
- 'Shark fin' in MB2, to separate rods without using the hands.
- Climate Week production of climate neutral tool steel, to prove to our customers and ourselves that we could make the impossible possible.
- More efficient shaft handling in the production of ESR electrodes, with shorter lead times, fewer shipments and fewer shafts in storage as a result.
- Security of supply in Sweden, focusing on methods, frequency and problem-solving.
- Quality and 100% Steuler, resulting in improved output and higher quality.

Being nominated is a great thing because the competition from our sister companies within the division was particularly challenging this year. Our congratulations and thanks go to all of those nominated for their work, commitment and desire to improve.

There is only one thing better than being nominated and that is winning. We say congratulations to Uddeholm, and we can say it twice. This year we won the award for best improvement within Health and Safety (shark fin in MB2) and in the Environment category (Climate Week).



## Safety within Uddeholm

At Uddeholm, safety and respect for our employees and the environment – as well as for our customers, visitors and the general public – are our top priorities. We maintain a high level of safety preparedness and ensure that our operations comply with applicable laws and regulations. All personnel within Uddeholm and our contractors receive regular training on potential risks and their responsibilities as regards health, safety and the environment in day-to-day work. Exercises to test the company's emergency and contingency plans are conducted regularly within the company and with the participation of the emergency services.

Despite our best efforts at prevention, near-accidents, incidents and accidents can still occur. It is in these situations that our knowledge, planning and training comes to the fore, enabling us to prevent the development of a more serious event.

#### FOCUSED FEFORTS FOR A SAFETY CUI TURE BASED ON OUR EVALUATIONS.

Safety culture includes training to raise employees' awareness and forward-thinking with regard to the risks that exist in our business. The aim is for people to take responsibility for themselves by following rules and procedures, but particularly by helping each other and reporting risks and risky behaviour in the company to avert accidents and ill health.

Plans for improving safety in our workplace within production and maintenance are produced together with the employees, based on a questionnaire filled in by the staff and things that have emerged from the training.

Work on developing the safety culture started in 2021/22, and training courses were launched in 2022/23. In all, 365 people have been trained in groups of 5-12, to provide for personal contact and open discussion.

In 2022/23, Uddeholm invested in a further seven defibrillators – there are now 15 on the site. Training in first aid and CPR (cardiopulmonary resuscitation) is offered to anyone interested, but at least two people in each shift team/unit/office building must be trained. The first aid training covers accidents and sudden illness as well as psychological care. The CPR training that we offer covers cardiopulmonary resuscitation and the use of a defibrillator in cases of cardiac arrest. Both courses take four hours and have to be repeated every three years.

## Safety at work

Our operation that is conducted in such a way that nobody gets hurt at work and where we care about each other's safety.

#### THE LTIFR WILL BE NO MORE THAN 3 BY 2026/27

Our goal is to achieve zero accidents and no ill health. We will take a preventive approach to work on our safety culture, thereby ensuring that everyone looks out for one another and the company. All employees must understand their value, as well as take responsibility for their own safety and that of others.

#### FEWER ACCIDENTS DURING 2022/23

The proactive work on reporting of risk observations and the implementation of safety talks has continued to develop with a positive trend. Courses in safety culture provide us with a new awareness which we also believe is a major factor in reducing the number of accidents.

2022/23	4.1			
2021/22	7.3			
2020/21	5.0			
2019/20	6.0			
2018/19	10.2			

LTIFR stands for Lost-Time Injury Frequency Rate, i.e. the number of accidents resulting in an absence per 1 million working hours. E.g. an LTIFR of 5 indicates that 5 accidents occur at a workplace for every 1 million hours worked. The purpose of a defined KPI is to ensure that reporting of accident statistics is comparable between companies, industries and internationally. The objective of a defined KPI is a common definition of the occupational injury concept within the basic industry. In order for an accident to be classed as an LTI, it has to result in a minimum of one day's absence and require medical assessment.

Here at Uddeholm, we are constantly working to be at the forefront with up-to-date and safe working methods. Employees can look at operator sheets and instructions, which describe how a work task should be performed optimally, what protective equipment should be used as well as what risks are involved in various stages of the work. We are working in the heavy steel industry, so safety is extremely important. Safety always comes first.

# High level of safety and preparedness

Uddeholm handles a variety of chemical products in connection with steel production, which places tough demands on safety. To minimise the risk of an accident, and to limit any possible effects, a high level of safety must be maintained in all processes. Should an accident occur in spite of these efforts, the chemical products that would affect the local community around the industrial area are ammonia, LPG, chlorine dioxide and natural gas.

Our sites are protected with gas alarms and fire alarms. These ensure rapid detection and a quick response in the event of a near-accident or accident at one of the factory premises. Our internal emergency and contingency plans are then put into action immediately, with the emergency services being alerted at the same time. In addition to having our own well-trained personnel and effective preventive maintenance procedures, Uddeholm has a close and effective working relationship with the emergency services in Hagfors. Uddeholm has, in cooperation with the emergency services, produced information on action to be taken by the general public in the event of an alarm. This is sent out to local households and is also published on the emergency services' page on Hagfors Municipality's website: Emergency services - Hagfors Municipality.

In 2022/23 Uddeholm installed backup power on the vehicle gates so emergency vehicles can always get in, even in a power cut. An important preventive measure.

#### WELL-PREPARED

In the event of a minor accident, the first course of action is to alert the emergency services in Hagfors. If additional resources are required, the emergency services in Ekshärad and/or Munkfors are also alerted. In the event of a chemical spill, chemical emergency responders from the Karlstad region would also be alerted and would attend the scene. In order for this process to function as smoothly as possible, the emergency services in Hagfors carry out regular planning and joint exercises.

#### 70% OF THE PART-TIME FIRE-FIGHTERS IN HAGFORS WORK AT UDDEHOLM

A total of 20 part-time fire-fighters are attached to Hagfors fire station. Of these, 14 work at Uddeholm, which we see as a big advantage. They view our operations with extra sharp eyes and are an excellent resource if an incident should occur.

# UDDEHOLM DEVELOPED AN APP TO SIMPLIFY COMMUNICATION IN THE EVENT OF CRISIS MANAGEMENT

Things that shouldn't happen still happen. This might involve near-accidents, fires or major environment incidents. In this case, it is important to get information out quickly to affected parties and to those who need support. Phone trees worked in the past, but the safety organisation wanted more. This resulted in the Uddeholm Safety app. Using this function, all affected parties are reached directly in the event of an incident, depending on the department and the incident that has occurred. Images can be included and questions can be asked, which ensures the streamlining of initiatives and that rapid, accurate information reaches those who need to be involved.





