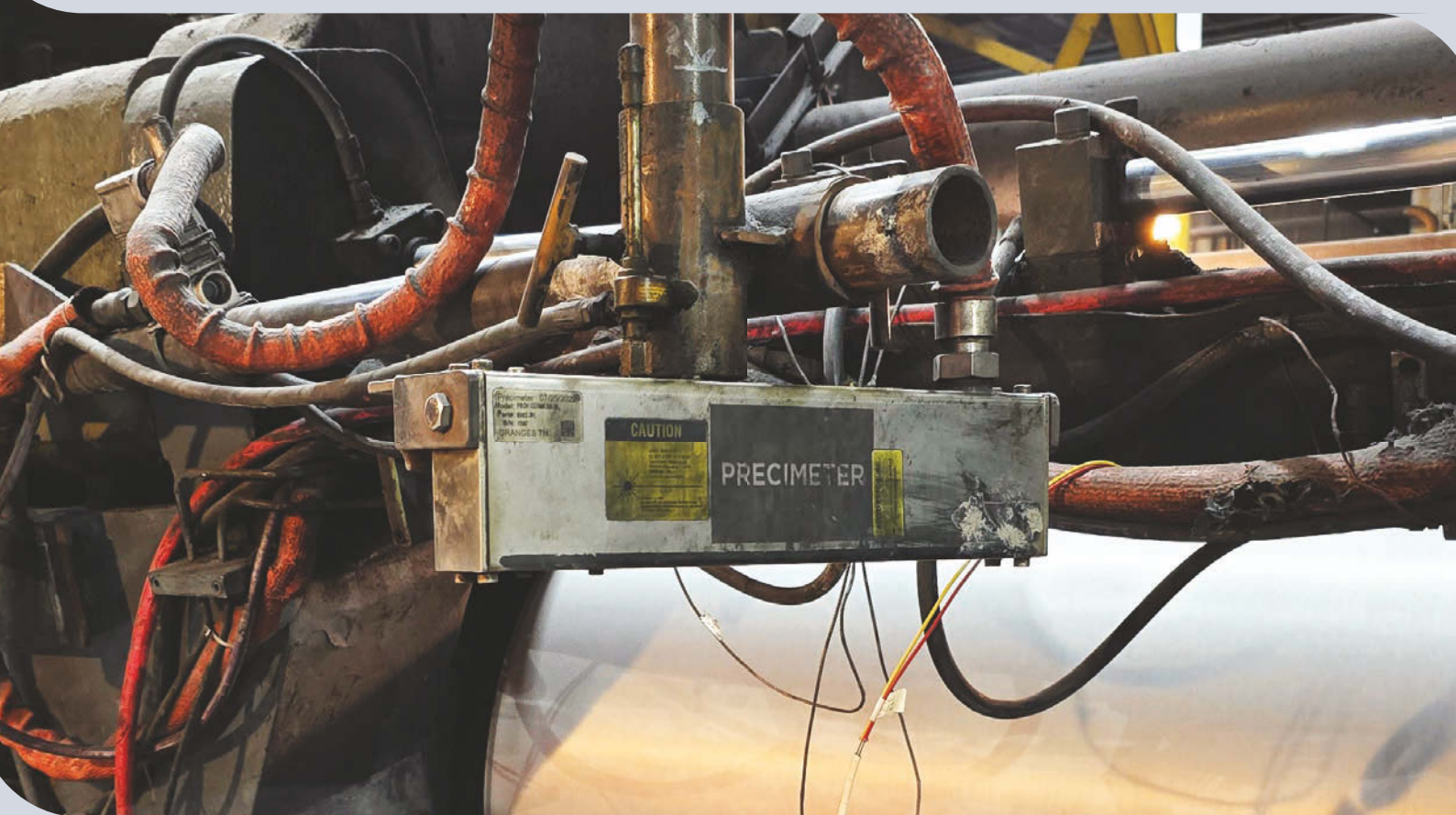


ALUMINIUM INTERNATIONAL TODAY

www.aluminiumtoday.com
March/April 2025 — Vol.38 No.2

THE JOURNAL OF ALUMINIUM PRODUCTION AND PROCESSING

Molten Metal



Level Control

THE DIFFERENCE MATTERS

**GRANCO
CLARK®**

+1-800-918-2600 | www.grancoclark.com | sales@grancoclark.com

ALUMINIUM INTERNATIONAL TODAY

Volume 38 No. 2 – March/April 2025

Editorial

Editor: Zahra Awan
Tel: +44 (0) 1737 855038
zahraawan@quartzltd.com

Group Editor: Greg Morris
gregmorris@quartzltd.com

Production Editor: Annie Baker

Sales

Commercial Sales Director: Nathan Jupp
nathanjupp@quartzltd.com
Tel: +44 (0) 1737 855027

Sales Director: Ken Clark
kenclark@quartzltd.com
Tel: +44 (0) 1737 855117

Advertisement Production

Production Executive: Carol Baird

Managing Director: Tony Crinion
CEO: Steve Diprose

Circulation/subscriptions

Jack Homewood
Tel +44 (0) 1737 855028
Fax +44 (0) 1737 855034
email subscriptions@quartzltd.com
Annual subscription: UK £270, all other countries
£292. For two year subscription: UK £510, all
other countries £527. Airmail prices on request.
Single copies £50
Digital subscription: (6 issues). 1 year: £259.
2 years: £414. 3 years: £544. Single issue: £35

Supporters of Aluminium International Today



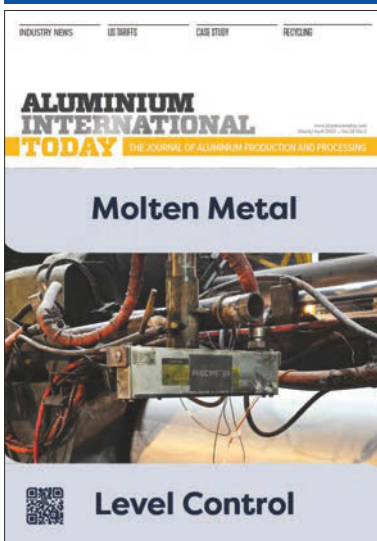
ALUMINIUM INTERNATIONAL TODAY is published six times a year by Quartz Business Media Ltd, Quartz House, 20 Clarendon Road, Redhill, Surrey, RH1 1QX, UK.
Tel: +44 (0) 1737 855000
Fax: +44 (0) 1737 855034
Email: aluminium@quartzltd.com
Aluminium International Today (USO No: 022-344) is published bi-monthly by Quartz Business Ltd and distributed in the US by DSW, 75 Aberdeen Road, Emigsville, PA 17318-0437. Periodicals postage paid at Emigsville, PA. POSTMASTER: send address changes to Aluminium International c/o PO Box 437, Emigsville, PA 17318-0437.



Printed in the UK by: Stephens and George Ltd, Goat Mill Road, Dowlais, Merthyr Tydfil, CF48 3TD.
Tel: +44 (0) 1685 352063.
www.stephensandgeorge.co.uk
© Quartz Business Media Ltd 2024



COVER



Cover picture courtesy of
PRECIMETER



SEARCH FOR
ALUMINIUM INTERNATIONAL TODAY



2 LEADER

2 NEWS

US ALUMINIUM AND TARIFFS

- 7 Trump Tailwinds: Could Alumina be Swept Up in Aluminium's Bull Story?
- 10 Tariffs and the Aluminium Industry
- 13 The Trump Effect: Opportunities for US Aluminium Producers

RUSSIA AND CHINA RELATIONS

- 16 Shifting Dynamics of Primary Aluminium Flows: West to East

KITIMAT CASE STUDY

- 19 Kitimat's Sleeping Operation

AUSTRALIAN ALUMINIUM

- 22 Sustaining Leadership Amid Change

AUTOMOTIVE AND CONSTRUCTION

- 25 Sustainable Solutions in Aluminium

RECYCLING

- 29 Investing in a Sustainable Future
- 33 How Innovation is Fuelling the Green Revolution
- 36 Inspiring Minds for a Sustainable Future

THE ALUMINA CHRONICLES

- 41 Guyana Focuses on Bauxite Growth

ALUMINIUM SCRAP SUPPLY

- 46 The Uncertain Path Ahead

ADVERTORIAL

- 39 RiA Boosts Recycling Innovation at Constellium



Tariff Turmoil

"And very simply, it's, if they charge us, we charge them," - Donald J. Trump, 47th President of the United States.

On the second Sunday of February 2025, Donald J. Trump proposed 25% tariffs on all aluminium and steel imports to the US. At the time that this comment was written, details on these tariffs were not disclosed.

Over the last five years, the aluminium industry has faced numerous challenges: bouncing back after Covid-19, navigating rising energy and raw material costs; adapting to geopolitical conflicts and the resulting sanctions, meeting the increasing environmental and sustainability demands, etc.

The aluminium industry could do with less complications - but are these tariffs totally unexpected?

As Lauren Roberts Fastmarkets notes, "'Tariff' has quickly become the word of the moment". In this issue, experts from Fastmarkets, CRU and DTE comment on the Trump administration and potential impact.

One key takeaway from these tariffs is that countries are striving to protect their own industries and economic growth. So, how has trade changed in response?

Looking East, Saida Litosh from LSEG explores the "Shifting Dynamics of Primary Aluminium Flows", discussing the strengthening trade ties between Russia and China. Meanwhile, Marghanita Johnson, CEO of the Australian Aluminium Council, unpacks the challenges that the Australian aluminium industry face and its ongoing commitment to sustainable production.

The eye of the industry wanders as its focus is drawn to the latest developments; one question remains: can sustainability transcend market fluctuations and trends?

zahraawan@quartzltd.com

Trump Announces 25% Aluminium Tariffs

Donald Trump announced 25% tariffs on all steel and aluminium imports into the US on 10th February 2025 that would affect 'everybody', including its largest trading partners Canada and Mexico.

The US president also said he would announce reciprocal tariffs, raising US tariff rates to match those of trading partners, which would take effect "almost immediately."

The tariffs would come on top of existing metals duties. During his first term, Trump imposed tariffs of 25% on steel and 10% on aluminium but later granted several trading partners duty-free quotas, including Canada, Mexico, and Brazil. Joe Biden extended these quotas to UK, Japan, and the European Union.

As the world awaits updates on



several industry associations have shared their perspectives.

"This is consistent with action his administration wisely took during his first term and we are confident he will take again," said Charles Johnson President and CEO of The Aluminum Association.

"We are disappointed, but we were expecting this and are ready for it," said Jean Simard, President and CEO of Aluminium Association of Canada.

"Ultimately, they will disrupt the efficiency and integration of global markets at a time when stability is most needed," said Paul Voss, Director General, European Aluminium.

"The UK Government appears to be downplaying the impact of these tariffs... This is not just a trade issue, it's an economic and industrial concern," said Nadine Bloxome, CEO of Aluminium Federation (ALFED).

"Its early days and we are still working to understand the impact of any potential tariffs on Australia's aluminium trade," said Marghanita Johnson, CEO of the Australian Aluminium Council.

Canpack Breaks Ground on Greenfield Beverage Can Plant Investment

Canpack Group broke ground on a greenfield beverage can plant investment in Uttar Pradesh, India.

This will be Canpack's third beverage can plant in India, joining beverage can plant locations in Aurangabad and Nuh.

This project involves an investment estimated at \$150M (INR 13 billion) and will be located on 60 acres of land in the newly-established Integrated Manufacturing

Logistics Cluster (IMLC).

Vikram Potdar, CEO India, Regional Director Asia, Middle East and Africa added: "The total beverage can market in India is relatively small compared to other countries but has been growing in double digits due to the preferences of younger generations and innovations in the beverage industry."



Hydro and Rio Tinto Partner for CCS

Hydro and Rio Tinto have joined forces to identify and evaluate available carbon capture technologies for the aluminium electrolysis process.

Together the partners expect to invest approximately \$45 million over five years to support this initiative.

Most of the work is expected to be conducted at Hydro's facilities in Norway and Rio Tinto's facilities in Europe.

Around consumption during the electrolysis process accounts for

approximately three quarters of a smelter's direct CO₂ emissions.

Capturing carbon from aluminium smelter flue gas, with CO₂ concentrations around 1% (vol.), requires adapting direct air capture technologies for higher concentrations or point source technologies for lower concentrations.

In both cases, the current technology requires development efforts to mature from laboratory to commercial scale. The collaboration aims to speed up this development process.

"Carbon capture technologies are critical to decarbonising existing smelters," says Hydro President and CEO Eivind Kallevik.



Alcoa Outlines Plan for San Ciprián Smelter

Alcoa signed a plan to boost the long term future of its San Ciprián aluminium smelter.

Its subsidiary Alcoa Inespal has



formed an agreement with Ignis Equity Holdings, the Spanish government and Galician state government to enhance the long-term viability of the San Ciprián operations in Cervo, Lugo, Spain.

The Memorandum of Understanding between the groups outlines a process for the parties to work cooperatively toward the common objective of improving the long-term outlook for the San Ciprián operations.

The MoU will focus on:

A short-term focus on continued dialogue with San Ciprián's

workers representatives for the stability of the operations through prioritisation of restarting the smelter over capital investments that can be deferred to a later date.

Streamline the authorisation of renewable energy projects and deploy policies to achieve competitive energy costs.

Efforts to provide materially higher CO₂ compensation support.

Support for the residue storage area (RSA) capital projects approval.

Altek Set to Build Aluminium Recycling Facility at Real Alloy

Altek will team with Real Alloy to build a zero-waste aluminium salt slag recycling facility, in partnership with the US Department of Energy's Office of Clean Energy Demonstrations (OCED).

In its zero-waste facility in Wabash, Indiana, USA Real Alloy plans to use Altek's AluSalt salt slag processing technology to recycle metallics and salts, and recover other non-metallic products.

Real Alloy was awarded more than \$3 million (of the total project federal cost share of up to \$67.3 million) to begin Phase 1 activities for the Zero Waste Advanced Aluminium Recycling project, named Project Zaar.

Real Alloy received the award at the end of November from the

OCED.

This project aims to build a processing plant on the backend of an existing aluminium recycling facility to enable salt slag components, which are typically sent to landfills, to be recycled back into



the aluminium recycling process or beneficially used in other industries such as cement.

James Herbert, managing director of Altek said: "Our AluSalt technology is designed to reduce carbon emissions, eliminate landfill associated with salt slag recycling, and generate by-products that can be reused back in Real Alloy's recycling process, as well as within the cement and steel industries."

During Phase 1 of the project, Real Alloy will conduct planning and design and prepare analysis of expected project outcomes, provide documentation and reports necessary for OCED to complete a National Environmental Policy Act (NEPA) review.

Phase 1 is anticipated to last nine months according to an OCED factsheet.

Green Aluminum Smelter Project Secures \$10 million in Phase 1 Funding

The US' first primary aluminium smelter project in 45 years has received \$10 million in government funding.

The Green Aluminum Smelter project, led by Century Aluminum Company, secured the funding from the US Department of Energy's Office of Clean Energy Demonstrations (OCED) this week to begin Phase 1 activities.

The location of the Green Aluminum Smelter project will be determined during Phase 1.

Upon completion, the smelter would double the size of the current US primary aluminium indus-

try while avoiding an estimated 75% of emissions from a traditional smelter due to its energy-efficient design.

The high-purity aluminium produced from the facility is suitable for national defence, electric vehicles, semiconductors, building and construction, and clean energy applications.

During Phase 1, Century Aluminum will determine and announce the site, complete initial engineering studies for various aspects of the project, provide documentation and reports necessary to complete the National Environmental

Policy Act (NEPA) review, and engage community and labour stakeholders.

The project is expected to create 1000 jobs as well as 5000 construction jobs.



NEWS IN BRIEF

Alba and Ma'aden Discontinue Discussions



Aluminium Bahrain (Alba) and Saudi Arabian Mining Company (Ma'aden) have mutually decided to discontinue discussions on a potential combination of Alba with Segments of Ma'aden's Aluminium Strategic Business Unit.

thyssenkrupp and Novelis Sign Multi-Year Agreement



thyssenkrupp Aerospace and Novelis have renewed a strategic partnership through a multi-year agreement. Novelis will supply aerospace-grade aluminium from its facilities in Koblenz, Germany, and Zhenjiang, China, to several thyssenkrupp Aerospace key markets in Europe and Asia.

Rio Tinto Results Updates Expansion Project



Rio Tinto report that the \$1.1 billion AP60 expansion project in Quebec, announced June 2023, remains on schedule. Construction activities during Q4 included commencement of installation of the silo for the gas treatment centre, busbar and the first floor slabs.

Australia Pledges AU\$2 billion to Boost Aluminium Industry



The Australian government has offered AU\$2bn in credits to the country's aluminium industry to increase the transition to eco-friendly production.

Facilities will be eligible for support for every tonne of clean, reliable Australian-made aluminium

they make over a period of 10 years.

Australian Prime Minister Anthony Albanese unveiled the plan at Australia's largest biggest smelter, Tomago Aluminium.

"Labor's plan for a Future Made in Australia is very clear: we want Australia to make more things here," the Prime Minister said in a statement.

He continued: "Investing in the Australian-made aluminium industry is a massive opportunity. We've got the resources, the workers, and the know-how – the only thing we don't have is time to waste."

Tomago Aluminium CEO, Jerome Dozol, said: "We are at the very centre of Australian manufac-

turing, providing nearly 600,000 tonnes of aluminium each year right here in the Hunter region.

"This investment will provide support for onshore aluminium being manufactured at Tomago, and we will begin a new phase through the development of low-carbon aluminium."

Australian Aluminium Council chief executive Marghanita Johnson said the move was 'an important step in support of the industry's transition to the competitive, reliable, lower-carbon energy needed for the aluminium industry to secure a sustainable future'.

