

Arvedi - Acciai Speciali Terni SpA

COMPANY CERTIFICATIONS		
SAFETY	QUALITY	ENVIRONMENTAL MANAGEMENT
BS OHSAS 18001:2007 for the site as a whole	<ul style="list-style-type: none"> UNI EN ISO 9001:2015 for all production categories ASME NCA-3800 section III (forged products) IATF 16949:2016 for soldered stainless steel tubes PED 2014/68/EU for pressure equipment 	ISO 14001:2015 for the site as a whole

ENERGY SAVING INITIATIVES	
Energy Management System ISO 50001	<p>Energy Policy: For the achievement of its energy/environmental goals, the firm's energy policies are structured around the following points:</p> <ol style="list-style-type: none"> 1. Accordance with legal requirements. 2. The Risk Based Thinking Principle as a tool with which to identify potential environmental risks, co-ordinate prevention measures and pursue goals. 3. Environmental safeguards, climate protection and pollution prevention via assessment and monitoring of all environmental aspects and their impact as well as by recording and periodic analysis of environmental performance monitoring data. 4. Sustainable development via which manufacturing and new product design is planned and managed from a lifecycle perspective. 5. Human resource skills and awareness to ensure effective environmental management system planning and implementation. 6. Ongoing improvement to ensure Environmental Management System efficacy and efficiency pursued on the basis of ongoing data collection and analysis. 7. Communication to guarantee transparency and shared awareness of environmental themes. <p>Energy goals and milestones Reducing consumption, increasing self-produced and self-consumed energy, improving environmental impact and sustainability.</p> <p>Organisational structure The firm has identified the following professionals (or groups of professionals) required for appropriate Energy Management System (EMS) implementation: Energy coordinator, Energy team, Head of EMS and Energy manager.</p> <p>Energy performance improvement action Achievement of ISO 50001 certification testifying to energy management in line with international standards (implementation underway).</p>

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Energy consumption reduction initiatives	<ul style="list-style-type: none"> - installation of a heat recovery steam generator; - production process improvements (e.g. oxygen injection into furnaces via latest generation nozzles); - replacement of light systems with LED technologies; - adoption of co-generation systems (on-site combined thermal and electric energy production).
Renewable Energy Sources	Electricity from photovoltaic plants installed at CDF and Tubificio.
Water consumption reduction initiatives	For consumption reduction purposes the firm monitors use on an ongoing basis and uses recovery and/or reuse of water systems where possible.

ENVIRONMENTAL SUSTAINABILITY AND GREENHOUSE GAS REDUCTION INITIATIVES	
Global sustainable development goals	
Global goal formalisation	<p>The values and goals underlying AST's sustainability commitments have been formalised in two different documents/activities:</p> <ul style="list-style-type: none"> - sustainability report or balance sheet published for the year 2018 (to be updated for 2019); - slag recovery project - a recycling solution for the slag deriving from stainless steel production which is industrially sustainable, in line with the most cutting edge environmental standards and coherent with market demands.
Environmental policy document	<p>Our sustainability report was drawn up in accordance with Global Reporting Initiative (GRI) guidelines, a UN-recognised international independent body which is the main sustainability reporting benchmark globally. The report measures the firm's footprint in the three key sustainability fields: social, environmental and economic. Together with this report the firm has drawn up a specific document which sets out its overall environmental commitments and principles. The firm also has its own Environmental Management System certified in accordance with international UNI EN ISO 14001:2015 standards. The company bodies tasked with implementing and enacting the Environmental Management System are its senior management, the head of the Environmental Management System, the Environment, Ecology and Safety body, the quality Guarantee body and managers delegated and sub-delegated with environmental responsibility as well as all production and technical area staff and department heads. The firm's sustainability commitments are pursued by means of a range of initiatives both technical and managerial, designed to ensure:</p> <ul style="list-style-type: none"> - energy efficiency (new steam generation plant which raises the steam quota produced without using fossil fuels to 70% with 30,000 tons/per year of CO2 eliminated; use of diesel for internal movement and transport purposes only; energy production from photovoltaic and hydroelectric plants; internal water recycling including reuse of waste water from the cold area at hot rolling plants, etc.), - increases in the quantity and type of waste recovered, thus reducing the quantity of waste going to landfill sites (primarily via a cutting-edge international-calibre project designed to transform furnace slag and converters into CE marked products for use in road foundations, bituminous matrices and asphalt, etc., reuse of refractory materials in the production cycle, partially replacing lime, etc.); - a progressive increase in recycled material (iron waste) in the furnace, already underway for some years with further significant increases planned.