#### COLLABORATION WITH THE EMERGENCY SERVICES PROVIDES US WITH SECURITY

One of our most important collaborations linked to production in Hagfors is our collaboration with the emergency services. Every year, the emergency services practise various scenarios with all the shifts within the Uddeholm production site in Hagfors. The aim is to speed up responses in the event of actual emergencies. We have a major advantage in this regard, due to the proximity of the emergency services and their knowledge of our site. Over the years, the collaboration with the ambulance service has also been enhanced. We have long had specially assigned ambulance spaces, making it easier for ambulance staff to navigate the 77 hectare site quickly. A collaboration has also been established with the police, both as a natural part of our perimeter protection and to simplify matters if an incident should occur.



# Safe chemicals management

Uddeholm operates a proactive process for inspecting and assessing chemicals. The work is led by an cross functional chemicals group that is tasked with contributing to safe chemicals management and reducing the risk of ill health and environmental impact.

The chemicals group supports the operation with expertise regarding the environment, the working environment and industrial safety. Representatives from Purchasing and the Health & Safety Officers' organisation are also involved in the work of the chemicals group. The overall goal is to actively reduce the use of hazardous chemical substances within the company, by replacing them with less hazardous ones and by ensuring safe handling that minimises the risk of exposure and emissions. These are primarily products that appear on the Candidate List and/or are classified as CMR or PRIO substances.

The risk assessment work progressed in 2022/23. Uddeholm currently has 18 products on the CMR list, a decrease of four from the previous year. There are 19 products on the candidate list, a reduction of five since 2021/22. The number of substitutions in 2022/23 amounts to 23 products.

Finished steel products in massive form are viewed as articles according to the European Regulation (EC) 1907/2006. Steel in powder form is viewed as a chemical product. Uddeholm's goods and products do not contain any of the substances listed in REACH Annex XIV or in the Candidate List (SVHC). Residual products in the form of oxide scale and slag are registered in accordance with REACH. No registration is required for other Uddeholm products, as they only contain substances that have already been registered within the EU and Uddeholm is a downstream user of these substances.

For Uddeholm's powder products, one safety datasheet is prepared per type of powder in accordance with the requirements of the REACH Regulation (EU) no. 1907/2006. For other steel products, a compilation information sheet is drawn up.

**CMR products** = Chemical products that are carcinogenic, mutagenic or toxic to reproduction

**The Candidate List** = Under REACH the most hazardous substances on the market are gradually added to a list called the "Candidate List". This process aims to ensure that their use is correctly controlled and that safer alternatives are found as quickly as possible. Substances on this list are designated "Substances of Very High Concern" (SVHC).

**PRIO substances** = PRIO is a tool that has been developed by the Swedish Chemicals Agency to help companies and other actors to identify and replace hazardous substances in products and handled goods. The criteria for PRIO substances are based on Sweden's environmental quality objective "A Non-Toxic Environment" and the EU's chemicals legislation REACH.

**REACH** = A regulation that contains, among other things, rules on the registration of substances, prohibitions or other restrictions on substances, requirements for authorisation for SVHC, and rules on customer information. The REACH regulation also includes rules to be observed by users of chemical products.

#### SAFETY DATASHEETS FOR UDDEHOLM'S PRODUCTS

Most of Uddeholm's products are classified as goods according to REACH for which no safety datasheets are required. The products that do require safety datasheets must be prepared according to the requirements in the REACH regulation (EU) no. 1907/2006. For those products that do not require safety datasheets according to the REACH regulation, safety information sheets are prepared.

# Risk management at Uddeholm

At Uddeholm we evaluate both financial and non-financial risks. These are further divided into strategic and operational risks. The most significant risks, and the work to minimise these, are reported on an ongoing basis to the owner. We follow a standard for Risk Management that has been approved and adopted Groupwide. As far as operating activities are concerned, risk assessments and incident reporting are considered a natural extension of efforts to improve the work environment, reducing the risk of accidents and ill health. Our employees are our most important resource and incident reporting with corrective measures is therefore paramount. Safety is our most important area of focus within production. This work includes "Environment", in order to minimise the impact on the land, air and water.

#### DISSEMINATION OF INFORMATION WITHIN THE INDUSTRY TO BE ABLE TO LEARN FROM ONE ANOTHER

Incidents are reported through the MIA system, which is the Swedish Association of Industrial Employers' (Industriarbetsgivarna) reporting database for preventive work environment management, including environment and facilities. The MIA system is linked to the Metal industry in relation to deviation management. All risk analyses, risk assessments (where likelihood and consequence have been assessed) and safety inspections are also documented in the MIA system. Here there is scope for sharing information with other companies and educating one another on risks and how they can be minimised.



RISK AREA	RISK	RISK MINIMISATION
Work environment and health and safety	Forklift traffic and materials handling using overhead travelling cranes  Hot surfaces and molten steel	Requirement that ALL operators of forklift trucks or overhead travelling cranes have the necessary training and skills.  Uddeholm's strategy is to ensure that our personnel are kept removed from the source of risk as far as possible through the use of technical solutions. Where this is not possible, we provide personal protective equipment and clear instructions.  Other resources include e.g. training in behaviour based safety, focus reporting and root cause analysis in the event of near-accidents, as well as work in accordance with ISO 45001.
Environment	Inefficient production and raw materials handling  Not having access to energy at a competitive price when the time comes to transition to fossil free production	Work in accordance with ISO 14001 & ISO 50001 certification, improvement work, UPS.  Can already replace natural gas with, e.g. biogas.  A Climate and Energy Roadmap is currently being drafted.
Trademark infringement	Uddeholm's brand is incredibly important to Uddeholm, given our more than 355-year history.	With a clear profile and an efficient reporting system, we are able to tackle any trademark infringement anywhere in the world within 8 hours. With the aid of our trademark infringement process the majority of cases are concluded within 6 weeks. This process involves appointed lawyers predominantly in Singapore, Hong Kong and Sweden.
Corruption and respect Trading rules	Bribery, cartelisation	Code of Conduct training, whistle-blower system.
Human rights	Violations, discrimination, employee segregation  Child labour	Policy to e.g. combat violations, monitoring via health profiles and employee surveys.  Supplier audits (e.g. mines), monitoring of risk suppliers, etc.

# Combating poor metal health

#### ACTIONS 2022/23:

- All managers take a two-day course in mental health. To be able to identify people at risk of poor mental health and helping them to avoid taking time off sick, we need to raise awareness of this issue. We have to learn to see the signals and offer the right help. The training, which is based on material from Karolinska Institute, includes an action plan for first aid to deal with mental illness.
- Roll-out of Uddeholm's production system to reduce waste, including work-related stress focusing on the employee.
- Continued reinforcement of Uddeholm's values of Trust, Respect, Customer Focus and Value Creation.
   Work towards a shared set of values where everyone is treated with respect. We need to talk to each other, not about each other.
- Safety culture establishing a corporate culture where we care about each other.
- Talk for managers from the police to raise awareness of drugs
- The health policy was revised in 2022 and replaced the previous health, rehabilitation, abuse and non discrimination policies.