Dubai Future Foundation and EGA Partner

The Dubai Future Foundation (DFF) sign a strategic partnership with Emirates Global Aluminium

(EGA) to advance emerging manufacturing technologies through research-driven collaboration.

The partnership seeks to strengthen Dubai's preparedness for emerging sectors and reinforce Dubai and the UAE's status as global hubs for innovation. It also supports the 'Dubai Research and Development Programme'.

Khalfan Belhouli emphasised Dubai's commitment to preparing all sectors for the future, guided by the vision of its leadership. He said: "This partnership with EGA presents exciting opportunities to

advance industrial technologies, transformation, and advanced manufacturing, strengthening Dubai and the UAE's global standing in these vital sectors."

Abdulnasser Bin Kalban, Chief Executive Officer of Emirates Global Aluminium, said: "Four years ago, we set ourselves a bold goal to transform the aluminium industry by pioneering the adoption of Industry 4.0. The World Economic Forum has recognised EGA as a Global Lighthouse for our leadership in the adoption of these technologies."

Global Industrial Collaboration: Free Online Course on Aluminium

The world's first Massive Open Online Course (MOOC) dedicated to aluminium, 'Aluminium Unveiled: A Comprehensive Journey from History to Sustainability', is now available for free on FutureLearn.

This global initiative, led by European Aluminium, brings together leading academics and industry leaders to provide a comprehensive exploration of one of the world's most versatile materials.

Developed by professors from the University of Padova and the Norwegian University of Science and Technology (NTNU), this five-

week course combines academic expertise with real-world insights.

It features engaging content, including exercises, 30 articles, 24 video lectures, and 16 interviews with industry experts, offering participants a thorough understanding of aluminium's history, properties, production processes, and applications across key sectors such as automotive and mobility, building and construction, packaging, and engineering.

"Educating future generations and attracting new talent is essential to unlocking opportunities and driving progress in the aluminium

industry," said Professor Daniel Müller from NTNU.

Professor Franco Bonollo from the University of Padova added: "Aluminium is central to addressing today's most pressing challenges, from renewable energy to resource efficiency. With this course, we aim to empower participants with a deeper understanding of its potential and its role in advancing both industry and sustainability."



2024 DIARY

MARCH

23th- 27th

TMS Annual Meeting & Exhibition

The signature event of The Minerals, Metals & Materials Society (TMS) brings together scientists and engineers from around the world. For more than 150 years, TMS has been part of a tradition of connecting scientists and engineers to share research, collaborate on ideas, and build professional networks.

Held in Las Vegas, USA

www.tms.org/AnnualMeeting

APRIL

9th- 10th

Industrial Decarbonisation Europe 2025

Join senior decision makers from the hard-to-abate sectors to revolutionise clean technology integration, secure green financing, and standardise emissions reporting. Forge cross-sector alliances to pioneer industrial resilience and bolster global competitiveness.

Held in Amsterdam, Netherlands

<https://events.reutersevents.com/energy-transition/industry-europe>

MAY

10th- 12th

International Metal and Metallurgy Exhibition

Attended by more than 30 countries the exhibition welcomes the industry to bridge china and the rest of the world.

Held in Guangzhou, China

www.julang.com.cn/english

13th-15th

CRU World Aluminium Summit

Join the conversations that matter. This unique collaboration between CRU, IAI and ASI brings delegates deep insight into key market and sustainability issues.

Held in London, UK

<https://events.crugroup.com/aluminium/home>

For a full listing visit
www.aluminiumtoday.com/events



TOGETHER
TOWARDS
PERFORMANCE

GLOBAL REACH

INNOVATION, EFFICIENCY, SUPPORT.

Experience our global network of
Advanced Support and Technology Centres.



reelinternational.com

Our Global Support and Technology Centres, are dedicated to the development, support and promotion of efficiency, technology and innovation within the Aluminium industry. Our Technology Centres serve as focal points for research, development and customer service, bringing our support structures closer to our customers worldwide. REEL Aluminium is also committed to green innovation and sustainability which translates into REEL's commitment to contribute towards a net-zero Aluminium industry.



CCR ALUMINIUM & ALUMINIUM ALLOYS ROD LINES

Continuus-Properzi produces CCR lines for Al and Al alloys from 10,000 tpy to 100,000 tpy.

PROPERZI CCW SYSTEM ADVANCED ALLOYS WIRE

*Proven technology for High-Tech
Welding & Mechanical alloys.*

www.properzi.com



Trump Tailwinds: Could Alumina be Swept Up in Aluminium's Bull Story?

By **Laura Roberts***

"Tariff" has quickly become the word of the moment, as the recently inaugurated US President Donald Trump unveiled a series of import tariffs, paused them, then imposed them again with force.

And aluminium has found itself centre stage in this unfolding trade war.

"With President Donald J. Trump adamant on a 25% tariff on aluminium imports into the US, market participants are left scrambling trying to find units before those tariffs come into force," Fastmarkets' analyst Andy Farida said.

The imposition of tariffs supports the US domestic market, with analysts noting it could theoretically drive underlying prices with it.

"Adding 25% to the current [London Metal Exchange] aluminium [three-month] price, and you get to a rough estimate of \$3,313 per tonne," Farida said.

"It is a rather basic assumption but indicates that it is unwise to underestimate the potential bullish price action that could play out over the coming months," he added.

These Trump tailwinds also impact the metal's feedstock, alumina.

Only a small portion of aluminium consumed by the US is actually made in the US. Tariffs could impact the cost of imported alumina into the country and, according to some, have ripple effects across the global market.

"And in how this will translate in alumina is that now refineries can justify asking higher prices from smelters," Farida said.

"There is a symbiotic relationship that as alumina prices edge higher, it translates into higher London Metal Exchange LME prices," he added.

This sentiment was repeated by some market participants.

"In the current [alumina] market, we're seeing how supply is putting pressure on prices. Tariffs won't have a short-term impact, but longer term it could follow the same trend as the LME," one alumina consumer told Fastmarkets.

Tit-for-tat tariffs

Trump has long campaigned on the promise of tariffs.

In 2018, he imposed Section 232 tariffs of 10% on aluminium and 25% on steel. However, some countries were

able to bypass these through quotas and exemptions.

Fast forward to 2025, and Trump has put tariffs back on the table.

Initially, the policy announced on the 1 February implemented 25% tariffs on imports from Canada and Mexico and a 10% tariff on material from China. However, energy resources from Canada were given the 10% rate, which included aluminium.

Following separate agreements with Canada and Mexico, tariffs were postponed for 30 days. China remained affected by the original proposal.

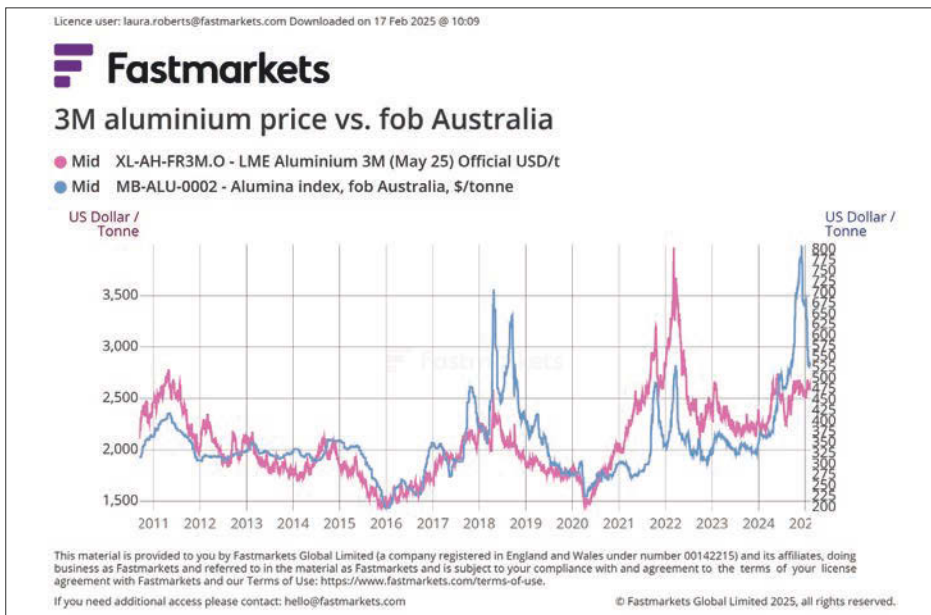
But, on Sunday 9 February, Trump made an ad hoc announcement that 25% tariffs would be applied, with no exceptions, on both steel and aluminium. The president subsequently signed an official proclamation on Monday 10 February.

Impacted countries have pledged to respond accordingly to tariffs in a near universal condemnation of Trump's tactics.

Tariffs directly impact aluminium, indirectly impact alumina

According to Fastmarkets' research, in

* Price reporter, Fastmarkets



2024, the US imported 3.9 million tonnes of unwrought aluminium, 2.7 million coming from Canada and 435,000 tonnes from the United Arab Emirates, while 82,000 tonnes came from Australia. US consumption was estimated at 4.7 million tonnes in 2024, meaning the US relies on imports for 83% of its aluminium needs.

Fastmarkets' assessment of the aluminium P1020A premium, the delivered duty paid (ddp) Midwest US was 28-30 cents per lb on Wednesday 12 February, its highest level since March 2023. The premium has increased by 28.8% from 22-23 cents per lb at the beginning of the year.

In March 2018, during Trump's first term, when he implemented 10% tariffs on aluminium imports, the premium started that month at 14-14.5 cents per lb, increasing 58.9% to a yearly high of 22-23 cents per lb in April 2018.

"Even if [a blanket tariff was] implemented," one trader said, "it should not change the flow of aluminium because it would affect everyone. Instead, it would [probably] raise premiums in the US, with the usual domino effect on other regions."

But for alumina the indirect impact of tariffs is harder to determine.

Higher aluminium prices, higher alumina prices?

Sources told Fastmarkets that higher aluminium prices driven by tariffs could shift the supply/demand balance in the alumina market, arguably resulting in higher prices.

"We need to see who gets exemptions. But overall, [it creates a] strong sentiment for the aluminium industry, and therefore, with [aluminium] prices going up it holds or pulls alumina slightly," a second source said.



"I think [it will be supportive to alumina prices globally]. China stocks are also getting run down; [the Shanghai Futures Exchange] was sold very aggressively, we could see a floor or a small bounce [up] here," the trader added.

Fastmarkets calculated its daily benchmark alumina index, free on board (fob) Australia at \$534.47 per tonne on Wednesday 12 February, down by 50.70% from its all-time high of \$805.83 per tonne on December 4 2024.

"The market has changed drastically. Major tightness from Guinea, which caused prices to spike in 2024 – now production disruptions have reduced particularly through expansion projects in India and Indonesia, there is a global surge in supply," Daria Efanova, head of research at Sudden Financial told Fastmarkets.

"For US domestic smelters, it reduces the cost burden, even if there are slightly higher tariffs... The [alumina] price decline eases pressure on importers," she added.

Meanwhile, Fastmarkets have heard that smelters in the US have considered ramping up production – or even restarting – in response to a more favourable domestic market.

If this is the case, demand for alumina could rise. However, there are significant

logistical challenges, notwithstanding high energy costs.

The US only has one operating alumina refinery, Gramercy in Louisiana operated by Alcoa, with an annual capacity of 1.2 million tonnes.

All other alumina supplied to the handful of US aluminium smelters is imported. The biggest suppliers of overseas feedstock are China, Canada, and Mexico – some of the main targets of Trump's tariff threats.

"The US continues to rely on imports on bauxite and refined material, because its domestic alumina production is limited," Efanova said.

"From that side, I would assume that they will continue to import refined material rather than intermediate products. If tariffs are applied across the value chain, costs will be carried on to the final material," she added.

But with the US producing a minimal amount of primary aluminium, it is the international market that would be vulnerable to fluctuations in fundamentals.

As such, sources told Fastmarkets that the price of alumina could rise to reflect a more volatile environment.

"There won't be any direct impact from tariffs on alumina. But overall, [the] LME is stronger, and regional premiums are stronger. This might have some impact on upstream prices and costs, which adds support to international [alumina] prices," one alumina producer said.

Others were slightly more sceptical, however.

"I don't think there will be any impact on the alumina market. The overall demand for aluminium in the world would not have a big change, thus no impact on alumina. Demand for alumina, or industrial raw materials in general, will increase only when we see improvement in the global economy. But it is not the case yet," a third trader said.

Market uncertainty

For now, the market remains in a wait-and-see mode until further clarity is provided on Trump's policy.

"I also don't see any impact on alumina. Even for the aluminium market, it is better to wait to see how the 25% tariff will be implemented," a fourth trader said.

Analysts also note there is still room for the parties to find common ground, considering the sheer magnitude of imported aluminium consumed by the US.

"The current aluminium capacity is not enough to fulfil their needs; imports will remain crucial. There is a moderate chance for negotiations with Canada and Mexico and room to find common ground," Efanova said.

In an ever-changing regulatory and policy environment, the market waits for the next move from President Trump. ■

The background of the entire advertisement is a photograph of an industrial furnace. The furnace is a large, dark structure with a bright, glowing orange and yellow interior where molten material is being processed. The image is divided into several large, overlapping geometric shapes (triangles and polygons) in shades of blue, white, and black, creating a modern, architectural feel.

Gillespie & Powers, Inc.

enters the 21st century with a rich
legacy spanning over **85 years**,
specializing in the creation, delivery,
and setup of advanced furnace
equipment for both the non-ferrous
and hazardous waste industries.

Integrating Science & Art
*to give you answers found
nowhere else in the industry*

**INDUSTRIAL FURNACES
REFRACTORY
ENGINEERING**



314-423-9460 | 800-325-7075
www.gillespiepowers.com



Tariffs and the Aluminium Industry

By Zaid Aljanabi*

The aluminium industry has a relatively short history when compared to other metals. Nonetheless, this light metal has grown at a fast pace to become the second largest industrial metal consumed and produced by volume. Over the past few years, the global aluminium industry has been undergoing a dramatic transformation entering a new phase marked by an accelerated decarbonisation drive, and more recently, trade tariffs. These expeditious decarbonisation efforts combined with a surge in trade barriers are certain to provide supply chain shocks that will redefine traditional trade flows of the metal. This article will attempt to address these concurrent factors.

The Race to Decarbonise is Underway

Although the aluminium industry has embarked on the path to decarbonisation, there is still a long way to go.

Aluminium emissions across the value chain reflect bauxite mining, alumina refining, aluminium smelting, and downstream processing. The vast bulk of emissions lie within the aluminium smelting part of the value chain, particularly power used in the production process, known as Scope 2, where potroom power emissions represent the lion's share. Indeed, the energy intensity associated with primary aluminium production, coupled with the strong bonds in aluminium oxide (alumina), requires vast amounts of energy to untangle it and convert it into molten aluminium. Alumina requires anywhere between 13 and 16 MWh per tonne of primary aluminium produced to smelt it into primary aluminium.

Scope 2 carbon emissions are a function of the source of power used for this process as well as the power intensity that is a central feature of the aluminium industry. This central feature of the

aluminium industry is also the reason why it is a relatively young industry, as it was the development of modern electrical power generation which allowed for the production of primary aluminium on an industrial scale. **Pic 1.**

Across the upstream value chain, CRU calculates that the industry's average emission intensity in 2024 was 13.13t of CO₂e per tonne of aluminium produced, down from 14.31t of CO₂e in 2018. These emissions linked to the power source have the greatest variation depending on whether the fuel is renewable (predominantly hydro power, but also increasingly wind and solar), or fossil fuel, namely coal and natural gas.

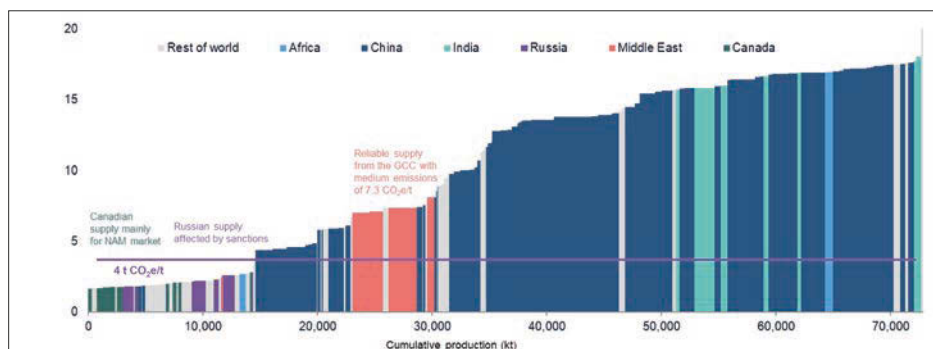
Despite the growth of renewable power for aluminium smelting, the industry's power sources are still dominated by fossil fuels. And decarbonising the power source is critical in lowering the industry's carbon footprint. To achieve significant reduction in the average intensity, the industry will not only need to move as much as feasible to low carbon power but increasingly apply innovative technologies (e.g. inert anode) and embrace continuous increases in the use of recycled metal.

Trade barriers and deglobalisation

Tariffs and trade protectionism are not entirely new concepts to the aluminium industry. However, tariffs have become more prevalent in recent years, initially by countries against China for what was seen as unfair competition. More recently of course, incoming President Trump has brought tariffs to the top of the industry agenda with sweeping tariffs against all imports into the US.

In a succession of executive orders, the Trump administration initially imposed a 25% tariff on all imports from Canada and Mexico, which has been linked, in the administration's reasoning, to negotiations on tackling the flow of illegal migration and fentanyl into the US. This was shortly followed by a one-month reprieve.