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Changes determined by sustainability strategies:	<ul style="list-style-type: none"> - On corporate processes - by means of more clearly defined goals and strategies, an environmental responsibility chain, more systematic controls and monitoring via audits, greater awareness at the various corporate levels (<i>implemented</i>). - Adoption of environmentally friendly vehicles for the corporate fleet (<i>implemented</i>). - Remote working systems (teleconferencing, remote working from home, etc.) (<i>implemented</i>). - Promotion of car pooling, use of bicycles and public transport, etc. (<i>implementation underway</i>). - Changes to packaging from an environmental perspective (<i>planned</i>).
Purchases and supplies	
Primary raw materials used	The range of materials includes stainless scrap, carbon scrap (strictly for fusion purposes only), FeLeghe such as chrome, nickel, silicon, titanium, niobium, etc. and scorifiers necessary for the formation and treatment of slag. The raw material is sourced internationally with the exception of the carbon scrap which is an entirely national market.
Environmental criteria in supplier selection	N/A
Promotion of action to get suppliers involved on environmental themes	In purchase contracts environmental sustainability statements are required of suppliers on their products and manufacturing processes.
Adoption of raw material reduction initiatives	The raw materials which can be considered to derive from recycled material (stainless scrap and carbon scrap) account for around 80-85% of the total materials used in the production process as a whole.
Sustainable purchase policy for travel	Where possible the firm prioritises communication systems such as: call or video conferencing, thus limiting staff travel.
Sustainable purchase policy for consumables	N/A
Sustainable purchase policy for food and drink	The company has a canteen (which has recently gone plastic free, having replaced plastic bottles with water dispensers) and a packed lunch service for shift workers. There are food and drink distributors at various office and production area sites and water dispensing machines have recently been installed in various areas of the plant.
Production	
Green services/products	
Product innovations designed to replace dangerous chemical substances	N/A
Adoption of production process environmental certification trajectories	The firm acquired UNI EN ISO 14001:2015 standard environmental certification in 2018.
Presence of a document communicating atmospheric emissions	Yearly atmospheric emission communications to ARPA Umbria.
Participation in environmental innovation research projects	N/A
Waste Management	
Recycling and appropriate waste management improvement initiatives.	In 2018 the firm produced 149,360 tons of waste and an additional 300,000 tons of slag. 95% of this was sent to landfill sites. The remaining 5% was recycled without internal/external distinction. The firm launched its own internal procedures in the Environmental