#### OTHER:

- Exercise, sleep and good eating habits are the foundation of everyone's well-being. Activities and support can be accessed via the wellness benefit which is available to all Uddeholm employees.
- The occupational health service can be approached for counselling. Recurring health profile examinations, in which mental illness is discussed in interviews with all employees.





# UDDEHOLMS FAMILY DAY 2 JULY 2022

In partnership with local associations and with a performance from Kulturskolan (the school of the arts)

Uddeholm employees, Manpower staff and summer workers were invited to join us for a festive Family Day in true Uddeholm spirit.

The Family Day included a stage performance from Kulturskolan, the Gustava Theatre and Greatest Revival, light refreshments and fun activities for young and old, including face painting, a quiz walk, football skills, floorball, disco golf. All in partnership with Kulturskolan and local sports clubs. Steel City Hangouts as well as Blåljus (emergency and ambulance services) were there to show off their vehicles. Some 600 people took part in the event, and the pictures from the day testify to a wonderful and action-packed time with happy children and adults.

#### Parental leave

Sweden offers a generous parental insurance compared to many other parts of the world. All parents are entitled to leave in connection with the birth of a child, amounting to a total of 480 days/child. This applies in the event of the birth of just one child. In the case of twins, for example, parents are entitled to a total of 660 days. It is entirely up to the parents themselves to decide how these days are divided up, with the exception that each parent has to take at least 90 days.

We have looked more closely at the figures for Uddeholm, and can state that 3826 days were taken in 2022/23, divided between 134 employees.

#### Number of days taken

	2019/20	2020/21	2021/22	2022/23
Men	2,104	1,593	2,564	2073
Women	838	1,103	1,534	1753
Total	2,941	2,696	4,098	3826

Uddeholm finds it natural and positive for employees to take parental leave. This provides benefits and opportunities during their absence as others need to step in, which results in better backup and greater flexibility.

#### KRISTIAN RENBERG, HEAD OF HEAT TREATMENT

#### How long have you been on parental leave?

I have been at home for almost three months and I will be back at work in another month.

#### How is the work being handled in your absence?

My colleagues and my boss, and all of the operators, have done a fantastic job and my absence has hardly been noticed. Great to see, although it was quite hard for me to let go in the first couple of weeks. But Helen Welin

gave me her full support and ensured that I really felt it was OK and that things would work out. So a big thank you to Helen, without her it would not have gone this smoothly, I suspect. Thanks also to Ronnie Eliassen, Pär Åkerlund and Torbjörn Simonsson, who took over the reins in my absence. Last but not least, to all of the operators who took their responsibility seriously and kept production going.

#### Do you see any professional advantages in being away?

First and foremost, my leave gave me the chance to spend quality time with my little one, time that will never come back. But it also gave me the chance to take a breather, to take a fresh look at my job and everything around it. I will come back with lots of energy and a broader, more positive view of Uddeholm across the board. I haven't been 'shackled' to my department but have had time to sit and reflect more on the synergies across the company. I feel that Uddeholm has a positive attitude to parental leave. And that my absence has not disrupted anything but has rather resulted in greater flexibility at my level.











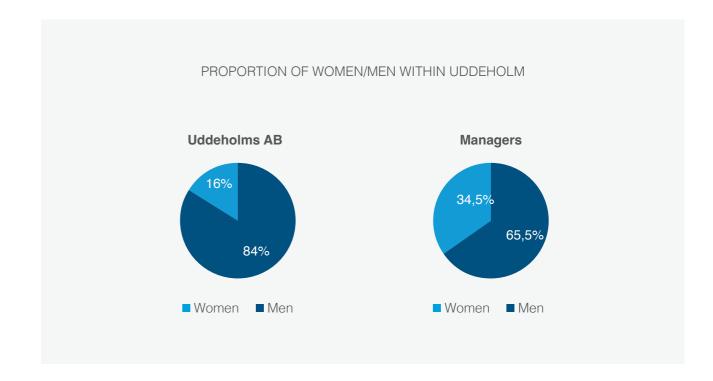
# 200 different professions within Uddeholm in Hagfors

We are shaping a sustainable world with the aid of knowledge, innovation and our skilled employees. There are more than 200 different professions here, and each and every one of them is needed in order for us to be world leaders within advanced tool steel.

Uddeholm can be found all over the world, and our customers range from small businesses to world renowned big brands. However, the heart of our organisation, the production process and our head office, are located in Hagfors, Sweden. We have around 850 employees with a wide range of backgrounds, skills and representing more than 15 different nationalities. Uddeholm is and should be a place for everyone, where our employees feel appreciated, that they are making a difference and that they are contributing to our success. In order to continue supplying Swedish steel of the highest quality to our customers, we need smart, bold and innovative employees who want to do their job a little better every day.

During 2021/22, various changes were made to the recruitment process from a diversity perspective, by removing gender and photographs from the selection process. In this respect, work is also constantly being carried out to reduce the formal requirements in the advertisements in order to encourage more people to apply. The proportion of women in the company is now 16%, an increase of 1% from last year. It was pleasing to see that 32% of the holiday temps were women, also slightly up on the last holiday period.

When we look at the proportion of female managers in the company, this has also risen by over 10% in just one year. From 24% female managers to 34.5% for 2022/23.



#### Recruitment

There are many ways of joining Uddeholm – here are a few examples.

#### **EMPLOYMENT (IN HAGFORS)**

Uddeholm's production operation in Hagfors is our main base. Around 850 people work here. The most common employment form in Sweden is permanent employment. There is also short-term employment for e.g. summer temps. Uddeholm also has an office in Karlstad, where it is possible to work on certain days or to hold meetings.

#### HIRED EMPLOYEES

To create flexibility in our operation, we collaborate with employment agencies who provide consultants when we need to increase our workforce. This collaboration began in the spring of 2020, and has proven to be one of our largest sources of recruitment. The consultants have carried out work in several parts of the business, and as a result we have been able to adapt the number of employees according to need.

#### SUMMER WORKERS

Every year, Uddeholm offers summer jobs to young people, which also constitutes a good recruitment base for continued employment. Uddeholm takes on around 90 summer workers during the maintenance break every year.