However, a few days later it was announced that a tariff of 25% will be imposed on all steel and aluminium coming into the US, again potentially impacting the Canadian aluminium industry more than others. These tariffs could have widespread implications for regional metal premiums, semi-finished aluminium pricing, and trade flows



Pic 1. Aluminium emissions curve (Scope 1, 2 & third-party anode purchases emissions), 2024 t CO₂e/t Al
SOURCE: CRU Aluminum Cost Model, CRU Emissions Analysis Tool (EAT)

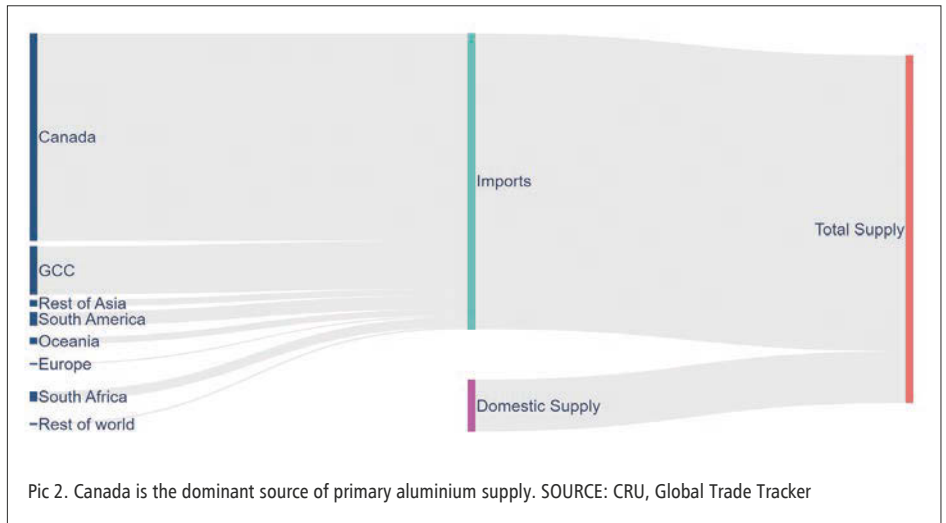
*Principal Analyst, Aluminium, CRU

of both primary metal and rolled and extruded products.

Canada is by far the largest supplier of primary aluminium into the US, with almost 70% of US external metal needs supplied by Canadian smelters, benefiting from low carbon metal powered by the country's vast hydro power sources. On the other hand, Canada relies heavily on the US market, with almost 85% of primary metal produced in Canada going to the US. Needless to say, the future status of tariffs on Canadian aluminium will have a pivotal impact on both sides of the border, for both consumers and producers. **Pic 2.**

The countries of the Gulf Cooperation Council, the GCC, are also major suppliers of primary aluminium to the US, namely the UAE, Bahrain and Qatar. However, the 10% tariff that has already been in place for years has had little impact on metal flows into the country as most of this metal is in the form of value-added products, which caters for critical industries such as the automotive and transportation sectors.

If tariffs were to remain on Canadian metal, this will pose a substantial increase in the US Midwest premium, that would



be passed on to downstream producers who would then pass on the cost to final end-users and ultimately consumers.

We currently expect the premium to increase to around 42 ¢/lb, compared to 24 ¢/lb in early February 2025. To put this in perspective, the total import value aluminium into the US is approximately \$11bn. At the same time, with 25% tariffs being placed on imports of

semis, domestic producers of sheet and extrusions are likely to increase their conversion fees also.

US tariffs on primary metal could reshape trade flows over the coming years, while we will see increased onshoring of the US aluminium downstream industry as tariffs support the domestic industry. ■



- Water Resistant
- Customer / Logo Print
- Customized Roll Dimensions
- No Need To Replace Existing Packaging Wrapping Machine

A better, eco-friendly and cheaper alternative to the plastic film (LDPE) for wrapping and protecting aluminum profiles during their storage and transportation.

- Basis Weight: from 60gr/m² up to 200gr/m²
- Elongation: up to 70%



SER.PA.M S.A.

Neohori, Serres, P.C.: 621 00, Greece

Tel.: +30 23210 76000, Fax: +30 23210 76004

e-mail: exports@serpam.gr, www.serpam.gr



Industrial Crepe Paper For Aluminium Profiles

REPLACE PLASTIC FILM

USE CREPE PAPER

- + SAVE ON PACKAGING COSTS
- + INCREASED PROTECTION
- + ECO FRIENDLY



Now looking for a sales agent or representative. Contact Us!

AUTONOMOUS CHARGING & SKIMMING MACHINES

FOR UNRIVALLED SAFETY
AND PRODUCTIVITY LEVELS



IN-FURNACE DROSS
PROCESSING



AUTONOMOUS
OPERATION



INCREASED
SAFETY



Phone

P +49 341 697 688 70
F +49 341 697 688 99

Address

RIA Cast House Engineering GmbH
04356 Leipzig - Germany

Web

info@ria-che.com
www.ria-che.com



Karl Ágúst Matthíasson

The Trump Effect:

Donald Trump's Return to the White House Offers Opportunities for US Aluminium Producers

By **Karl Ágúst Matthíasson***

Donald Trump's return to the White House presents both risks and opportunities to the US aluminium industry, with a likely continuation of the protectionist instincts and policies he displayed in his first term. Renewed or enhanced tariffs on imported aluminium could raise the price of aluminium for domestic consumers but at the same time, offer an incentive for the US aluminium industry to renew and rebuild itself after a year of decline. Digitisation of the industry, pioneered by innovators such as DTE, can make aluminium production and recycling faster, more efficient, and less energy-consuming, and by incorporating them into its processes, the industry has an opportunity to ensure a healthy future for decades to come.

The Trump Tariffs

In March 2018, Trump imposed substantial import tariffs on foreign steel (25%) and aluminium (10%) ^[1] under Section 232 of the 1962 Trade Expansion Act, ^[2] which, among other things, authorises the President to "adjust the imports of an article and its derivatives" in the event that the imports have a negative effect on US national security. He justified these measures by stating that foreign competitors like China were flooding the market with cheap, often subsidised, products that undercut US producers.

While the Biden administration has eased some of the tariffs, notably striking a truce with the European Union until March 2025 and lifting tariffs on UK products, most of the tariffs remain in place. The tariffs' persistence reflects a broader trend towards protectionism across the US political spectrum in a world where decades of globalisation appear to be in reverse.



Portable device

Bearing this in mind, as well as his promise ^[3] to impose a 25% tariff on goods from key trading partners such as Canada and Mexico to force them to clamp down on illegal drugs and migrant flows into the US, there is no reason to believe that Donald Trump will change his approach. In fact, it is distinctly possible that he will feel emboldened to go further in his second term than he did in his first.

The Price of Protectionism

Most of the inflationary impact of tariffs on imported aluminium is borne by downstream users in the form of higher prices. This has implications for all industries in which aluminium is a key

component and puts additional pressure on US downstream users at a time when many across the economy are being financially squeezed. At the same time, US industries risk facing disruption in supplying foreign customers as countries hit by the US tariffs respond by imposing tariffs of their own on US goods.

A Lifeline for the Aluminium Industry

While Trump's protectionist policies in his first term had winners and losers, a 2021 report ^[4] by the Economic Policy Institute argued that the Section 232 tariffs had given a significant boost to the US aluminium industry. In 2017, the industry was on its knees, with only one

*Co-Founder and Director of Strategy and Growth at DTE

operational alumina refinery and 18 out of 23 smelters having closed since 2010.

This reduced domestic aluminium production not only weakened the US economy but also presented a security risk, as it left the country dangerously short of a critical material for the defence industry in the event of war. The report stated that the US hosted the only NATO smelter in NATO capable of producing high-purity aluminium needed for military and aerospace applications, a vulnerability that left the alliance dangerously dependent on foreign suppliers, including potential adversaries.

The report found that the Section 232 tariffs helped to reverse this decline in the two years following their implementation, up until the COVID-19 shock. US primary aluminium production increased by nearly 400,000 tonnes, or 37.6% in total, thanks to restarts and production increases at existing smelters. Downstream aluminium industries have also benefited with 55 new or expanded projects to produce rolled or extruded products. These initiatives added nearly a million tonnes of annual rolling and extrusion capacity, generating 4500 new jobs and \$6 billion in new investment.

Tariffs Increase US Domestic Competitiveness

The improvement in the US aluminium industry's fortunes between 2018 and 2020 was largely driven by the increased competitiveness of US-produced metal. Previously cheaper foreign imports became more expensive due to tariffs, significantly narrowing the price gap and reducing the appeal of imported aluminium. The remaining cost disparity was partially mitigated by the sustainability advantages and shorter supply chains associated with domestic production.

A continuation of Trump's previous protectionist policies provides US-based aluminium producers and potential investors with confidence in the sustained domestic competitiveness of their products while offering a strong incentive to invest. Additionally, these policies incentivise the scrapping of aluminium within the US as a less costly alternative to exporting scrap overseas.

By enhancing the competitiveness of US

aluminium, Trump's protectionist policies provide a strong incentive for the industry to renew itself. A successful renewal would position the sector for a promising future heading into the second quarter of the 21st century.

The Effect on Europe

A re-imposition of aluminium tariffs after the expiry^[5] of the US-EU truce in March 2025 could negatively impact EU companies exporting finished goods to the US and likely provoke retaliatory tariffs on US products.

Several factors are already conspiring to drive up the cost of aluminium in Europe, including high energy prices and the EU's Carbon Border Adjustment Mechanism (CBAM), which is set to be copied by the UK from 2027. If retaliatory tariffs on US aluminium imports exacerbate the problem, European producers will have even stronger incentives to invest in boosting domestic output. To remain competitive, leveraging recent technological advancements will be crucial to optimising the efficiency and performance of their production processes.

Digital Technology Should be at the Heart of Aluminium Investment

To revitalise the aluminium industry, companies and investors should prioritise the integration of digital technologies into new or upgraded facilities. By augmenting or replacing traditional manufacturing techniques with advanced equipment and next-generation solutions, the industry can achieve greater efficiency, lower costs, improved safety, and unprecedented levels of environmental sustainability.

The incorporation of digital technologies reduces production costs, enabling savings to be passed on to users, which further reduces the price gap between imported and domestically produced aluminium. Innovations that improve recycling rates, reduce melt time, and enable a transition away from fossil fuels meet growing demand from environmentally conscious customers.

Leading innovators are already offering and exploring ways to do just this. Internet of Things (IoT) breakthroughs can already allow producers to monitor their processes in real-time and offer insights on

process improvements moving forward. Equipment for real-time composition analysis, such as the Laser-Induced Breakdown Spectroscopy (LIBS)-based method developed by DTE. On its own, real-time composition analysis eliminates the need to use excess energy keeping the metal molten while time-consuming laboratory testing is performed. But when the thousands of instantaneous composition readings are processed by AI-powered analysis software and displayed on a centralised GUI, a single operator can have a comprehensive overview of the entire process.

With AI-powered predictive warnings about issues that have not yet occurred, the operator can respond proactively rather than reactively to any kind of deviation (such as those that routinely occur when trying to obtain precise grades of aluminium from scrap) and ensure the process runs as smoothly and cost-effectively as possible.

Other innovators are approaching energy efficiency and the associated cost reduction by developing more efficient electric furnaces, while others are creating furnaces that burn hydrogen rather than coal or natural gas.

Finding the Opportunities

Donald Trump's potential return to the White House brings a mix of concerns and opportunities, particularly for the US aluminium industry. His tariff policies, while designed to protect domestic producers, could raise prices for downstream aluminium users by making imported aluminium more expensive.

However, these tariffs also present an opportunity for the US aluminium industry to capitalise on the increased competitiveness of domestic aluminium compared to previously cheaper foreign imports, potentially incentivising greater investment in US production. Advanced digital technologies, such as those developed by DTE, can further enhance this competitiveness by enabling US manufacturers to produce aluminium more cost-effectively than with traditional techniques, offering a pathway to growth and efficiency within a previously declining industry. ■

1) Swanson, A. (2018) Trump to Impose Sweeping Steel and Aluminum Tariffs, The New York Times. Available at: <https://www.nytimes.com/2018/03/01/business/trump-tariffs.html> (Accessed: 18 December 2024).

2) An act to promote the general welfare, foreign policy, and security of the United States through international trade agreements and through adjustment assistance to domestic industry, agriculture, and labor, and for other purposes. (1962).

3) Pitas, C. (2024) Trump vows new Canada, Mexico, China tariffs that threaten global trade, Reuters. Available at: <https://www.reuters.com/world/us/trump-promises-25-tariff-products-mexico-canada-2024-11-25/> (Accessed: 09 January 2025).

4) Hersh, A.S. and Scott, R.E. (2021) Economic Policy Institute. rep. Available at: <https://www.epi.org/publication/aluminum-producing-and-consuming-industries-have-thrived-under-u-s-section-232-import-measures/> (Accessed: 08 January 2025).

5) Josephs, J. (2023) Europe and US extend trade truce over Trump tariffs, BBC News. Available at: <https://www.bbc.co.uk/news/business-67758395> (Accessed: 08 January 2025).

HIGH QUALITY ALUMINIUM RECYCLING EQUIPMENT!

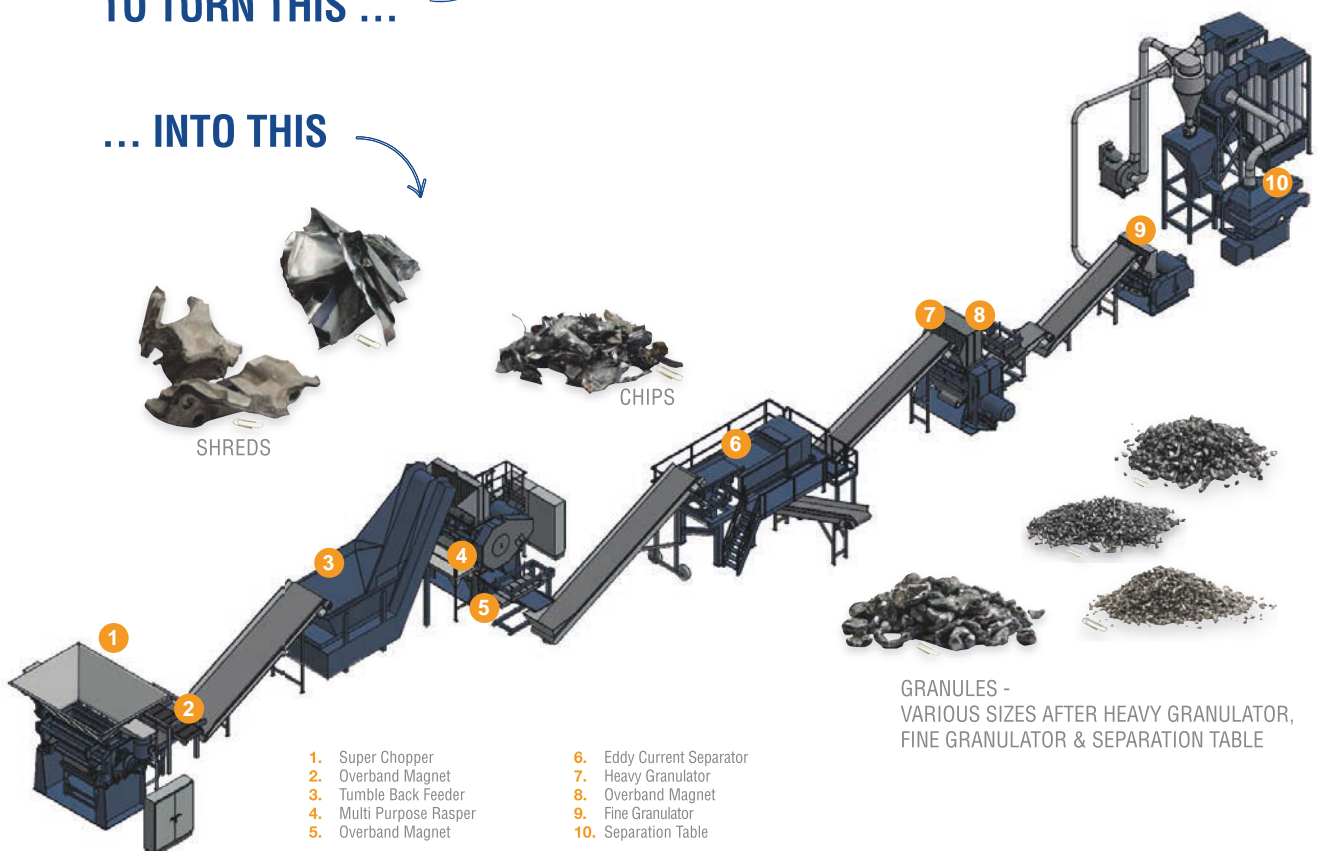


WHEN YOU NEED
TO TURN THIS ...



Scan to read
more about
Aluminium
Recycling!

... INTO THIS



Shifting Dynamics of Primary Aluminium Flows: West to East

By **Saida Litosh***

Sharp Decline in EU Aluminium Imports from Russia in Recent Years

The aluminium industry has undergone significant shifts in global trade flows, particularly the redirection of Russian aluminium from Western to Eastern markets and the strengthening of trade ties between Russia and China.

Once a major supplier to the region, Russia's primary aluminium exports to the EU have dropped sharply in recent years, driven by geopolitical tensions and market self-sanctioning following the invasion of Ukraine.

This shift is evident in the steep decline in Russian aluminium volumes entering the EU. Imports fell by 46% in 2023 and declined further by 54% year-on-year in the first eleven months of 2024.

Amid heightened geopolitical pressures and a strategic push to reduce import dependence, Russia's contribution to the EU's primary aluminium imports has fallen sharply, declining from 28% in 2014 to under 4% last year. To fill the gap left by dwindling Russian supplies, countries such as the UAE and India have emerged as alternative suppliers, reflecting a broader effort by the EU to diversify its sources and reduce reliance on Russian imports. **Fig 1.**

China Emerges as a Key Market for Russian Aluminium

Asia has become a key destination for

Russian aluminium, with China and South Korea together absorbing nearly 74% of the 2024 supply. China's share of global aluminium imports from Russia has grown sharply in recent years, soaring from just 14% in 2021 to over 60% in 2024.