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	<p>Management System field which set out the roles, duties and responsibilities of the various offices/bodies, designed to improve the whole waste management cycle. Specifically the appropriate waste management theme has been the subject of a great many audits including of third party firms working on site with the relevant non-conformity reports and penalties applying.</p> <p>Specific training has also been organised around this field. The firm has also arranged for staff working in the waste management area to attend specific external training courses on this theme.</p>
<p>Waste processing and waste reduction initiatives</p>	<p>In addition to slag, refractory material reuse, etc. the firm has also committed - pursuant to the current AIA - to progressive increases in the reuse of certain types of waste (CER codes 170302, 17504, 170904) documented annually in its Monitoring and Control Plan (PMC).</p> <p>A series of materials classified as byproducts, working intermediate goods, working residues consisting in furnace and converter slag, fume abatement dusts, hot rolling and slab grinding flakes, etc., are also reused (in the byproduct category) as input materials for reuse processes.</p>
<p>Environmental impact improvement targets</p>	<p>The Environmental Management System hinges on a body of documents (Environmental policy, Environmental Management System Manual, Environmental Goals, Risk Assessment Document, Environmental Management Procedures, etc.) setting out its general principles, values, targets and management measures from the perspective of ongoing improvement in line with a PDCA approach (Plan-Do-Check-Act).</p>
<p>Innovation and research</p>	
<p>Investment in innovation and research</p>	<p>Around 20% of profits are used for research and development. Together with its own financial resources AST employs its staff on research and development work.</p> <p>Over recent years, this has focused, in particular, on the following goals:</p> <ul style="list-style-type: none"> - developing innovative products or standard products for innovative applications; - implementing innovative process control and ongoing improvement solutions; - implementing innovative process improvement solutions for IoT and Industry 4.0 purposes; - eco-innovation for environmental sustainability and energy efficiency. <p>As far as process innovations for environmental sustainability purposes are concerned, refractory product categories have been studied to improve performance and optimise fusion process consumption. Further classifications have been done on muds to identify innovative management procedures.</p>
<p>Direct atmospheric emissions reduction initiatives</p>	<p>The firm has adopted a great many initiatives designed to reduce atmospheric emissions in accordance with the rigorous conditions required by AIA.</p> <p>On the principal emission points (furnaces and converters) the firm monitors dusts, carbon monoxide and gaseous effluent process parameters on an ongoing basis and transmits the results telematically on a daily basis to Arpa Umbria. The firm also carries out long-term sampling on dioxin and furan electric furnace emissions.</p> <p>A series of measures designed to bring the plant's many emission points into line are underway, both as regards their geometric configuration and where samplability considerations are concerned.</p>

	The firm has also adopted a series of managerial measures formalised into specific procedures designed to contain and limit widespread emissions. The 'slag project' with its planned scaling back of what is known as the 'rampa scorie' cooling process and plant covering and aspiration will generate further significant reductions in dust emissions.
Staff training	
Staff awareness raising and training designed to reduce environmental impact	<p>In the Environmental Management System context great space has been accorded to staff training and awareness raising. Training sessions held at the firm's training centre on various environmental management themes (ISO 14001, SGA, ADR etc.) have been attended by around 200 people over a two-year period.</p> <p>Over 50 training hours have been provided supplemented by training sessions held with smaller groups of people in the departments/production areas concerned and/or EAS body offices. Visual campaigns have also been organised involving the use of visual resources to get across concrete messages regarding the firm's environmental policies on energy and resource (light, water and paper) saving.</p> <p>In 2020, on the other hand, 72 employees participated in 3.6 hours of training.</p>
Client relations	
Marketing policies designed to highlight product sustainability.	<p>For public/client communications, product environmental information is stressed in specific documents and other tools including:</p> <ul style="list-style-type: none"> - the firm's webpage; - the freely downloadable sustainability balance sheet.
Relations with local government and the community	
Working together with the local council on community sustainability projects and initiatives	<p>Community projects have included:</p> <ul style="list-style-type: none"> - a plastic free project in the firm's canteens: from 7 January 2020 the AST, CDF and Tubificio canteens went plastic free; - a cinema with Acciai Speciali Terni project targeting AST staff and their families; - paediatric cinema project in conjunction with the I Pagliacci association; - setting up of an AST 800 063 966 toll free phone line for the environment providing information and clarification to citizens and taking reports;
Participation in competitive tenders requiring environmental criteria	N/A
Access to public incentives for green process/product development	N/A
Membership of business associations and networks	Membership of Confindustria Umbria
Direct joint working with business networks and associations	Ongoing joint working with Confindustria Umbria on the Terni Urban Re-Generation project.
Initiatives and activities in schools	Direct joint working arrangements with local schools have been organised around workplace safety and security.

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