#### WORK EXPERIENCE

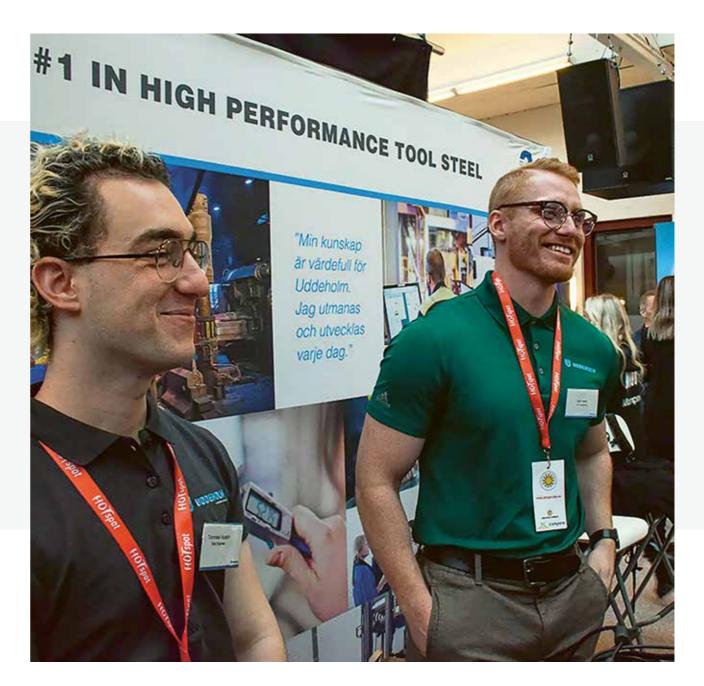
We offer work experience for several different educational levels: upper secondary students/adult education, vocational college students and students from universities/university colleges. When it comes to work experience from the local upper secondary school and vocational college courses in the region, we enjoy close collaboration with these schools and receive work experience students from them on a regular basis. In addition to work experience students from upper secondary school, adult education and vocational colleges, we also take in students from university colleges/universities.

#### TRAINEE

As a result of the trainee positions we offer, we are able to create improved succession. The trainees get a rapid start to their careers as well as secure acclimatisation to the company and their work duties, with the aim being for this to lead to permanent employment. We offer two different programmes, one that is aimed at candidates with upper secondary education and one for candidates with university education.

#### MASTER'S THESES

In order to support education within skills areas that are important to our business, we consider it only natural to take on students who are working on their master's thesis.



Hotspot is a perfect opportunity for students to come into contact with working life and employers. This annual jobs fair is one of the biggest in Sweden with over 100 different exhibitors, and is held at Karlstad University. The fair enables networking between students and employers across the country.

Uddeholm was present at Hotspot, with staff offering competitions, games and discussions. This year's Hotspot had a record number of exhibitors, 137 in all.

Three prizes were later presented in different categories, and one of them was awarded to Uddeholm. We are proud to have received the award for "nicest treatment", citing an impressive welcome and commitment to answering questions, which made the visit enjoyable and memorable for everyone who came to Uddeholm's stand.

## Investment in expertise – preserve and develop

All new employees attend the Uddeholm Instruction programme – a specific training course that has been developed within the company. The programme covers areas such as sustainable production, the working environment and safety, environmental impact and product quality. In future, all hired personnel will attend the programme to safeguard the anticipated levels of production. Training courses such as Forklift, Overhead crane and Skylift are carried out in cooperation with external parties, while Fire and Hot work are run with the aid of internal trainers. The target group for these courses are both employed and hired personnel who are brought into the production process. In order to streamline the process and familiarise target groups with the production more quickly, e-learning has been used for the theory elements of the Forklift and Overhead crane courses. This is followed by a practical operator's test on site.

All managers attend the Uddeholm Leadership Academy, which is a 10-day course staged in Uddeholm Manor focusing on personal development and leadership.

In 2021 we started a training initiative based around skills matrices, and the aim is for every employee to have one of these by 2023.

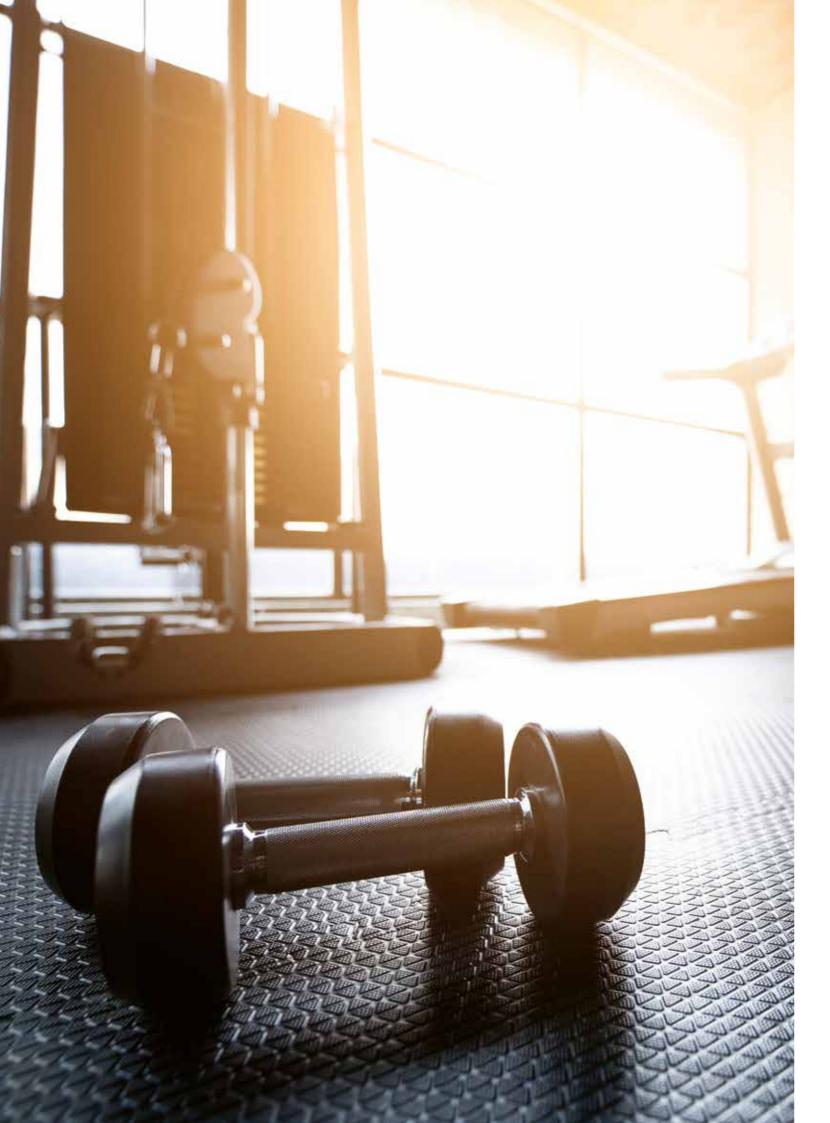
#### CROSS-FUNCTIONAL GROUPS

A natural way of benefiting from various types of skills is to work across different functions. This entails working both vertically and horizontally in the company in order to benefit from different skills. There are several examples of this within Uddeholm. The purpose is to benefit from various skills and experiences, as well as to increase understanding and motivation. This working method naturally helps to develop our organisation.