South Korea has also significantly increased its imports of Russian primary aluminium, rising from a mere 1% of global volumes in 2021 to approximately 12% last year. Meanwhile, Turkey, historically a key market for Russian aluminium with a 20% share in 2021, saw its share decline to 11% in 2024. **Fig 2.**

Russia's Dominance in China's Aluminium Imports Faces Rising Competition

China's imports of primary aluminium reached a record 2.1 million tonnes in 2024. While Russia remained the largest supplier, shipping 1.1 million tonnes during the year, its volumes declined by 4% year-on-year, and its market share fell to 53%, down from 76% in 2023.

Meanwhile, Indonesia and India together accounted for 16% of China's total aluminium imports in 2024. Shipments from India continued to climb for the second consecutive year, increasing by over 70% and capturing an 8% share of imports. However, this remains significantly below the country's 2021 peak, when it supplied more than 50% of

China's total aluminium imports.

Imports from Indonesia also surged, more than tripling in 2024. The country now holds an 8% share of China's primary aluminium imports, although absolute volumes remain modest at approximately 170,000 tonnes. **Fig 3.**

Looking ahead, the robust trade relationship between Russia and China is expected to remain strong in 2025. However, uncertainties loom over China's metal appetite, particularly following the removal of the export tax rebate on the country's semi-finished products and the potential for trade disruptions.

Furthermore, other markets are likely to continue solidifying their roles as alternative sources of primary aluminium for China, potentially further diminishing Russia's share in the years to come.

China Becomes a Net Exporter of Alumina in 2024

Russia has emerged as the primary destination for China's alumina exports in recent years. Russian aluminium giant Rusal has increasingly relied on Chinese alumina following the loss of access to its refinery in Ukraine and its joint venture in Australia. To secure a stable supply chain, Rusal also acquired a significant stake in a Chinese alumina producer in October 2023.

Shipments to Russia soared from just

* Metals Research Lead, LSEG

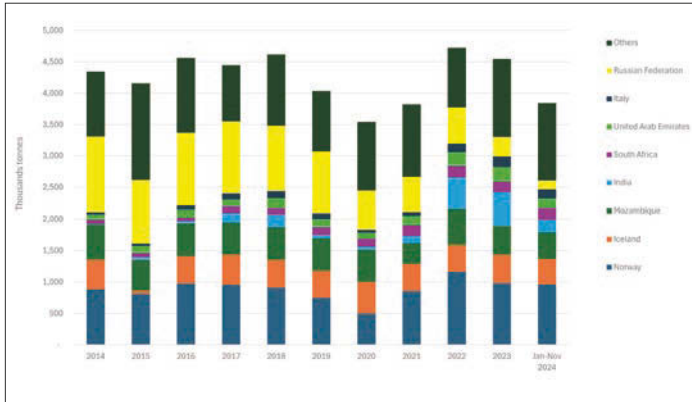


Fig 1. EU Primary Aluminium Imports.

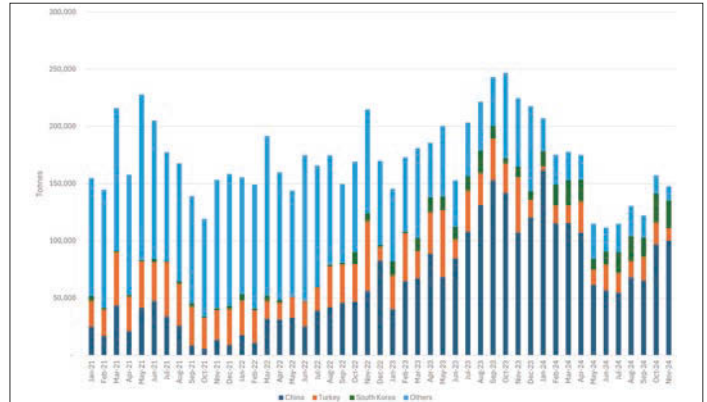


Fig 2. Global Imports of Russian Primary Aluminium.

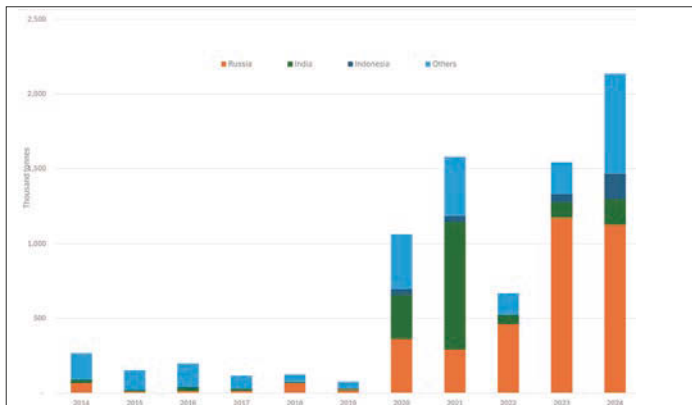


Fig 3. China's Primary Aluminium Imports.

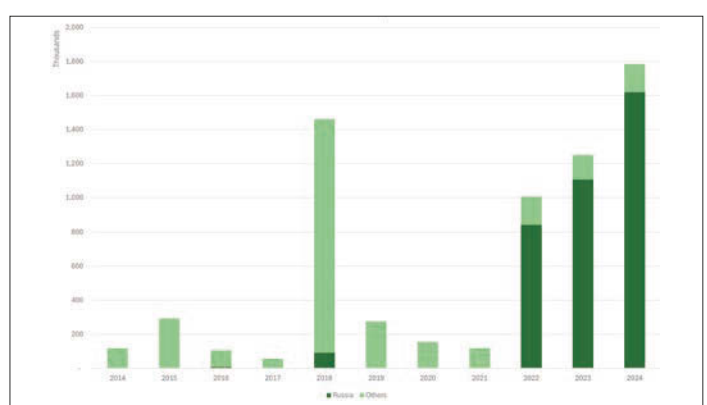


Fig 4. China's Alumina Exports.

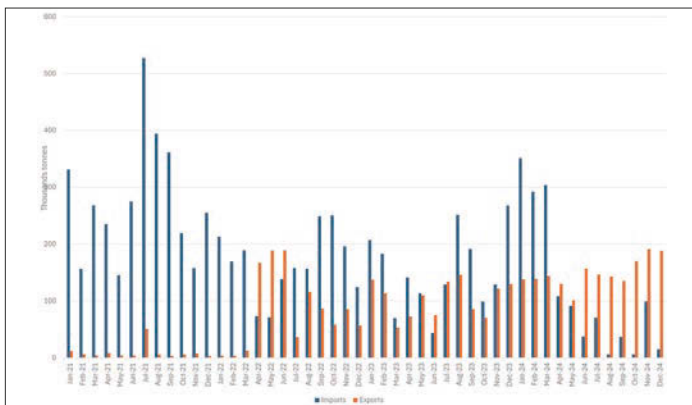


Fig 5. China's Monthly Alumina Exports/Imports.

1,750 tonnes in 2021 to 1.1 million tonnes in 2023, accounting for 88% of China's total alumina exports. In 2024, volumes rose by another 47% year-on-year, reaching a record 1.6 million tonnes and representing 91% of China's total exports.

This surge in trade with Russia propelled China to become a net exporter of alumina in 2024, with net exports totalling nearly 366,000 tonnes. **Fig 4 and Fig 5.** ■

The Original.

THE BRIQUETTE.



RUF
BRIQUETTING SYSTEMS

More information



www.briquetting.com

Reliable briquetting machines from the world market leader

Elevate **EFFICIENCY**,
Embrace **SUSTAINABILITY**
Presezzi Extrusion ZPE heater



EPD[®]
THE INTERNATIONAL EPD[®] SYSTEM



Transforming **Billet Heating** with Pioneering Technology

Discover the future of billet heating with Presezzi Extrusion's ZPE Heater, where groundbreaking efficiency meets uncompromised sustainability. **Engineered for excellence**, the ZPE heater boasts a remarkable **energy efficiency of over 82%**, setting new standards in operational savings and environmental responsibility.

Dramatically **reduce your CO₂ emissions** by more than 50% compared to a traditional aluminium billet heating systems and streamline your processes with our customized heating solutions tailored for different alloys. Experience the advantages of a compact design that simplifies installation without the need for bulky transformers or extensive foundation work. Our innovative Permanent Magnet Billet Heater adapts seamlessly to various billet sizes, eliminating the need for water cooling and reducing maintenance costs.

We drive the extrusion and recycling world
to a more **sustainable future**



PRESEZZI EXTRUSION GROUP
www.presezziextrusiongroup.com

PRESEZZI EXTRUSION S.p.A.
20871 Vimercate (MB) - Via Rovereto, 1/d - ITALY
Tel +39 039 635011 - info@presezziextrusion.com

PRESEZZI EXTRUSION NORTH AMERICA INC.
Bruno Donada - Tel. +1 847 676 2459 - Fax +1 847 676 2459
b.donada@presezziextrusion.com

Kitimat's sleeping operation



This article is a condensed version of the white paper 'A Successful 72-hour Sleeping Mode Operation on AP40 Pots in Kitimat Smelter.' Written by **Jennifer Petten¹**, **Pradeep Varma Kalidindi²**, **Kara Chisholm³**, **Pierre-Luc Voyer⁴** and **Patrice Desrosiers⁵**

Sleeping Pot Methodology

Over the years, Rio Tinto has developed a sleeping mode methodology where the pot is brought just below the voltage needed to produce aluminium (decomposition voltage), but the anodes are not short-circuited in the metal. By sleeping the pots, the bath temperature does not cool down, and the pot stays alive even if no alumina is added to the pot.

Kitimat Potline Event

On November 9, 2022, a 48-pot section at BC Works Rio Tinto suffered a hyper-dense phase system (HDPS) failure, resulting in a sudden loss of alumina supply for the pots. Initially, the maintenance diagnosis assumed no foreseeable recovery within 72 hours.

As a result, the sleeping mode contingency was initiated because the Kitimat AP40 superstructure design can only hold approximately 18 hours of alumina supply. This 18-hour window was used to prepare the 48-pot section and initiate sleeping mode as the pot line was at risk of tripping due to high voltage from anode effects once the pots stopped receiving alumina feed.

Preparation

The first step taken to prepare the affected pots for sleeping mode was to contact other affected areas, such as power operations, to ensure they would have an available workforce to monitor the voltage and amperage and adjust amperage as needed. Additionally, the gas treatment

centre needed to be informed as pots wouldn't be fed with alumina, potentially requiring adjustments to feed rates.

The most crucial step was to ensure that all affected pots (48-pot section) had enough beam movement in both directions. This was achieved through beam raising or metal tapping. It was also important to lower the bath level in the affected pots and increase the bath levels in unaffected pots to minimise anode pin washing, reduce the risk of cover collapse, and ensure enough bath was available when awakening the pots back to normal pot voltage.

Sleeping Mode Initiation

The sleeping mode of the 48-pot section was initiated at hour 16 of no alumina feeding. The first step was to stop aluminium fluoride (AlF_3) addition to the affected pots to help control the bath temperature while the pots were at a lower voltage. A designated technical person in the control room was responsible for this task and acted as the main coordinator between power operations and the technical lead on the floor. Their role was to determine the rate of pots to put to sleep as determined by communicating with power operations and monitoring the open circuit protection system (SURMEC) to ensure the proper voltage safety gap.

During the 48-pot section sleeping mode event, pots were put to sleep in groups of five. Four operators and a technical lead would each put one pot to sleep at a time, waiting for approval from

the coordinator before moving on to the next five pots. The key steps for putting a pot to sleep were:

- Taking a reference of the beam level, pot voltage, and marking the four corners of the beam.
- Lowering the beam in increments and visually checking each corner to ensure no obstructions that could cause potential buckling to the anode beam.
- Once the target voltage was achieved, measuring the bath height and readjusting levels to minimise compromising the anodes and sidewall of the pot shell.

After the 48-pot section was put to sleep, it was important for the first four hours that the designated operators and technical lead on the floor monitored the pot voltage and adjusted as needed approximately every 15 minutes, as the pots were quite unstable and tended to drift higher than the decomposition voltage. Additionally, the amperage was reduced by 10–15 kA to manage the bath levelling for the entire line. The lower amperage allowed room for more bath addition by un-squeezing the unaffected pots.

Follow-up

Once the 48-pot section was asleep, a strategic plan was created for monitoring the pots. The follow-up criteria included:

- Monitoring the voltage every hour (after the 4-hour mark of pots sleeping)
- Following the anode current distribution

1. Reduction Process Technician, 2. Reduction Process Superintendent,
3. Reduction Process Engineer-In-Training, 4. Reduction Operation Excellence Manager, 5. Reduction Principal Advisor.



- Monitoring the bath temperature and keeping tapping holes open
- Monitoring bath levelling
- Collecting bath and metal samples
- Conducting visual inspections of the flame colour (looking for yellow flames)

During the remaining 68 hours (about three days) of the pot's sleeping, the most important follow-up was maintaining bath levelling. The affected pots were continually producing bath and needed continual removal during the 12-hour shift. To help minimise bath production in the affected pots, the amperage was reduced further by 5–10 kA as the anode immersion of the unaffected pots would allow.

On a pot-to-pot basis, various troubleshooting activities were needed. Anode incidents were found by following the anode current distribution. An anode change team addressed incident anodes on the sleeping pots as needed. The majority of incidents that occurred during the sleeping process were on anodes that were late to be changed; therefore, the carbon under pin was already compromised. AlF_3 shots were imposed for a given period to mitigate the rise in bath temperature, compensate for the ongoing bath evaporation, and the fluoride consumption in the bath. Additionally, anode effects were resolved by placing the anodes in the metal for a given time and lowering the beam slightly below it was prior to the anode effect.

Awakening

Once repairs were made to the alumina feeding system, the awakening phase began. A strategic approach of waking up two pots at a time was used due to anode effects, increasing the potline voltage, and the workload required to perform the task. The SURMEC safety voltage gap required full-time monitoring and adjusting during the awakening phase to limit the risk of a

potline trip due to increased pot voltage from anode effects and returning the pot to the operating voltage. The awakening phase lasted approximately 12 hours.

Prior to waking the pots, the crust breakers and feeders were tested to ensure they were functioning properly and that the feeder holes were opening. The anode clamps were tightened to prevent the risk of slipping anodes. The anode beam was then slowly raised in steps to reach the reference voltage, and bath was added as needed to ensure anode immersion. When the pots were brought back from sleep mode, they went into anode effect and were unstable. After the anode effects were killed, the pots returned to a relatively stable state. To resume normal operation, the AlF_3 addition was restarted, and normal operations were allowed on the pots that were classified as stable.



Follow-up tasks during the awakening phase included:

- Inspection of the feeder holes
- Bath levelling
- Bath temperature.

Key Learnings

The key challenges were observed specifically in the preparation, follow-up, and awakening phases. During the preparation phase, it was underestimated how large of a team was needed full time in the 48-pot section.

Organisational changes were made, and tools were developed throughout the

72 hours of sleeping mode to mitigate the risk of workforce fatigue and loss of operating pots.

During the follow-up phase, there was an understanding that bath levels were of the most importance, as the levels can increase quite quickly based on the study of the previous 2021 trial. However, the magnitude was not reflected from the previous trial, as it was successfully completed on one pot and not on a group of pots. This left little room for compounding equipment break down or workforce issues, as the bath tapping vehicle (BTV) had to be in operation continuously. Within the first 24 hours, the bath levels did get quite high on various pots, causing contamination of the metal. Amperage drops favoured optimising bath generation and bath movements.

Another key learning was regarding bath temperatures, and selective pots did become quite hot due to no AlF_3 feeding. The decision was made to impose a correction on an individual pot basis based only on hot pots. The AlF_3 feeding was followed and prohibited once the pot was trending under the hot pot threshold.

The main challenges of the awakening phase included the rate of waking the pots and the bath management. Due to the pots going into anode effect upon waking up, the potline voltage fluctuated significantly, creating challenges with adjusting the SURMEC safety voltage gap.

Conclusions

Sleeping pot methodology engaged in 48 pot section for 72 hours is a success

story in BC works – Kitimat after all pots were successfully returned to service without failure. Subsequent autopsies were conducted on a few pots from the sleeping pots section; there were no indications of excessive bath attack, no deterioration on preformed blocks, or silicon carbide sidewall. Effectively, there were no tangible impacts on the long term performance and pot life evolution with the current lining age of the majority of the pots in comparison to the sleeping pots section, the sleeping pots section have surpassed the forecasted average pot life. ■



Take speed and stability to the next level

Elevate your quality and productivity with the trusted standard in OES

The Thermo Scientific™ ARL iSpark™ Plus Series OES Metal Analyzer uses single-spark acquisition to provide rapid elemental analysis—up to 15% faster than previous models. The increased speed and reliability minimize tap to tap times, save energy, reduce carbon footprints, and realize a faster return on investment.

Capable of providing ultra-fast, on-line analysis of non-metallic inclusions, the ARL iSpark Plus adds to the versatility, dependability, and productivity of metal processing operations.

 Learn more at thermofisher.com/isparkplus

thermoscientific

Sustaining Leadership Amid Change

Recent Developments in the Australian Aluminium Industry.

By **Marghanita Johnson***

The Australian aluminium industry, a cornerstone of the national economy since 1955, is facing a defining moment. Recognised for its extensive contributions to bauxite mining, alumina refining, aluminium smelting and downstream processing, the sector is navigating rapid change driven by global energy transitions, economic pressures, and sustainability imperatives. This article explores the industry's current landscape, highlighting its challenges, opportunities, and the actions required to secure its future.