Examples of cross-functional groups that have long existed in the company include:

- Sustainability
- Climate and Energy
- Residual products
- Water
- Seveso Directive
- Chemicals





# Employee index

Employee index is a key performance indicator that is based on questions to employees regarding motivation and commitment. A measure that shows our commitment within the company.

Surveys in 2019 and 2021 showed a falling index, but this stabilised in 2022. An in-depth analysis was carried out to target actions correctly and there has been great determination within the company to improve the staff satisfaction index.

The response rate to the survey in the autumn of 2022 was 72%, and if we had to highlight one thing from this survey we would choose the increase we see in the perception of a good work/life balance. This has gone up by 5%, and Uddeholm employees report a better balance than Sweden as a whole.

#### **ACTIVITIES DURING 22/23:**

- Trivselpeng (an allowance) introduced for team activities outside working hours.
- Family Day for the whole family.
- Clear guidelines for permission to work from home in roles where this is possible.
- Summer gift with locally-produced goods for all employees, contractors and temps.
- Roll-out of Uddeholm's production system to reduce waste, including work-related stress focusing on the employee.
- Continued reinforcement of Uddeholm's values of Trust, Respect, Customer Focus and Value Creation.
   Work towards a shared set of values where everyone is treated with respect. We need to talk to each other, not about each other. This is an ongoing exercise with the aim of making it a natural part of our working lives which goes hand in hand with training in safety culture.

#### UDDEHOLM'S BENEFIT PACKAGE

Uddeholm has a benefits portal for all employees with offers from wellness providers and others, that can brighten up your day. It also includes a wellness grant to promote health as well as a welfare fund that should be used in the department to raise the level of commitment and strengthen the team spirit.

There is also Träningsvärket, a small gym/fitness centre that is available for all employees to use.

#### The Business

To be a market leader and the preferred choice within high-performance tool steel, you need a strong brand. Our customers have to know that we deliver solutions that guarantee their success no matter where a tool is made or used. This creates added value for customers and strengthens their competitiveness.

We have to conduct business, both procurement and sales, in a way that takes into account the Group's Code of Conduct and ethical and formal requirements, as well as follow up on the material's origin. Two examples of how these policies might look are the Uddeholm Business Policy and Compliance.

# +355 years of customer focus and innovation



The Uddeholm brand has existed for more than 355 successful years, and will be here for at least another 355 sustainable years

# 743 active brand names



Uddeholm has 743 active trademark registrations around the world

# 100% code of conduct



Uddeholm has active procedures for Code of Conduct and Compliance training

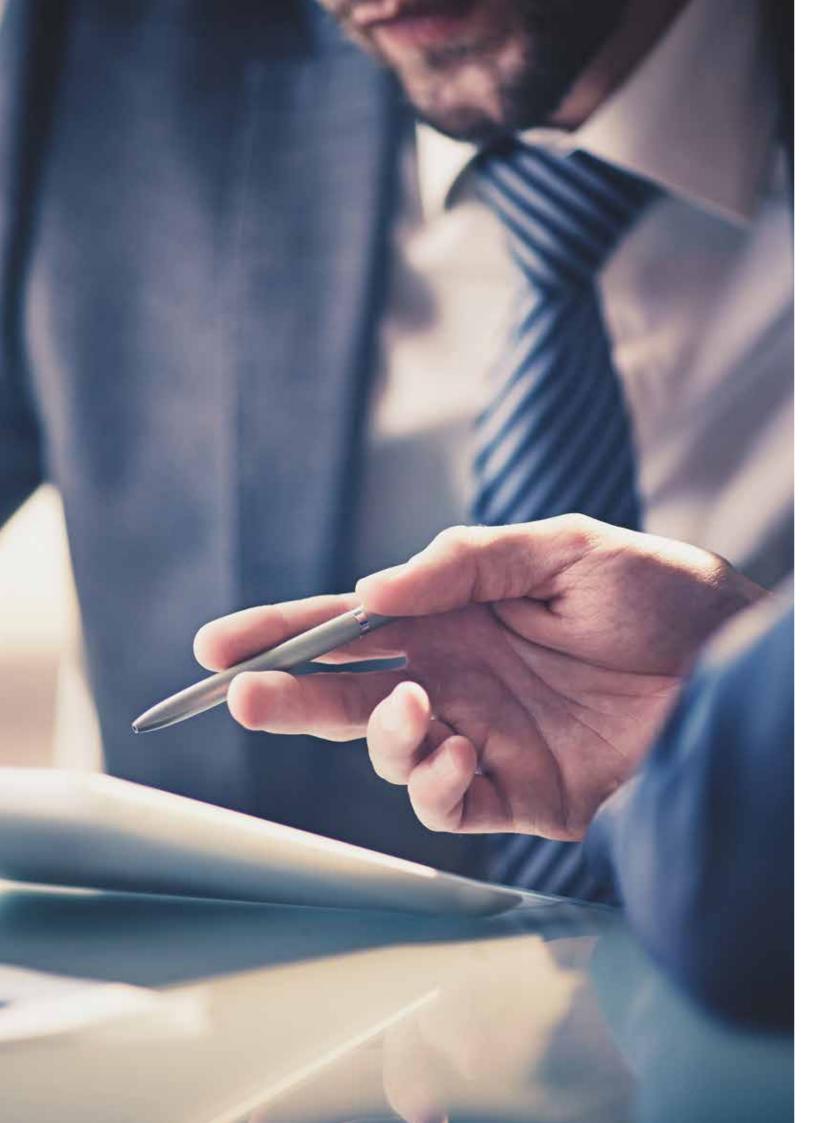
#### **UDDEHOLM BUSINESS POLICY**

Uddeholm develops, produces and markets high-quality tool steel to customers all over the world. By offering sustainable and standard-setting products and solutions for current and future generations, we work to make our customers competitive.