A Mine to Market Industry

The aluminium value chain in Australia is extensive, encompassing six bauxite mines, five alumina refineries, four aluminium smelters, and over 20 extrusion presses. Together, these operations produce over 100 million tonnes of bauxite annually, positioning Australia as the world's largest bauxite producer. Australia also leads globally in alumina exports, producing approximately 18 million tonnes of alumina each year. It also ranks as the seventh-largest producer of aluminium. This integrated mine-to-market model underpins over 20,000 direct jobs and a further 55,000 indirect roles, mostly in regional areas across Australia.

Economic Contributions and National Resilience

The economic significance of the aluminium industry cannot be overstated. According to a report released by the Australian Aluminium Council in late 2024, the sector contributes over \$18 billion annually to the Australian economy, including more than \$15 billion in export revenue. With wages averaging 60% higher than the national manufacturing

benchmark, the industry is critical to regional economies.

Beyond financial metrics, aluminium is a strategic material integral to national security. It is essential for military applications, including aircraft, armoured vehicles, and naval vessels. Ensuring domestic production capacity is vital to reduce dependence on foreign supply chains.

Australia's Response to Global Industry Policy

In response to other key global industry policies such as the Inflation Reduction Act and the European Critical Raw Materials Act, the Australian Government has passed legislation known as the Future Made in Australia Bill 2024, which has garnered strong backing from the industry. This legislation focuses on developing green metals – including alumina and aluminium, as well as renewable hydrogen and low-carbon liquid fuels—key to achieving net-zero emissions by 2050. The aluminium industry is uniquely positioned to contribute to these goals, given its role in producing materials for renewable technologies and sustainable infrastructure.

As part of this package, in January 2025, the Australian Government announced a new A\$2 billion Green Aluminium Production Credit, available from 2028–29, to support Australia's aluminium smelters to transition to renewable electricity.

■ Smelters that can show new significant decarbonisation before 2036 can negotiate an emissions-linked credit contract payable per tonne of green aluminium produced for up to 10 years.

■ Credit rates for each facility will be

determined based on reductions in Scope 2 emissions.

■ A review in 2030 will evaluate the credit design and market impact.

This marks a globally significant step towards securing the future of Australia's aluminium industry and strengthening Australia's role as a leader in the energy transition. This announcement is an important step in support of the industry's transition to the competitive, reliable, lower-carbon energy needed for the aluminium industry to secure a sustainable future.

These new credits were welcomed by the industry, which has consistently called for production credits for the sector to help attract private capital and ensure the aluminium industry remains globally competitive. These new aluminium production credits should provide some of the transitional support needed as Australia's energy infrastructure and systems develop, and energy pricing returns to competitive levels.

Targeted public investment is crucial for attracting private sector funding and advancing green metal initiatives. The industry expects further announcements in the future, including for alumina. Such investments would enable the development of critical infrastructure, expand renewable energy capacity, and maintain the industry's competitiveness as global markets increasingly prioritise sustainability.

Energy Security: The Industry's Pivotal Challenge

Energy security is a cornerstone issue for the aluminium sector, which relies heavily on stable, affordable energy supplies.

* CEO, Australian Aluminium Council



Aluminium smelting accounts for about 10% of Australia's National Electricity Market (NEM) usage, with this figure rising to over 25% on low-demand days. Smelters play a vital role in stabilising the grid, providing flexibility during peak demand periods, and maintaining minimum demand levels for system reliability.

In 2024, Alcoa announced an agreement with AGL for a nine-year electricity contract extension that secures the supply of power at the Portland Aluminium Smelter in Victoria until mid-2035. The combined contracts announced to date will enable the smelter to produce up to 95% of its nameplate capacity of 358,000 tonnes of aluminium per year. Currently, smelter production averages at about 80% capacity.

Also in 2024, Rio Tinto announced two major renewable power purchase agreements (PPAs) to supply its Gladstone operations, including Boyne Smelter, in Queensland, including the Upper Calliope Solar Farm and the Bungaban wind energy project. The combined 2.2 GW of renewable PPAs with Windlab and European Energy have the potential to lower carbon emissions by about 5 million tonnes per year and could generate the equivalent of 10% of Queensland's current power demand.

Tomago Aluminium updated stakeholders on its progress to repower the smelter by 2028.

By aligning energy policies with net-zero ambitions, Australia can position itself as a leader in green manufacturing while safeguarding regional economies that depend on the industry.

Positioning Bauxite, Alumina, and Aluminium as Critical Minerals

One of the industry's most pressing

advocacy efforts continues to be in securing recognition of bauxite, alumina, and aluminium as designated Critical Minerals in Australia, in addition to High Purity Alumina (HPA), which is already listed. Bauxite and aluminium are frequently included in other countries' critical mineral lists. These materials are essential to renewable energy technologies, electric vehicles, and infrastructure development, making them indispensable to the global energy transition.

By including bauxite, alumina, and aluminium on the Critical Minerals list, the Australian government would signal its commitment to maintaining secure, sustainable supply chains. This designation would also attract international investment, enhance funding opportunities, and streamline regulatory approvals—key elements for expanding the sector's capacity and economic impact.

Decarbonisation: A Path to Global Leadership

Decarbonisation efforts are central to the industry's future. Initiatives include renewable-powered smelting technologies and low-carbon production processes, which align with national and global climate goals. These advancements are critical for reducing environmental impact and meeting the growing expectations of investors.

As Australia is a large producer of alumina, it forms a large part of the Australian industry's emissions, with around 45% of industry emissions. As Australia is where global low emission alumina trials are being conducted, Australia is leading technologies for the adaptation of brownfield alumina refineries to even lower carbon technologies. This includes ongoing

demonstration and trials of mechanical vapour recompression for alumina digestion as well as consideration of both electric and hydrogen calcination processes.

By leveraging abundant renewable energy resources, Australia could produce alumina aluminium with significantly lower emissions, reducing global carbon dioxide emissions. Realising this potential requires:

1. Reliable, low-carbon energy at competitive prices.
2. Support for capital investment in decarbonisation technologies.
3. Streamlined regulatory processes across the aluminium value chain.

These measures are not just industry goals but national imperatives. The benefits extend beyond emissions reductions, fostering economic growth and positioning Australia as a sustainable resource leader.

Unifying the Industry Voice

In a landmark decision, the Australian Aluminium Council announced the integration of the former Australian Aluminium Extrusion Association (AAEA) into its structure in late 2024. This unification consolidates the industry's representation, enhancing its ability to advocate effectively for stakeholders across the value chain.

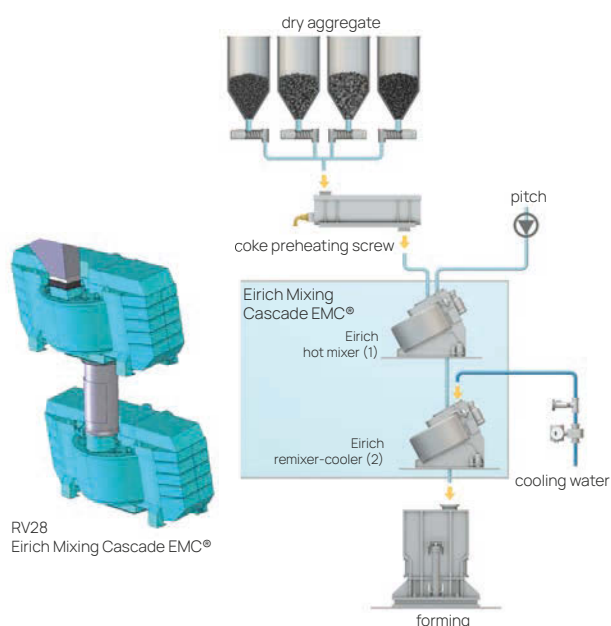
This integration strengthens the organisation's capacity to address diverse challenges, from energy costs to trade pressures. By fostering collaboration, the unified Council aims to drive sustainable growth and innovation across the aluminium industry.

With this change, the Council has already increased its profile in Australia's downstream aluminium industry with additional aluminium extrusion members joining this collective group.

Conclusion: Embracing Innovation and Sustainability

The Australian aluminium industry is at a crossroads, balancing economic, environmental, and geopolitical pressures. Recent developments – including critical minerals advocacy, energy security initiatives, and decarbonisation investments – highlight the sector's adaptability and commitment to sustainable growth.

As the world moves towards a low-carbon future, the aluminium industry's role will only grow in significance. By embracing innovation, fostering partnerships, and advocating for supportive policies, Australia can ensure its aluminium sector remains a global leader in sustainable resource development and a cornerstone of the national economy. ■



Preparation Technology for Carbon Paste

Choose the Eirich solution:

- Low investment costs
- Low operating and maintenance costs
- Simple and swift commissioning
- Optimum mixing and cooling conditions
- Excellent paste quality
- Maximum plant availability
- All key machinery is manufactured in our own workshops
- Reliability for more than 160 years
- Numerous references worldwide

eirich.com

KELK
A VPG Brand

For Aluminium Rolling Mills



- ROLLMAX Load Cell System (5 Year Warranty)
- ACCUSPEED Laser Velocimeter
- Strip Mill Tensiometer
- MONOBLOC Process Line Tensiometer



Laser Measuring Systems

- Strip Thickness & Cross Profile
- Sheet Flatness & Contour



NEW
to KELK



KELK.com

Transform the way you operate.

We're supporting the global aluminium industry to make better, more innovative products manufactured using sustainable technologies and processes.

We can help you identify your biggest opportunities.
[Let's work together.](mailto:ENQUIRIES@INNOVALTEC.COM)



ENQUIRIES@INNOVALTEC.COM
INNOVALTEC.COM

INNOVAL

CONSULTANCY, TECHNICAL SUPPORT AND TRAINING FOR THE ALUMINIUM INDUSTRY

Sustainable Solutions in Aluminium

By **Dr. Can Akyil***

As industries strive to meet global sustainability goals, aluminium has emerged as a key material driving innovation in the automotive and construction sectors. With the growing demand for sustainable manufacturing practices (References 1 - 4), lightweight vehicle designs, and energy-efficient buildings, industry leaders have been exploring new surface finishing solutions to meet these requirements. In 2025, as these industries progress towards a more sustainable future, aluminium's use is expected to grow, fostering ongoing development and innovation.

The Changing Role of Aluminium in Automotive and Construction

Aluminium's versatility and strength have made it a preferred material across many applications. In the automotive industry, aluminium can enhance fuel efficiency, reduce emissions, and improve vehicle performance. These factors make aluminium the go-to material for "lightweighting," or the practice of making vehicles lighter to improve their performance and efficiency. This design optimisation is essential for improving the range and performance of all vehicles, but especially electric vehicles (EVs). The weight of EV batteries necessitates the use of lightweight, durable, and corrosion-resistant materials to replace traditional steel parts, with aluminium emerging as the solution. As a result, EVs are expected to use 30% more aluminium than traditional internal combustion vehicles (References 4 & 5), further driving the demand for this material.

The benefits of aluminium adoption are further bolstered by its excellent recyclability. Aluminium can be recycled infinitely without losing its properties, enabling automakers to meet strict sustainability standards while reducing production costs. Widely used in components such as engine blocks, cylinder heads, and suspension systems, aluminium's versatility plays a pivotal role in modern vehicle manufacturing. **Fig 1.**

In the construction sector, aluminium's durability, strength, corrosion resistance, and lightweight properties make it a

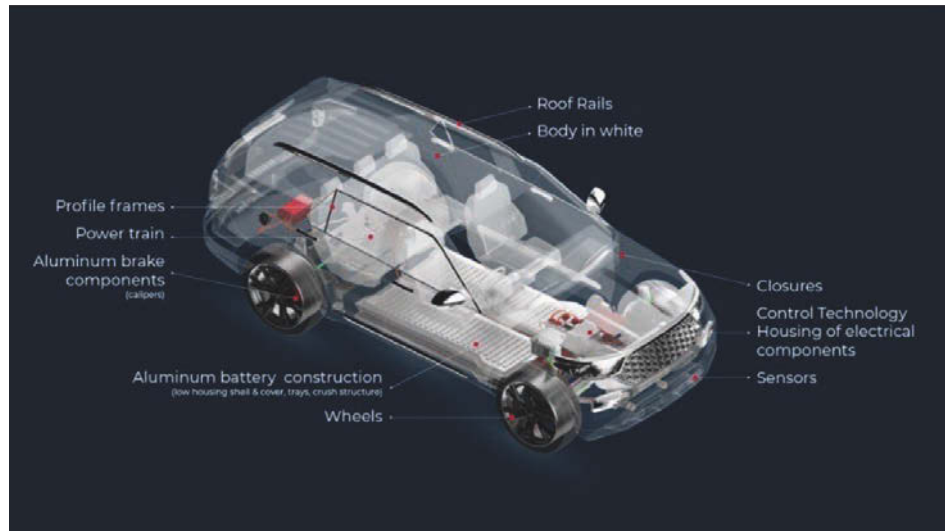


Fig 1. Aluminium Versatility in Vehicle Manufacturing

cornerstone of modern building design. Commonly used for windows, doors, facades, and structural components, aluminium improves frame load-bearing capacity, enabling the use of larger windows, and reduces heating and cooling costs through the addition of new thermal insulation capabilities. **Fig 2.** These features have led to increased adoption, with global aluminium use in construction doubling over the past decade to an average of 10 kg/m² in 2024, as seen in **Fig 3** (References 3, 4, 8).

Secondary Aluminium: A Sustainable Solution

Growing environmental concerns and resource limitations are prompting a shift in how aluminium is sourced and processed. Despite its many advantages, traditional aluminium manufacturing is energy-intensive and poses a significant environmental impact. To address this, the industry is turning to secondary aluminium, which is produced from recycled aluminium scrap rather than newly extracted materials. Recycling aluminium uses up to 95% less energy (**Figs 3 & 4**) when compared to primary aluminium production, significantly reducing carbon emissions and conserving natural resources.

In Asia, particularly in China and India, demand for secondary aluminium is growing rapidly, driven by urbanisation and industrialisation. As shown in **Fig 4**, this region accounts for over 60% of global aluminium consumption, with annual growth rates exceeding 6-8% in some markets. Europe, driven by sustainability regulations and green building initiatives, has seen moderate consumption growth of 2-4% annually, while the US has experienced steady growth rates of 3-5% (References 6 & 7). The shift towards recycled materials is expected to accelerate over the next five to seven years, and as adoption grows, so do concerns about the performance, appearance, and durability of recycled aluminium (References 2-6).

While secondary aluminium offers significant carbon footprint reduction, the material also poses challenges, primarily related to corrosion resistance and appearance. Companies are actively working to develop processes that mitigate these issues, improving the performance of recycled aluminium and enabling its use across a broader range of applications.

Innovative Solutions in Aluminium Manufacturing

New solutions and technologies are

* Light Metal Solutions Global Business Director at MacDermid Enthone Industrial Solutions



Fig 2. Aluminium Application in Building Construction

emerging to support sustainable aluminium manufacturing. These technologies enable original equipment manufacturers (OEMs) and building owners to meet high-performance standards using recycled secondary aluminium materials. Examples of these innovations include:

AluKlad 130: As the use of secondary aluminium grows across the automotive sector, manufacturers are looking for advanced surface finishing solutions to enhance corrosion protection, appearance, and wear resistance. This new aluminium anodising system is designed to improve the performance of aluminium across challenging automotive applications. It delivers superior alkaline resistance for exterior EV components and enables anodised aluminium to withstand extreme conditions, including pH 13 environments in automated car washes.

This system meets current automotive requirements, eliminates the need for organic topcoats, and supports a wide range of colours and finishes.

New Trivalent Chromium Passivation Treatments: Secondary aluminium

components are susceptible to uniform and filiform corrosion. Uniform corrosion is defined as corrosion that affects the entire surface, while filiform corrosion involves damage that spreads beneath the protective layers, ultimately weakening adhesion. Both types of corrosion are driven by electronegativity differences in intermetallic compounds, which become more pronounced in secondary aluminium parts. This issue is significant in the gasket areas of EV battery boxes, where corrosion has been a notable concern. These components, typically made from aluminium alloys, are located on the underside of vehicles, exposing them to harsh, corrosive environments with limited airflow, which accelerates corrosion. To address this issue, enhanced trivalent chromium passivation systems have been developed, offering superior corrosion resistance and improved durability. These advanced treatments provide a reliable solution for EV applications, ensuring better performance and longevity in demanding conditions. **Fig 5.**

Chromium-Free Conversion Coatings: In building and construction applications,

the use of recycled aluminium profiles can lead to increased corrosion-related defects. To address this, advanced bi-metal chromium-free conversion coatings have been developed, greatly improving the corrosion resistance of secondary aluminium. These innovative coatings provide a more sustainable and effective solution, ensuring greater durability and performance in construction materials.

Optimised Solutions for Anodising: The increased use of aluminium alloys has introduced challenges in anodising, including prominent extrusion marks and colour inconsistencies due to variations in the alloy composition. To address these issues, the industry is adopting advanced acidic etching processes that precisely dissolve material, resulting in smoother, more uniform surfaces. Additionally, specialised electrocolouring additives have been developed to ensure consistent and even colour deposition, mitigating variations caused by differences in the base material. These innovations enhance the aesthetic quality and performance of anodised aluminium, making it more reliable for a wide range of applications.

Conclusion

Aluminium is proving its strength as an essential material in the automotive and construction industries as they strive for a greener future and aim to meet heightened performance goals. Its lightweight, durable, and recyclable properties make it an ideal material for reducing environmental impact while meeting growing industry demands. Looking ahead, ongoing innovations in surface finishing solutions, such as passivation, anodising, and conversion coatings, will enable manufacturers to overcome material sourcing challenges, expand the use of recycled aluminium, and support a circular economy. Industry leaders in the automotive and construction spaces must be ready and willing to adapt to new aluminium applications to

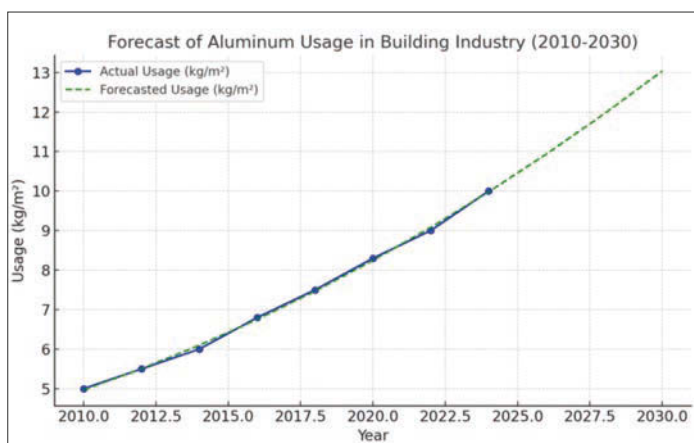


Fig 3. Forecast of Aluminium Usage in Building Industry (2010-2030) [References 4-6]

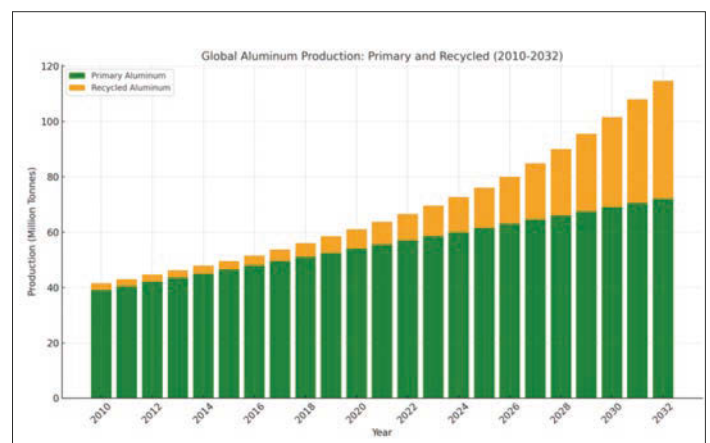


Fig 4. Global Aluminium Production: Primary and Recycled (2010-2032) [References 1-3 & 6]

remain competitive and meet evolving sustainability demands. ■

References

- [1] Guillaume, G. and Pacheco, D. (2022) EPD Background Report. Available at: https://www.aluminum.org/sites/default/files/2022-10/Semi-Fab_LCA_Background_Report.pdf (Accessed: 05 February 2025).
- [2] Elisa.Andreotti (2024) Report reveals global aluminium demand to reach new highs after Covid, International Aluminium Institute. Available at: <https://international-aluminium.org/report-reveals-global-aluminium-demand-to-reach-new-highs-after-covid/> (Accessed: 05 February 2025).
- [3] Elisa.Andreotti (2024) Report reveals global aluminium demand to reach new highs after Covid, International Aluminium Institute. Available at: <https://international-aluminium.org/report-reveals-global-aluminium-demand-to-reach-new-highs-after-covid/> (Accessed: 05 February 2025).
- [4] Aleksić, J. and Vargas, D.B. (2023) Aluminium demand will rise 40% by 2030. here's how to make it sustainable, World Economic Forum. Available at: <https://www.weforum.org/stories/2023/11/aluminium-demand-how-to-make-it-sustainable/> (Accessed: 11 February 2025).
- [5] (2021) ALUMINUM BUILDING AND CONSTRUCTION USAGE STUDY. Available at: https://www.aluminum.org/sites/default/files/2022-03/IBREC_Aluminum_Analysis_4.2021_Summary.pdf (Accessed: 05 February 2025).
- [6] (2021) ALUMINUM BUILDING AND CONSTRUCTION USAGE STUDY. Available at: https://www.aluminum.org/sites/default/files/2022-03/IBREC_Aluminum_Analysis_4.2021_Summary.pdf (Accessed: 05 February 2025).
- [7] Topic overview | statista (no date) Statista. Available at: <https://www.statista.com/topics/> (Accessed: 05 February 2025).
- [8] CRU Group: Home - Cru Group (no date) CRU Group Website. Available at: <https://www.crugroup.com/> (Accessed: 05 February 2025).

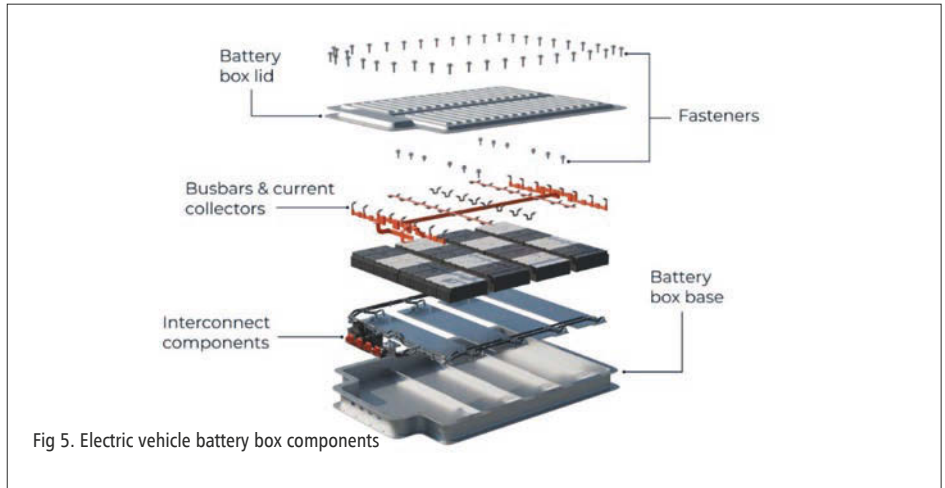


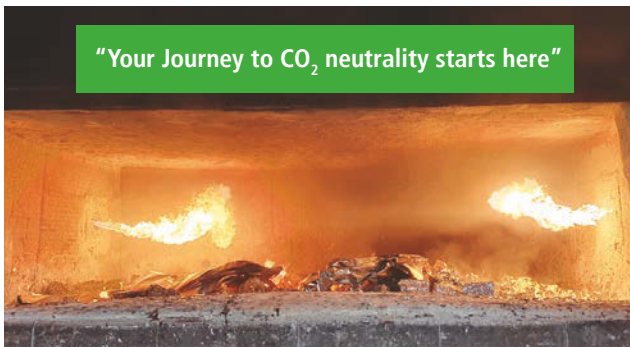
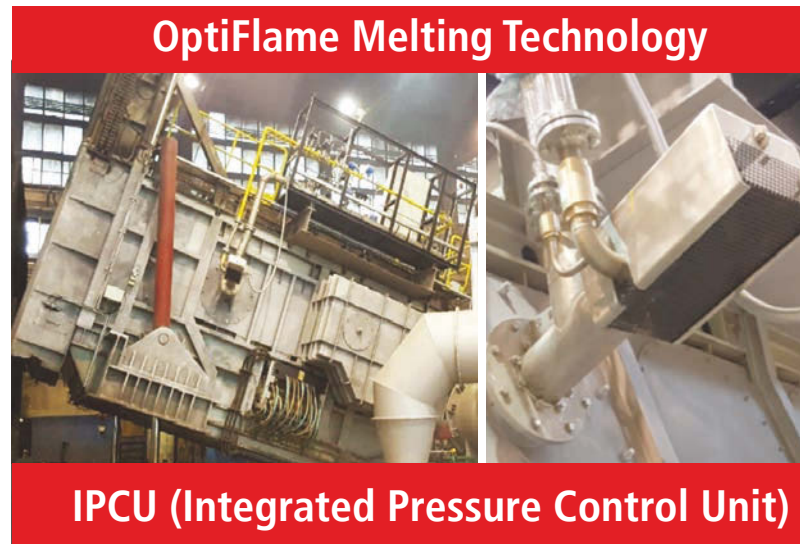
Fig 5. Electric vehicle battery box components



Combining the advantages of Oxy-Fuel and Air-Fuel Combustion

Reducing Fuel Consumption up to 60%
Reducing Oxygen Consumption up to 40%
Reducing CO₂ emissions up to 60%

- Lowest NO_x thanks to flameless operation
- Lowest Dross thanks to flame operation
 - Reduces Exhaust Volumes
 - Increased Melting Rate
 - Low Maintenance



"Your Journey to CO₂ neutrality starts here"



contact@hotwork.ag | www.hotwork.ag | CO₂ Reduction



ALUMINUM USA 2025. America's **leading** aluminum event.

May 28 - 29, 2025
Music City Center, Nashville, TN

Attend the leading exhibition and technical conference for the aluminum industry, representing the entire value chain and application fields such as automotive, aerospace, building and construction, packaging, electronics, and more.



Scan here to learn more
about ALUMINUM USA and
Conference led by CRU!



Register Today for a **FREE** Exhibit Pass at
aluminumusa2025.com/AIT





Images courtesy
of Marco Prosch.



Investing in a Sustainable Future

Novelis increases capacity and looks to maximise recycled content

By **Suzanne Lindsay-Walker***

Aluminium's properties as an infinitely recyclable material hold promise for achieving a more sustainable future and transforming how people live. Delivering on that promise depends upon the industry's ability to maximise the use of recycled content across a range of aluminium products and applications. Novelis has made investments across its global footprint to help drive towards a more sustainable future.

Novelis operates an integrated network of rolling and recycling operations with more than 13,000 employees at 31 facilities in nine countries throughout North America, South America, Europe, and Asia. In FY24, Novelis purchased or tolled more than 2.3 kilotonnes of recycled metal, including more than 82 billion used beverage cans. This is a result of the

company's commitment to investing in recycling capacity and capabilities as part of a decade-long push to strengthen its global recycling leadership and increase the percentage of recycled content in its products.

Among these investments was the completion of the Nachterstedt, Germany, Aluminium Recycling Centre in 2014, the largest recycling facility in the world at the time. Novelis continued to expand its recycling capacity, making investments in Yeongju, South Korea, and Pindamonhangaba, Brazil, which now holds the distinction of being the world's largest recycling plant. More recently, Novelis has further expanded its recycling capabilities with new projects in Ulsan, South Korea; Guthrie, Kentucky; Bay Minette, Alabama; and Latchford,

UK, where construction of an aluminium recycling and rolling facility commenced in 2022.

Nachterstedt, Germany

Since its completion in 2014, Novelis has continued to invest in its Nachterstedt facility to ensure it remains at the edge of innovation in the industry. Recent upgrades, including a scrap storage hall, new scrap processing equipment, and a rail extension, have improved the efficiency and safety of scrap handling at the site.

A new furnace was added to help process end-of-life coffee capsules, improve melt loss, and increase recycling production output. To further reduce waste, a vacuum belt filter was introduced to remove paint from used beverage cans before they are shredded. This solution

* Vice President Sustainability at Novelis

is expected to eliminate approximately 1,000 tonnes of waste each year, with ongoing exploration of possible uses for the remaining waste.

In March 2024, Statkraft, Europe's largest producer of renewable energy, began providing the Nachterstedt plant with approximately 58 GWh per year sourced entirely from wind and solar installations.

Accounting for 40% of the plant's electricity needs, this change in energy source is expected to reduce carbon emissions from energy consumption by more than 17,000 tonnes of CO₂e per year.

Yeongju, South Korea

Novelis' recycling centre in Yeongju is the largest aluminium used beverage can recycling facility in Asia. Since opening in October 2012, its capacity has steadily increased. In 2022, the facility reached a milestone by recycling 133.3 billion aluminium cans, which helped prevent 20 million tonnes of carbon emissions, the equivalent of planting 340 million trees each year. The centre now processes more than 18 billion beverage cans annually.

As part of its sustainability efforts, the Yeongju facility recently installed high-efficiency silicon solar panels that will provide approximately 15% of the total power consumed by the plant's main building.

Pindamonhangaba, Brazil

Novelis invested \$150 million in 2021 to expand its aluminium rolling and recycling capabilities at the Pindamonhangaba plant in Brazil. This expansion boosted the plant's annual capacity by 100,000 kilotonnes for aluminium sheet production and recycling, helping to meet the growing demand in the beverage packaging market.

This followed a \$175 million expansion that began in 2018, which increased production of sheet ingots, hot mill products, and recycling, while also adding a new water source.

Today, the Pindamonhangaba plant is the largest aluminium recycling centre in the world.

In 2022, Novelis recycled 31 billion aluminium cans in Brazil—20 billion collected domestically and 11 billion from other countries.

Guthrie, Kentucky, USA

Novelis's automotive recycling centre in Guthrie, Kentucky, began commissioning in the first quarter of the company's 2025 fiscal year and is steadily ramping up production. The facility's sorting and recycling capabilities will enhance the utilisation of pre- and post-consumer

automotive scrap, providing Novelis customers with more sustainable products. Once fully operational, the Guthrie automotive recycling centre is expected to have an annual casting capacity of 240 kilotonnes of sheet ingot and to reduce carbon emissions by over one million tonnes each year. With its aluminium shredding and sorting technology, Guthrie will recycle and cast sheet ingot from various types of automotive scrap.



Ulsan, South Korea

Novelis is currently commissioning a \$65 million capital investment to build a new recycling centre at its Ulsan plant. Once fully operational, the centre will have an annual recycling capacity of 100 kilotonnes, which will reduce the company's carbon emissions by more than 420,000 tonnes each year. With the addition of the Ulsan Recycling Centre, Novelis will increase its total recycling capacity in South Korea by more than 20% and enhance its ability to process various types of aluminium scrap. The first automotive and can body sheet ingots were cast at the new centre in Ulsan in January 2025, with production set to ramp up over the coming months.

Bay Minette, Alabama, USA

Construction of Novelis' recycling and rolling plant in Bay Minette, Alabama, began in 2022, with an anticipated opening in the second half of 2026. The plant is expected to create up to 1,000 new jobs and have an initial capacity of 600 kt of finished aluminium products per year. Bay Minette's recycling centre will increase Novelis' global recycling capacity by 15 billion used beverage cans (UBCs) annually when fully operational.

The output will primarily serve the beverage packaging and automotive markets in North America, with flexibility for speciality production.

Latchford, United Kingdom

Located in Warrington, UK, Novelis'

Latchford facility is one of Europe's largest recycling plants for UBCs and the continent's largest closed-loop recycling operation for automotive aluminium rolled products. Novelis is currently investing approximately \$90 million, net of a \$15 million grant from the UK government, to double recycling capacity in Latchford for UBCs and other scrap types to produce new rolled sheet for the beverage packaging market.

This investment underscores the company's commitment to sustainability by fostering low-carbon and high-recycled content products that support not only Novelis's sustainability goals but also those of its customers.

The plant plays a crucial role in Novelis' European production and will have enough capacity to recycle every aluminium beverage can sold in the UK once the expansion is complete.

As part of its commitment to carbon neutral production, the company successfully tested the use of hydrogen fuel to power recycling furnaces at Latchford as a part of the UK Government's Industrial Fuel Switching Competition. The trial required the installation of new burners, regenerators, and furnace lining material. Using hydrogen instead of the same amount of natural gas when operating a melting furnace can reduce CO₂e emissions by up to 90%. Several series of tests were conducted by blending different percentages of hydrogen with natural gas (30%-100%) to evaluate safety concerns, the impact on existing infrastructure, and equipment compatibility. During the trial campaign, several hundred tonnes of 3000 series scrap aluminium alloy were remelted and cast into sheet ingots. In addition, all relevant parameters were measured to assess any impact on the product, process, operating environment, and environmental emissions.

Commitment to Continuous Improvement and Sustainability

Recycling is the cornerstone of Novelis' ambition to be the world's leading provider of low-carbon, sustainable aluminium solutions that advance business, industry, and society toward a circular economy. In 2024, it unveiled Novelis 3x30, a vision to accelerate decarbonisation and circularity, aiming by 2030 to achieve 75% average recycled content in our products, become the lowest-emissions flat rolled products (FRP) aluminium provider (under three tonnes CO₂e per tonne of FRP shipped), and lead the industry toward circularity through first-mover investments. By investing in cutting-edge facilities around the globe, the company is positioning aluminium as the material of choice for circular solutions. ■



Optifine™
5:1 125

The **high efficiency grain refiner** that stands head and shoulders above the rest.

made with
low carbon
aluminium

50%
cost
saving

85%
less product
needed

125%
relative
efficiency*

* Compared with Optifine 3:1 100
(Optifine 3:1 100 is 3x more efficient than standard grain refiners)

Opticast™
2ndgen

But don't take our word for it, test your current grain refiner against Optifine using the **NEW Opticast 2nd gen**

Contact us to arrange for your samples to be measured by Opticast 2nd gen or to discuss your grain refinement needs.

+44 (0) 782 333 0676
technical@mqpltd.com

mqpltd.com



COATINGS



BORON NITRIDE BLUE



BORON NITRIDE WHITE



RODACOAT ZB (ZIRCON)



RODACOAT RB (MULLITE)

REDUCE YOUR CONSUMPTION OF BORON NITRIDE BY USING OUR NEWLY FORMULATED CONCENTRATED COATING RBNC85!!

MASTICS



Non-wetting moldable



Cleanwool moldable



Mastic 85R



Mastic 85B

FIBER & BLANKET BASED PRODUCTS



Fiber cone



Blanket



Fiber rope



Laundry Sock

**UNLOCK
EVERY INCH
OF YOUR
STORAGE
SPACE!**

COMBiLiFT
LIFTING INNOVATION

ENHANCE THE SAFETY, STORAGE & EFFICIENCY OF YOUR LOGISTICS WITH COMBILIFT

Combilift's range of multidirectional forklifts, pedestrian reach trucks, straddle carriers and container loaders will allow you to maximize the capacity, improve efficiency and enhance the safety of your facility.