- By continually developing our production process and our product and service programme, we strive to offer the maximum possible customer benefit with the minimum possible environmental and energy impact, both in our own production process and for the user of the product. Our goal is to be the obvious choice for environmentally conscious customers.
- By systematically assessing risks and events and conducting preventive improvement work with the implementation of effective measures, we aim to create a safe environment that is free from disruption and where there is minimal risk of accidents and ill health.
- In a safe and inspiring work environment where the contribution of our competent and conscious employees is a given, proactive improvement measures are a natural part of daily work.
- Trust, Respect, Customer Focus and Value Creation are our guiding principles and the cornerstones on which Uddeholm is built. The continuous implementation of our values ensures that we are a sustainable company, where people have the space to develop and contribute to safeguarding our position as "Number 1 in high-performance tool steel".
- By striving for the best available technology in purchases and investments and engaging in preventive work focusing on quality, energy, the environment and work environments, we ensure a safe work environment, reduce our environmental footprint and streamline our processes within areas where our activities have the greatest impact on the environment: emissions to air and water, noise and energy consumption.
- Compliance with legislation, norms and other requirements that society places on us as a company is a matter of course for us.
- The operations system is an important tool in steering the company towards set goals. Our
  efforts in terms of strategy and targeting specific objectives create the right conditions for increased awareness and engaged employees who help us to achieve our objectives.
- Our vision: SHAPING THE WORLD Manufacturing solutions for generations to come.

#### THE UDDEHOLM BRAND FROM A SUSTAINABILITY PERSPECTIVE

Uddeholm stands for innovation and sustainable production. Our brand has the courage to be constantly at the forefront of developments, including from a sustainability perspective. Uddeholm has 743 active trademark registrations around the world, and it is of the utmost importance for us jointly to create, maintain and work proactively to protect our common trademarks. Our brand is our customers' guarantee of quality and sustainability, both now and for future generations. The Uddeholm brand has been in existence for more than 355 successful years, and will be here for at least another 355 sustainable years.



# Compliance

Uddeholm and its parent group voestalpine have effective procedures related to our Code of Conduct, as well as a whistle-blower system.

There are Group-wide guidelines (in English) for:

- Code of Conduct
- Business Conduct
- Antitrust
- Group Directive related to dealings with business partners
- Compliance manual
- Preventive Compliance manual
- Preventive Compliance Programme
- Capital Market Compliance Directive

#### ALL EMPLOYEES SHOULD BE FAMILIAR WITH THE CONTENTS OF OUR CODE OF CONDUCT

- 05 Introduction and Purpose
  - Scope of Application
- Responsibility for Implementation
- O8 Compliance with Laws and other External and Internal Rules
  - Fair Competition
- 09 Corruption / Bribery / Acceptance of Gifts
- 0 Money Laundering
  - Respect and Integrity
- 11 Conflicts of Interest
- 12 Handling of Corporate Information / Secrecy
- 13 Corporate Communication Internet
- 4 Prohibition of Misuse of Insider Information
- Report of Misconduct

#### Production

A steelworks is among Uddeholm's production operations in Hagfors, where activities include melting alloy substances and our own recycled steel and purchased scrap metal in an electric arc furnace, ladle metallurgy and casting. The Hagfors site is also home to facilities for Electro-Slag-Refining (ESR), production of powder, nitriding of powder, rolling, forging, heat treatment, machining, warehousing and ancillary services.



-50% reduction in fossil CO<sub>2</sub> emissions since 1990



 ${\rm NO_{x}}$  has fallen by 60% in the last 20 years thanks to our improved processes

98-84% recycling



84-98% recycled content in Uddeholm's sustainable products

2030 fossil free



Fossil free production in 2030

#### ENSURING DISRUPTION-FREE PRODUCTION FOR ALL OUR PROCESSES

Disruption-free production is achieved by:

- Ensuring the right capacity and delivering in accordance with the promised capacity.
- Capacity must be mapped for people, machinery and systems in all areas of our processes.
- Future infrastructure needs (data, media and energy) must be mapped, and we must have active action plans with sufficient advance planning to continuously ensure that these needs are met.
- The availability of our main processes/critical process steps must be mapped and continuously increased by working proactively, predictively and sustainably. There must be SLAs (Service Level Agreements) in place for all critical equipment and systems.
- We must ensure a stable supply chain so that there is zero disruption to our critical processes caused by a shortage of purchased goods and services.
- Ensure capable processes for the prescribed quality level.
- Continuously protect the company's resources and opportunities by means of active risk management. This is done by systematically cataloguing, analysing and eliminating risks in the company's activities, thereby enabling the company to achieve its objectives.

Reducing waste is an important part of Uddeholm's strategy for a sustainable environment. Not just for the positive impact on the environment but also because it supports our goal of maximising customer value throughout the supply chain. With the aid of sustainability initiatives such as net dimensions to reduce weight, low discard rates late in the supply chain and reduced packaging, we can further reduce carbon dioxide emissions, operating capital (e.g. storage), oversized production and logistics solutions, and time to market. We are striving to minimise waste in all areas, which leads to higher and more consistent quality, flexible and prompt availability and security of supply, supporting our aim to strengthen our end-customers' competitiveness.

#### THE PRODUCTION SYSTEM

The production system is the hub when it comes to creating a sustainable operation in which we streamline our processes through a systematic and structured working method, where we identify deviations and opportunities with the aim of eliminating waste. In order to achieve this, we have to train and implement all 8 UPS modules throughout the organisation. We create an understanding of and realise:

- The flow principles Driven by customer needs and Right from me
- The improvement principles Normal situation and Improvements in our operational control, management and development

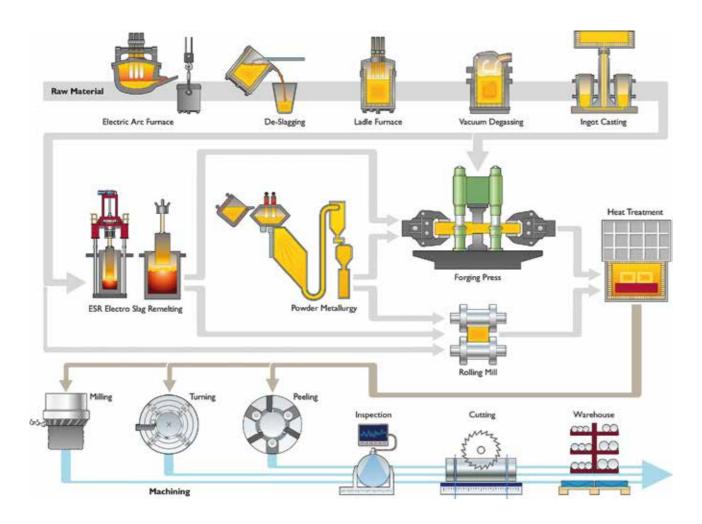
# Steel production in Sweden

Two different methods for producing steel are used in Sweden. These processes differ depending on which raw material is being used – pig iron made from iron ore, or the recycling of scrap.