Contact Us Today

To find out how Combilift can help you unlock every inch of your storage space.

combilift.com

How Innovation is Fuelling the Green Revolution

Advanced precision sorting enables the Green Aluminium Revolution

By Tom Jansen*

The Turning Point in Aluminium Recycling

Global supply chain disruptions, rising energy costs, and increasing environmental pressures are transforming priorities across industries worldwide. This has led to a surging demand for low-carbon 'green' aluminium, with recycling emerging as the most promising pathway due to aluminium's minimal energy requirements – just 5% compared to primary production – and its infinite recyclability. Green aluminium is emerging as the cornerstone against market uncertainties – and we believe there is a good reason for that.

Meanwhile, new waste shipment regulations are changing the landscape for recyclers, fuelling the drive for higher-purity feedstock, which supports domestic rolling mills and extrusion plants, particularly in Europe.

The good news is that the industry has made significant strides in recent years, with new technologies emerging. Ranging from Dynamic LIBS (Laser-Induced Breakdown Spectroscopy) to deep learning, these innovations set the scene for an exciting new era, paving the way for new opportunities. Let's look into them in more detail.

Advanced Sorting with Dynamic LIBS Technology

A reliable local supply of high-quality recycled aluminium depends on the ability to accurately and consistently separate alloys. Dynamic LIBS technology, featured in Tomra's Autosort Pulse, marks a breakthrough in precision sorting. Launched in 2023, the sophisticated system makes the sorting of different aluminium alloys possible, closing another gap towards aluminium circularity.

Unlike static LIBS systems, where objects are analysed as they pass through a fixed laser beam with random targeting, Dynamic LIBS incorporates sophisticated 3D laser measurements and AI algorithms to determine optimal laser targeting positions.

At the core of this innovation lies its unique single-point focus mode, enabling the laser to repeatedly track and target the same spot on a moving object. Imagine it as if the laser is 'drilling' into the material. This approach enhances material penetration, generating considerably more spectral data for analysis, which results in the highest possible sorting accuracy. The system excels even when processing items with thick coatings, complex 3D shapes,

surface irregularities, or longer items, where single-pass systems often struggle to provide reliable readings.

This robust analysis capability directly translates to improved sorting outcomes: when processing mixed 5xxx and 6xxx stamping scrap, real-world applications of the Autosort Pulse have demonstrated both recovery and purity rates exceeding 95% in a single step. Even more results have been achieved with complex streams like Taint Tabor or mixed wrought fractions from Twitch. Here, purity levels can surpass 97% when sorting 6xxx, 5xxx, or 3xxx series alloys, or even specific alloys such as 6063. At the same time, maintaining recovery rates of >95% is possible, reaching as high as 97-98% for certain alloy series like 4xxx/cast alloys.

In terms of throughput capacity, Tomra's Dynamic LIBS system can process four to seven tonnes per hour for lighter stamping scrap, scaling up to more than ten tonnes per hour for typical used aluminium old sheet or mixed wrought fractions. The technology maintains effectiveness even with smaller pieces down to 10 mm, though throughput rates may adjust accordingly for very small items.

These figures demonstrate the significant

* Segment Director Metals, Tomra Recycling



advancements achieved by Dynamic LIBS systems, with real-world applications.

How Technology Can Create New Markets

One plant where the impact of our Dynamic LIBS technology can already be seen is Gerhard Lang Recycling in Germany. As one of the first companies globally to implement this system, it is redefining precision sorting of alloy stamping scrap generated during automotive production. This implementation is part of the KANAL research project, funded by the German Federal Ministry of Economic Affairs and Climate Action, which aims to close the loop on aluminium scrap in automotive production.

At its Gaggenau facility, Gerhard Lang Recycling has installed the Autosort Pulse to establish a scalable solution for sorting stamping scrap, which comprises a mixture of 5xxx (high-magnesium) and 6xxx (low-magnesium) wrought alloys. Previously, the mixed aluminium scrap was sold directly to manufacturers without further separation. Now, with the Autosort Pulse and Tomra's advanced Dynamic LIBS technology, the alloys are sorted into distinct, high purity 5xxx and 6xxx products.

The success of Gerhard Lang Recycling underscores the key advantage of Dynamic LIBS technology: it opens up access to previously untapped scrap sources, enabling the recovery of high-quality aluminium alloys and creating new markets. By preventing downcycling and preserving material value, this technology supports full material circularity and a less

carbon-intensive aluminium supply chain.

A Revolution Around the Globe

This is just the beginning. We can expect to see many more of such implementations throughout our industry worldwide in 2025. The green aluminium revolution is not limited to Europe but is developing on a global level – something we experience every day when talking to our customers.

Demand for aluminium sorting technology is expanding beyond established markets like Europe and the UK. We're witnessing significant demand in markets such as Eastern Europe, the Middle East, the US, and countries like Turkey and Japan. This development highlights the global nature of this transformation and its far-reaching impact.

The Next Step in Aluminium Recycling: Deep Learning

Another technology that has gained traction in recent years is deep learning. Already integrated into our Autosort Pulse, deep learning algorithms enhance the system's ability to identify the shape and position of items on the conveyor belt. For example, when multiple pieces overlap, the AI-based object singulation function determines whether they form a single object or multiple ones in the system's software. This innovation will help to further improve single object detection beyond traditional processing technology, allowing for higher belt occupancy and faster processing speeds – all while maintaining exceptional sorting purity.

Deep learning's transformative potential extends far beyond this application. To learn how, let's first look at what deep learning actually is. As a subcategory of AI, deep learning imitates the way the human brain processes information. It is a special technique within machine learning that uses artificial neural networks that are trained by huge amounts of data, so they recognise and store certain patterns and later apply them to new data.

Our AI experts feed thousands to millions of images into the network as training material until it learns to distinguish certain visual characteristics such as shapes, sizes, dimensions, or other details. This enables deep learning to solve some of the most complex sorting tasks, which helps us not only to reach even higher sorting granularity, but to also reduce manual labour in sometimes challenging work environments.

One example is our Gainnext technology, which is already demonstrating its value in aluminium recovery by efficiently cleaning used beverage can (UBC) fractions or in plastics applications. Gainnext™ is very effective at complementing existing sorting technologies. At Tomra, we are actively working on expanding our Gainnext™ ecosystem to address complex sorting needs in the metals sector, which currently relies on manual labour.

The Power of Three

When talking about new technologies, let's not overlook current solutions. Today, XRT systems such as Tomra's X-Tract, which sort by atomic density, are widely regarded as the gold standard for separating heavy metals from aluminium. Having proven their value for more than a decade, there is no doubt that XRT solutions will undoubtedly remain central to any aluminium processing plant. The true power, however, if we want green aluminium to become the standard in production processes, lies in combining XRT technology with one or, ideally, both of the advanced sorting solutions mentioned above.

By integrating all three technologies, we can take a significant step closer to true material circularity, with sorting playing a critical role in the process.

Once again, our industry is at a pivotal moment, with technology driving this change. We are convinced that the use of Dynamic LIBS and deep learning will drive the circular economy forward at a time when it is most needed – customer demand for technologically advanced solutions is increasing, companies are aiming to fulfil their net-zero targets and legislation is tightening. Now is the ideal time for new markets to emerge and further boost our industry. ■

PRECIMETER

precimeter.com



Molten Metal Level Control.

Inspiring Minds for a Sustainable Future

By **Varun Vishnuprasad***



EEG's Can Collection Campaign

A powerful truth is that meaningful change requires the involvement of all sectors of society. It is the mindset and the will of people that can make a lasting difference. When people unite behind a cause and take action, they can drive a nation forward. But it is often necessary to educate and provide the right tools and the appropriate platforms. This is crucial for climate action and highlights the need for a shift in mindset at both local and global levels.

Since its inception in 1991, the Emirates Environmental Group (EEG) has advocated for the inclusion of all entities to progress sustainable development. Guided by the slogan "Together for a Better Environment," the journey began humbly amid a myriad of challenges. However, the determination of the group's commitment to promote environmental literacy has enabled and encouraged cross-cutting relationships across all sectors of society, from individuals to corporate heads to high-ranking government officials. EEG's ability

to connect people through its campaigns and programmes has strengthened the organisation, positioning it as the leading environmental NGO in the region.

While education has been essential in spreading awareness, bringing people together is what has made our programmes a great success. One such initiative is EEG's recycling campaigns, which have been running since 1997. The Can Collection Campaign, focusing on collecting aluminium cans for recycling from various entities across the UAE, has become an annual campaign that garners attention from hundreds of entities all across the country.

What started with a few entities in 1997 has resulted in the collection of a total of 439,825 kg of aluminium cans (number of cans collected between 1997 to December 2024). It has also reduced 6,602 MTCO₂e from the atmosphere, saved 100,098 million British Thermal Units of energy, and saved 10,677 m³ of landfill space.

The success of the campaign inspired

EEG to hold an annual event: The Can Collection Campaign. The recycling campaign takes place twice a year, opening collection sites across the Emirates. The Can Collection Day and the Can Collection Drive attract major entities to the assigned sites to deposit empty aluminium cans.

From families to academic institutions to the hospitality sector and major corporations, this programme brings together a plethora of entities to participate in the circular economy.

The campaign not only educates participating entities and the public but also those who support them in achieving their targets. To receive a certificate of appreciation, the minimum deposit of aluminium cans per entity is 35 kg of aluminium cans.

This target, however, is often well exceeded with the average deposit weighing between 500 and 4,000 kg of aluminium cans. This is one of the best examples where collaborative and cooperative efforts produce results. We

*Research Officer, Emirates Environmental Group (EEG)



have observed corporate entities reaching out to their employees and their families and to their stakeholders, depositing their cans for recycling. They pool the resources and collectively manage to surpass targets every year.

In addition to these two campaigns, participants can deposit their recyclables through our other campaigns: "Neighbourhood Recycling Project" (aimed at school students) and the "One Root One Communi-tree" (OROC) project, running in two phases throughout the year. The OROC project is open to all members and sectors of the society and is the most popular project among EEG's recycling projects.

Aluminium is one of the most easily recycled materials across the world and is of great value to industry and to achieving a circular economy. Research shows that recycling aluminium uses 95% less energy than manufacturing new aluminium from raw materials. This alone highlights the significant benefits of aluminium recycling in climate action.

Recycling significantly strengthens local manufacturing and recycling industries, boosts the national economy through circular practices, conserves natural resources, and helps protect biodiversity.

In addition to recycling aluminium cans, EEG collects eight recyclables: paper, plastic, glass bottles, mobile phones, toner cartridges, scrap metals, and e-waste.

Despite these merits of recycling, EEG has incentives that are awarded to participating entities upon achieving pre-set targets under these projects and campaigns. Each entity receives a certificate and an indigenous tree sapling to plant under their name as part of the "For Our Emirates We Plant" programme. This falls under EEG's annual urban afforestation programme. Every entity is given a placard to place in front of their tree(s) as they come to plant the saplings themselves.

Since launching its urban afforestation campaign in 2007, EEG has planted 2,141,485 indigenous trees across the UAE. These trees are sequestering 12,627.69 MTCO₂ emissions annually from the atmosphere. Afforestation enhances green spaces, improves air quality and the microclimate, boosts biodiversity, and plays a crucial role in combating desertification.

Across the world, desertification (a process where fertile arable land becomes deserted through human activities and climate change) is a growing threat. The

Emirates is in a region highly vulnerable to climate change, where food and water security are already challenged by harsh environmental conditions. Thus, combating desertification and climate change through all means, including afforestation, is vital.

Today, these campaigns mark a significant step in achieving several local, regional, and international efforts. Locally, these campaigns help achieve several government initiatives, including Dubai's effort to increase green cover by 100% and bolster the expanse of protected areas and natural reserves by 60% by 2040. The UAE's pledge to cut emissions by 47% by 2035, the UAE's aim to divert 50% of waste from landfills by 2025, and 80% by 2031, among many others.

On an international level, local actions can have a significant impact. These projects directly help contribute to achieving the United Nations Sustainable Development Goals, including SDG #11 (Sustainable Cities and Communities), SDG #12 (Responsible Consumption and Production), SDG #13 (Climate Action), SDG #15 (Life on Land), and SDG #17 (Partnership for the Goals), as well as other SDGs.

Further to this, afforestation contributes to increasing biodiversity, which helps achieve the Kunming-Montreal Global Biodiversity Framework by 2050. The campaigns also feed into the UAE's pledge to become net zero by 2050.

All these pledges are very difficult to achieve through government means alone; the shift in mindset among UAE residents and citizens is key to accelerating these positive changes.

This is the core mission of EEG: to engage with the public and increase awareness through action programmes. Thus, EEG's slogan "Together for a Better Environment" stands firm today and is more critical as climate change devastates the world in an unprecedented manner. These actions by people and corporations are a positive step towards a more resilient and sustainable future. ■

ALUMINIUM CHINA

09-11 JULY 2025

Hall N1-N4, Shanghai New International Expo Center

Register Now!



Asia's Premier Platform for Branding, Sourcing, and Networking across the Aluminium Industry Chain

ALUMINIUM CHINA offers a comprehensive platform for business deals, international exchange, branding, and networking. Each year, the event brings together producers, processors, and technology providers across the entire aluminium value chain—from raw material production and primary production segments to machine and plant engineering, processing technologies, semi-finished products, finished products for various application sectors, and recycling technologies.



600+ Exhibitors



60,000 sqm Exhibit area



30,000+ Trade visitors & delegations



Exhibit Range

Aluminium Materials

- Primary aluminium
- Recycled aluminium
- Aluminium alloys
- Semi-finished products, such as aluminium profiles, sheets, belts, foils, aluminium-plastics, casting, and forging
- Deep processed product for automotive, packaging, electronics, transportation, new energy, construction, machinery and other industries

Processing Equipment & Auxiliaries

- Primary aluminium processing equipment
- Recycled aluminium processing equipment
- Heat processing equipment
- Extrusion and rolling equipment
- Surface processing equipment
- Test and measurement equipment
- Deep processing equipment
- Environmental protection and energy efficient equipment
- Smart manufacturing equipment
- Refractory materials, foundry chemicals, master alloys, additives etc.
- Other auxiliary materials and equipment

Previous Exhibitors (partial)

Aluminium Materials



Processing Equipment & Auxiliaries



Concurrent Events

Lightweight 2025亚洲汽车轻量化展览会
Asia's Lightweight Automotive Trade Fair



2025年上海国际工业材料展览会
COPPER CHINA 2025

Follow us on our socials



For exhibiting, visiting and marketing cooperation, please contact:

Caroline Wang +86 10 5933 9325 caroline.wang@rxglobal.com
www.aluminiumchina.com/en-gb.html

Built by RX In the business of building businesses

Co-organizer:

Reed Exhibitions Deutschland GmbH
Beijing Antaike Information Co., Ltd.

RiA Boosts Recycling Innovation at Constellium



Image 1. Groundbreaking Furnace Charging Machine



Image 2. Furnace Charging Machine, with its 60m³ Charging container

The RiA team has successfully completed the installation of cutting-edge rail-mounted Furnace Charging and Skimming Machines at Constellium's advanced recycling centre in Neuf-Brisach, France. This achievement highlights Constellium's €130 million investment to foster a circular economy and advance its ambitious decarbonisation objectives.

Constellium continues to set the standard for sustainability within the industry. The newly commissioned recycling facility in Neuf-Brisach embodies the company's commitment to reducing environmental impact while enhancing production efficiency. Central to these objectives are RiA's rail-mounted Furnace Charging and Furnace Skimming Machines (**Image 1**), which provide unparalleled efficiency and safety in the recycling process.

RiA's Furnace Charging Machine (**Image 2**), with its impressive 30-metric tonne capacity, stands as a benchmark for innovation in the aluminium recycling industry. This advanced, fully electrically driven machine charges scrap material into the furnace in under 90 seconds, significantly reducing furnace cycle times. The resulting speed and efficiency deliver substantial energy savings, a critical factor in achieving both economic and environmental goals.

RiA's Charging Machine is operator-free, enhancing safety as operators can monitor the process from a remote control room. This innovative design is a testament to RiA's commitment to creating cutting-edge solutions that prioritise both performance, efficiency, and operator safety.

Advanced Furnace Skimming Machine

Sharing the same rails as the Charging Machine, RiA's rail-mounted Furnace Skimming Machine is a multifunctional machine that skims, stirs, and cleans three furnaces. Equipped with advanced laser positioning technology, the Skimming Machine ensures consistent performance while protecting the furnace's refractory

lining, thereby extending the lifespan of critical equipment and reducing maintenance costs and furnace downtime.

The Skimming Machine (**Image 3**) features a fixed-length, air-cooled boom with a stroke exceeding nine meters, enabling it to reach and effectively skim, stir, and clean all necessary furnace surfaces. This innovation enhances operational efficiency and minimises downtime, further boosting productivity at the Constellium Neuf-Brisach recycling facility.

Driving Sustainability in Aluminium Recycling

The deployment of RiA's cutting-edge technology aligns seamlessly with Constellium's broader sustainability strategy. By increasing the facility's recycling capacity, the new machinery supports a circular economy in which aluminium can be endlessly recycled without losing its properties. This approach conserves natural resources and significantly reduces greenhouse gas emissions compared to primary aluminium production.

A Collaborative Vision for the Future

The collaboration between RiA and Constellium showcases a shared vision of engineering excellence and environmental stewardship. By combining RiA's technological innovations with Constellium's industry leadership, this project demonstrates the transformative potential of partnerships in driving sustainability forward.