#### UDDEHOLM'S PRODUCTION IS BASED ON RECYCLING OF SCRAP METAL

In the case of scrap-based manufacture, scrap that has been discarded in an earlier stage is reused. Electric arc furnaces, which require electric energy, are primarily used to melt the steel scrap. When using scrap as the raw material, the specific energy consumption, i.e. calculated in kWh per tonne of produced steel, is only one fifth of that required for ore-based steel manufacture.

A steelworks is among Uddeholm's production operations in Hagfors, where activities include melting alloy substances and our own recycled steel and purchased scrap metal in an electric arc furnace, ladle metal-lurgy and casting. Uddeholm is also home to facilities for Electro Slag Remelting (ESR), production of AM powder, nitriding of powder, forging, rolling, heat treatment, machining, warehousing and ancillary services.





## The Product

In order to make our customers more competitive, we need to be a product leader within high-performance tool steel and to understand the development of the manufacturing industry. In addition, it is necessary for us to be innovative and to demonstrate a high degree of entrepreneurship. We consistently offer greater value than our competitors, and we are perceived as a complete partner possessing considerable understanding, knowledge and expertise as regards our customers' business areas. We focus on selected application areas that are relevant on the global market.

# WORLD LEADING RESEARCH



Our products are world-leading within high-performance tool steel

# 317 GLOBAL PATENTS



Uddeholm has 317 global patents

# KNOWLEDGE AND EXPERTISE



We are a complete partner possessing considerable understanding, knowledge and expertise as regards our customers' business areas.

# 100% SUSTAINABLE PRODUCTS



Uddeholm's steel is sustainable and satisfies human and financial needs without destroying or wasting natural resources.























# Environmental, Economic and Social Sustainability at Uddeholm

The concept of sustainable development aims to "meet the needs of the present without compromising the ability of future generations to meet their own needs", which has its origins in the Brundtland Report from 1987 entitled 'Our Common Future'.

There are three pillars (economic, social and environmental) to sustainable development that are mutually dependent on one another and which must be in balance if sustainable development is to be achieved.

**Environmental sustainability** is about protecting the environment and natural systems that have to be protected, maintained and not overexploited in the long term. In other words, it's about resource conservation and providing for future generations. Environmental sustainability also encompasses anything related to the planet's ecosystems. By this, we mean factors such as water, air, land, ecosystem services and biodiversity.

**Economic sustainability** has two definitions. The first of these is economic sustainability that does not give rise to a negative impact on social and environmental sustainability. The second is economic sustainability with growth, which is considered sustainable as long as the total amount of capital increases. Increased economy may therefore be permitted at the expense of a reduction in other assets, such as natural resources and ecosystem services.

**Social sustainability** has to do with well-being, fairness, empowerment, rights and the needs of the individual. Some of these can be quantified, while others are more qualitative. When combined, they cover the complete social dimension of sustainability.

#### WHO IS OUR SUSTAINABILITY REPORT AIMED AT?

The following groups are deemed to be the key stakeholder groups:

- Customers Existing and potential
- Employees Existing and potential
- Sales companies
- Owners
- Suppliers and contractors
- Neighbours and communities
- Authorities & organisations
- Future generations We will ensure sustainable production with a continued presence in Hagfors in a way that promotes the environment and society

A stakeholder analysis is produced as an element of operational governance. This describes our engagement with various stakeholders and identifies our key stakeholders. Information and dialogues are to be revised accordingly, depending on the stakeholder. Regardless of the stakeholder, we want to ensure open dialogue across the board, with focus areas in accordance with our strategy that stem from a commitment to sustainability formulated in our strategy.

# The UN's Sustainable Development Goals

Observing the UN's Sustainable Development Goals is reflected in Uddeholm's strategy and activities.

The United Nations is a unique organisation made up of independent states that have joined forces to work for peace as well as economic and social progress. It is unique because no other organisation can be said to represent all the countries of the world in the way the UN does. The organisation was founded on 24 October 1945, when the statute entered into force. The UN initially had 51 member states, but this figure has now increased to 193.

The UN has adopted the Sustainable Development Goals, and these represent the most ambitious agenda for sustainable growth that the countries of the world have ever undertaken. The aim is to achieve these goals by 2030:

- To eradicate extreme poverty
- To reduce inequality and injustice in the world
- To promote peace and justice
- To solve the climate crisis

Through the global Sustainable Development Goals, including all three dimensions, this ambition can become a reality.





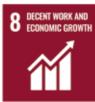






























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#### WHICH GOALS ARE MOST IMPORTANT TO UDDEHOLM?

Through a materiality analysis, Uddeholm has whittled down the Sustainable Development Goals to those that are most important to our operations. This is a necessary process in order to adopt the right direction in our strategy with the right activities. The six target areas we have chosen to focus on will be the core of our strategy and sustainability work. These are:

- No 13 Limit climate change and work to end fossil dependence. This is the UN goal that is most challenging for us, but also the one where we, as a Swedish company, have a head-start thanks in part to our fossil free electricity supply.
- Nos 9 and 12 Sustainable industry, innovations and responsible consumption and production. Two goals that identify the circular industry we are included in, incorporating a sustainable business strategy.
- Nos 3, 8 and 10 Health, well-being, working conditions, economic growth and reduced inequalities.
   Three fundamental goals that focus on people

#### HOW DO WE INTERPRET THESE GOALS?

#### **Goal 13 Climate Action**

Uddeholm's most important environmental challenge – to strive, as an energy-intensive business, to end
fossil dependence, achieve climate neutrality and find competitive energy sources that do not add to the
greenhouse effect.

#### Goal 9 Sustainable industry, innovation and infrastructure

The focus should be sustainable industry that promotes innovation and, in this way, reduces the climate footprint, including supporting customers with solutions for new, sustainable manufacturing methods. We should have a sustainable workplace where work aimed at minimising risks and accidents is always at the top of the agenda. A workplace that has the best employees, who jointly develop and enjoy working in our business.

#### Goal 12 Responsible consumption and production

 Achieving a sustainable society is something that we want to contribute to as a business – we recycle scrap metal and everything we do is part of a circular system of reuse. Today our products comprise 84-98% recycled material! The focus of all our efforts is to do the right thing, thereby minimising our impact, conserving various resources and reducing our emissions.

#### Goal 3 Good health and well-being

Everyone should be able to experience good health and well-being – as a company we must work to
identify and combat ill health among our employees, and we must actively combat all forms of victimisation. We want to have a corporate culture where our employees look after one another and the company.
Our employees are the key to our success.

#### Goal 8 Decent work and economic growth

Sustainable workplace in accordance with statutory working conditions. We must give consideration to
the whole person's well-being – both physical and mental. An objective of zero accidents is a matter of
course for us. We want everyone to be able to return home from work in the same condition as when they
arrived.

#### **Goal 10 Reduced inequalities**

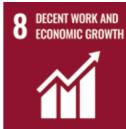
An equal society is based on the principle of all individuals' equal value, rights and opportunities irrespective of, for example, gender, ethnicity, religion, disability, age and other circumstances. Diversity wins.



















VALUE CREATION

Our value values provide the foundation for all our efforts: Trust, Respect, Customer Focus and Value Creation. These must sum up and permeate Uddeholm as an organisation and as a workplace. They must govern how we work, our priorities and the decisions we make.

# The Paris Agreement

The Paris Agreement is a global climate agreement that entered into effect in 2016. The core of the agreement is to limit global warming by reducing greenhouse gas emissions.

The Paris Agreement is linked to the United Nations Framework Convention on Climate Change (UNFCCC), a global convention on measures to prevent climate change. The agreement was decided in connection with the climate conference (COP21) in Paris in December 2015, hence the name. The agreement formally entered into effect in November 2016. All countries that formally adopted the Paris Agreement are bound by it under international law. The agreement is based on shared responsibility and trust in that all countries do everything in their best ability to meet the agreement's goals. Through the Paris Agreement, the countries have, among other things, committed themselves to:

- Keeping the increase in global average temperatures well below 2 degrees, with a view to not exceeding 1.5 degrees.
- Increasing adaptability to the harmful effects of climate change.
- Adjusting financial flows so that they can be combined with reduced greenhouse gas emissions.
- The agreement will also be implemented so that rich countries that have already emitted a lot of greenhouse gases will take the lead and make the transition faster than the global average.

#### The Green Deal - What is the EU's Green Deal?

The Green Deal is a roadmap for a sustainable economy in the EU. Climate change and environmental degradation are a threat to the continued existence of Europe and the world. The EU is therefore developing a new growth strategy to transform into a modern, resource-efficient and competitive economy.

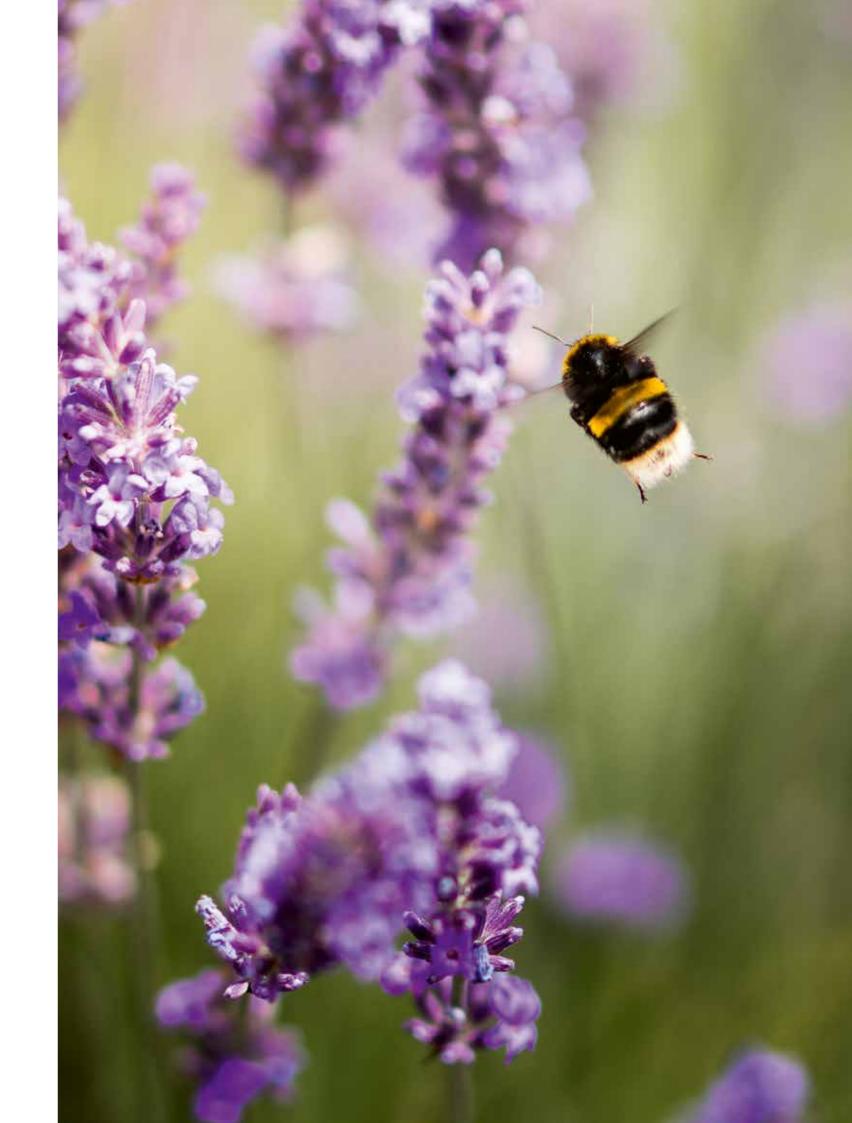
Taxonomy is a tool for identifying environmentally sustainable investments and is being introduced as part of the EU's new growth strategy. Taxonomy reporting includes the share of sales/capex/opex that derives from environmentally sustainable economic activities. Key figures regarding taxonomy can be read in the Group-wide report.

- 1. Limiting climate change
- 2. Adapting to climate change
- 3. Sustainable use and protection of water and marine resources
- 4. Transition to a circular economy
- 5. Pollution prevention and control
- 6. Protection and restoration of biodiversity and ecosystems

# Climate goals, Sweden

By 2050, the EU must achieve a balance between emissions and uptake and thus reach net zero emissions of greenhouse gases. By 2045 at the latest, Sweden will not have any net emissions of greenhouse gases into the atmosphere to subsequently go on to achieve negative emissions. The goal means that emissions of greenhouse gases from Swedish territory must be at least 85 percent lower in 2045 than emissions in the base year 1990.

The remaining emissions down to zero can be achieved through so-called additional measures. In order to achieve the goal, the capture and storage of carbon dioxide of fossil origin may also be counted as a measure where reasonable alternatives are lacking.



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# Manufacturing solutions for generations to come

# **SHAPING THE WORLD®**

We are shaping the world together with the global manufacturing industry. Uddeholm manufactures steel that shapes products used in our every day life. We do it sustainably, fair to people and the environment. Enabling us to continue shaping the world – today and for generations to come.