As industries worldwide face increasing pressure to reduce their carbon footprint, initiatives like this serve as a beacon of possibility through innovation and collaboration. With the successful installation at Neuf-Brisach, RiA and Constellium have set a new benchmark for efficiency and sustainability in aluminium recycling. Together, they exemplify how technological advancements and environmental responsibility can coexist, paving the way for a greener and more sustainable future. ■



Image 3. RiA's rail-mounted Furnace Skimming Machine

RiA
CAST HOUSE ENGINEERING

RiA

www.ria-che.com

info@ria-che.com

fioscope.de

fioscope

in-furnace vision



Air-Cooled In-Furnace Camera Systems for Optimised Process Control

Increase the safety and productivity of your Cast House

- Reduce furnace door opening
- Increase Operator Safety
- Reduce Furnace Cycle time
- Lower Energy consumption
- Review process and procedures

Seeing what others don't.



CRU

Communities

Co-hosts:



World Aluminium Summit

London, UK // 13 - 15 May 2025

Data and transparency in the commercial *sustainability* nexus

Join us in London for the 30 Anniversary gathering of this strategic event

Strategic topics to be addressed at the Summit:

- The role of data and transparency in understanding the commercial-sustainability nexus
- Focus on 'nature' as a key sustainability metric
- Global geopolitical pressures on the aluminium industry
- Analysing recycling, GHG emissions and supply chain tracking
- Deep dive on the Chinese aluminium industry
- Outlook for aluminium prices and premiums



360
Decision
Makers



170
Companies



38
Countries

Supported by

**ALUMINIUM
INTERNATIONAL
TODAY**

www.worldaluminiumsummit.com

Guyana Focuses on Bauxite Growth



(The photograph was provided courtesy of Mark Nelson.)

By **Richard McDonough***

Guyana is projected to have the second-largest increase in growth of its Real Gross Domestic Product (GDP) among all nations in 2025. This is according to a report issued by the International Monetary Fund (IMF).

Bauxite Mining

Bauxite mining has been part of the economy of Guyana for more than 100 years.

One of the major businesses involved in the bauxite industry in Guyana was RUSAL. This business, headquartered in Moscow, Russia, suspended its Guyanese operations in 2020.

Today, two other companies are major forces in the bauxite industry in Guyana:

Bosai Minerals Group (Guyana) Inc., a subsidiary of Bosai Group headquartered in China, and Guyana Industrial Minerals (GINMIN), a subsidiary of First Bauxite LLC headquartered in North America.

In some years, bauxite production has been modest, while in other years, mining of bauxite has produced substantial amounts of ore. Production went down dramatically after the suspension of the operations of RUSAL in Guyana. Reports from business and governmental officials indicate that bauxite production grew

substantially in 2024 and is projected to continue its growth in the coming years.

According to the "2019 Minerals Yearbook" issued by the United States Geological Survey, Guyana produced 1,498,000 metric tonnes of bauxite in 2015, which increased to 1,900,000 metric tonnes in 2019.^[1]

According to the United States International Trade Administration, citing data from the Bank of Guyana, bauxite production in Guyana reached 608,168 tonnes in 2020^[2]. By 2024, the Ministry of Natural Resources of Guyana reported an increase to more 1.7 million tonnes.^[3]

Leaders in Guyana see great prospects for growth in their nation's bauxite industry.

Vickram Bharrat, Minister of Natural Resources of Guyana, stated at that press conference, "we have received commitments from both companies that in 2025, the production will...increase even more significantly for bauxite."

In a speech on 5 January 2025, Dr. Mohamed Irfaan Ali, President of Guyana^[4], said that the bauxite sector of the economy had "collapsed completely" due to past decisions of the previous government. **Pic 1.**

Referencing the time period from 2015



Pic 1. Dr. Mohamed Irfaan Ali, President of Guyana.
(Photograph from the CARICOM website.)

to 2020, President Ali noted that "in a small area in Region 10, Linden, you had more than 500 jobs lost directly in the bauxite sector... You had one company pulling out investment. You had another company curtail investment. Because there was no clarity of vision...The destruction that took place between 2015 and 2020 created a drag on the economy in Linden and Region 10."

"Between 2014 and 2020, total production contracted by 40%," the President stated. "Yes, my friends, production went down by 40%...Between 2015 and 2020, in Region 10, more than 50% of the employees lost their jobs in the

The Exclusive Hub
for the Eurasian
Aluminium Industry

www.aluexpo.com

ALUEXPO

Powered by "The Bright World of Metals"

9th International
Aluminum
Technologies,
Machinery and
Products
Trade Fair

18-20 September 2025

ISTANBUL  Istanbul
Expo Center

Supporters



Organizer

Hannover Messe
Ankiros Fuarcılık A.Ş.



Deutsche Messe



Messe
Düsseldorf



@hmankirosfairs

In Conjunction With

alus¹²

ALUMINIUM IS EVERYWHERE

12th International ALUMINIUM SYMPOSIUM

September 18-20, 2025  Istanbul Expo Center



 /talsadalus
www.alusist.com

TALSAD
TURKISH ALUMINIUM INDUSTRIALISTS ASSOCIATION



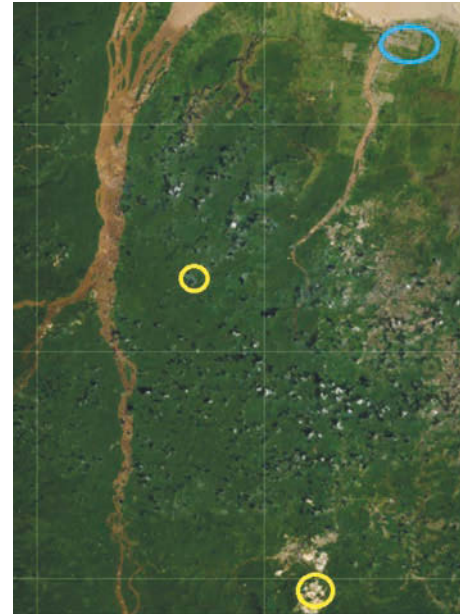
METEM
ULTEA CHAMBER OF METALLURGICAL AND
MATERIALS ENGINEERING & TRAINING CENTER



Pic 2. Guyana is located on the northern coast of South America. Its neighbours include Venezuela, Suriname, and Brazil. Note that Georgetown, the capital of Guyana, faces the Atlantic Ocean. (The photograph was provided courtesy of the United States Geological Survey, 2025.)



Pic 3. This aerial photograph shows two areas of bauxite mining (in yellow circles) in Guyana as well as the location of Georgetown, the capital of Guyana (in a blue circle). The Atlantic Ocean is at the top of this photo, while the Essequibo River is on the left side of this photo, and the Demerara River is on the right side of this photo. The white spots in the photo are clouds. Note that much of the land of Guyana is covered in forests. (The photograph was provided courtesy of the United States Geological Survey, 2025.)



The amount of bauxite exported from Guyana was less than 1% of the total exports of this product from all nations in 2023. This was a substantial decrease from 2019 when Guyanese exports of bauxite represented 4.5% of exports of this product globally. In the intervening years, the percentages were 1.4% in 2020 and 1.3% in each of 2021 and 2022.

Bauxite exports, as a percentage of all exports from Guyana, represented less than 1% in 2023. This compares to bauxite exports being 7.1% of all Guyanese exports in 2019. ^[6]

Three of the largest export markets for Guyanese bauxite – the USA, Germany, and China – remained the same in 2023 as in 2019, though their rankings changed during those five years.

While Ukraine was no longer a major export market for bauxite after 2019, it remained a modest destination in 2020. However, no bauxite from Guyana to Ukraine were reported between 2021 and 2023.

Four export markets for this product that were active in 2019 were no longer destinations for bauxite exported from Guyana in 2023. Guyana did not export any of this product to Ireland, Anguilla, France, or Croatia in 2023.

During the five-year time period from 2019 to 2023, a very small amount of bauxite was imported into Guyana. ^[7]

This information is according to the International Trade Centre (ITC). Unless otherwise stated, statistics detailing imports and exports of bauxite to and from Guyana are approximate and are from the most recent reports issued by the ITC.

Aluminium Ore (Bauxite)

Pic 5. The amount of exported aluminium ore from Guyana decreased dramatically

bauxite sector. Then what happened? The collapse of the sector. Closure of RUSAL.”

The President then detailed the steps taken by the current government to enhance the bauxite industry in Guyana.

“A number of steps were taken by our government to reduce costs, broaden product range, and increase production; because that was the important thing,” President Ali stated. “We had to build back this sector.”

He cited several specific items implemented by the current Guyanese government, including that “The government had issued additional reserves in Kara Kara, which approximates 3.5 million tonnes.”

Additional investments by Bosai Minerals Group, President Ali stated, have led to an increase in bauxite production by more than 250,000 tonnes in 2024, with bauxite production expected to further increase by 400,000 tonnes in 2025.

President Ali also detailed aspects of the expansion efforts of Bosai Minerals Group.

The value of exports of bauxite from Guyana is anticipated to have doubled from 2023 to 2024, according to President Ali. He indicated that exports of bauxite

are projected to have increased to \$163 million in year 2024.

Employment in bauxite production in Region 10 increased by more than 500 workers in 2024 and is expected to increase again in 2025, noted the President. “Another 500 persons will be employed in 2025 with the expansion that is taking place in the bauxite sector,” said President Ali.

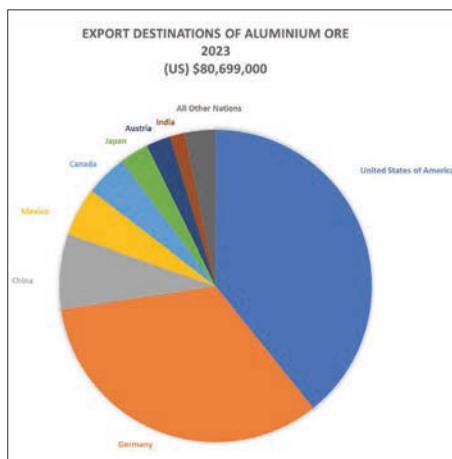
He concluded his speech by explaining that his government’s goal is a growth agenda in the bauxite sector and beyond.

“It’s about investing in the productive capacity of our country,” stated President Ali. “Creating policies and incentives that will enable the small and medium-sized operators to grow, to succeed, to compete, and be successful and to create an incentive mechanism to support the large-scale producers so that they also can expand production.”

Pics 2, 3 and 4.

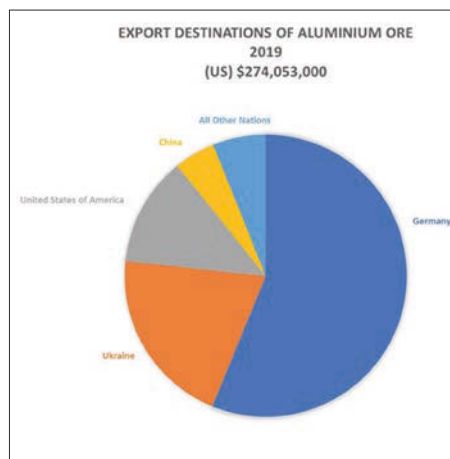
Trade

Guyana was one of the five largest exporters of bauxite (aluminium ore) worldwide in each year from 2021 to 2023 as well as in 2019. ^[5]



Pic 5. Destinations of aluminium ore exported from Guyana in 2023.

(Image created with data provided courtesy of the International Trade Centre.)



Pic 6. Destinations of aluminium ore exported from Guyana in 2019.

(Image created with data provided courtesy of the International Trade Centre.)

from 2019 to 2023. [8] The exported ore was valued at \$274,053,000 in 2019 and \$80,699,000 in 2023. [9]

The exports of bauxite from Guyana in 2019 were almost three-and-a-half times larger than the amount exported in 2023.

In 2019, there were 13 key countries that traded Guyanese bauxite: Germany, Ukraine, the USA, China, Canada, Ireland, Austria, Japan, México, Anguilla, France, Croatia, and Spain. [10]

This decreased to 11 nations in 2023: USA, Germany, China, México, Canada, Japan, Austria, India, Spain, Brazil, and Ecuador. [11]

Exports of aluminium ore to Germany represented more than half of all exports of this product from Guyana in 2019. This represented 56.2% of the exports of this product in 2019. [12] In 2023, the second largest export market for aluminium ore from Guyana was Germany; its share of the export market was 33.1%. [13]

Ukraine was the second-largest export market for aluminium ore from Guyana in 2019. Its share of the export market for this year was 20.5%. [14]

The USA was the third largest destination for Guyanese aluminium ore in 2019. The American share of this export market was 12.5% in 2019. [15] The USA was the largest market for exported Guyanese aluminium ore in 2023; this represented 39.0% of the total export market for this product. [16]

China was the fourth largest destination for aluminium ore exported from Guyana in 2019. Aluminium ore valued at (US) \$12,867,000 was exported from Guyana to China in that year, representing 4.7% of the total export market for this product.

Aluminium ore exported from Guyana, in 2019, to its 13 largest destinations represented 99.0% of all of the exports.

In 2023, these same 13 nations

represented 94.5% of all aluminium ore exported from Guyana.

Aluminium ore exported from Guyana, in 2023, to its 11 largest export destinations represented 99.1% of all of the exports. In 2019, these same 11 nations represented 77.0% of all aluminium ore exported from Guyana.

Pic 6. Pic 7.

Energy storage project

The IMF estimated that the GDP of Guyana was approximately (US) \$24,480,000,000 in 2024, and projected consumer prices in Guyana will increase 5.5% in 2025.

Substantial growth in the energy sector has occurred in recent years in this South American nation. This has especially been the case with oil exploration and production.

On 10 January 2025, the Export-Import Bank of the United States (EXIM) formally signed an agreement with Guyana to provide more than \$526,000,000 in financing for a major energy project. The Board of Directors of the EXIM had approved the financing in a meeting on 26 December 2024.

The funds are slated to be utilised "...to support a gas-to-energy project that will double the Guyana's installed electric capacity and transform Guyana's economy," according to a statement from the EXIM.

"By partnering with the USA and our private sector, Guyana has chosen the best-in-class equipment and a work culture dedicated to high standards and safety," said Reta Jo Lewis, Chair and President of the EXIM. "USA equipment and technology offer reliable, durable, quality solutions for Guyana's development. This deal is a game changer. Not just for Guyana and the USA. But for the people, businesses, and shared aspirations that



Pic 7. This is a sample of bauxite from Demerara-Mahaica Region (Region 4) in Guyana.

(The photograph was provided courtesy of the Pacific Museum of Earth of The University of British Columbia.)

unite our two nations. This historic project and partnership will strengthen Guyana's energy security, [and] double its installed electric capacity, while providing cleaner and more affordable energy for families and businesses."

The specifics for this major project, according to a statement from the EXIM, noted that the financing "...will aid the construction of a natural gas separation plant, a 300 MW combined cycle gas turbine power plant, and services related to the gas supply pipeline near Guyana's capital, Georgetown. This project will allow Guyana to transition to more reliable and cleaner energy for consumers and businesses by using natural gas-powered turbines to generate electricity...This project will result in a reduction of more than 460,000 tonnes of carbon dioxide per year, the equivalent of consuming more than one million barrels of oil."

Among those who attended the signing ceremony was Brigadier (Retired) Mark Anthony Phillips, Prime Minister of Guyana.

"This is indeed a most transformative project, and it is the largest project in terms of size and financing that is embarked upon by the Government of Guyana in the history of Guyana," said Prime Minister Phillips in a press release issued by the Department of Public Information of Guyana on 10 January 2025. "This is the moment that speaks to the power of vision, the strength of partnership, and the enormous possibilities which can arise with shared purpose." ■

Additional Notes:

[1] Guyana produced 1,498,000 metric tonnes of bauxite in 2015, 1,480,000 metric tonnes in 2016, 1,481,000 metric tonnes in 2017, 1,924,000 metric tonnes in 2018, and 1,900,000 metric tonnes in 2019.

[2] The United States International Trade Administration, sourcing data from the Bank of Guyana, reported that production of bauxite in Guyana amounted to 608,168 tonnes in 2020, 618,452 tonnes in 2021, and 705,631 tonnes in 2022.

[3] During a press conference on 14 January 2025, officials with the Ministry of Natural Resources of Guyana stated that Bosai Minerals Group (Guyana) Inc. and Guyana Industrial Minerals (GINMIN) reported 523,732 tonnes of bauxite was produced in 2023 and more than 1.7 million tonnes in 2024.

[4] Dr. Ali became President of Guyana on 2 August 2020. As an international leader, Dr. Ali was Chair of the Caribbean Community (CARICOM) during the first half of 2024.

[5] The country's rankings ranged from number four in 2019, number six in 2020, and number five in 2021, 2022,

and 2023. Guinea, Australia, Brazil, and Türkiye were the countries ranked higher than Guyana in 2023. Five years earlier, only Guinea, Australia, and Indonesia ranked higher than this South American nation in 2019.

[6] Bauxite exports, as a percentage of all exports from Guyana, represented less than 1% in 2023. This compares to bauxite exports being 7.1% of all Guyanese exports in 2019, 2.8% in 2020, 1.9% in 2021, and 1.3% in 2022.

[7] In two of those years, 2021 and 2023, no bauxite was reported to have been imported into Guyana.

[8] Exports of this product decreased from 2019 to 2021, then increased in 2022, and then decreased again in 2023.

[9] Aluminium ore exported from Guyana was valued at (US) \$274,053,000 in 2019, (US) \$79,839,000 in 2020, (US) \$79,273,000 in 2021, (US) \$99,723,000 in 2022, and (US) \$80,699,000 in 2023.

[10] In 2019, Guyana exported (US) \$2,973,000 in aluminium ore to Canada, (US) \$1,995,000 to Austria, (US) \$1,811,000 to Japan, (US) \$1,766,000 to México, (US) \$1,607,000 to Anguilla, (US) \$741,000 to France, (US) \$724,000 to Croatia, and (US) \$605,000 to Spain.

The market share of aluminium ore exported from Guyana represented 1.1% to Canada and less than 1% to each of these other countries in 2019.

[11] In 2023, Guyana exported (US) \$6,154,000 in aluminium ore to China, (US) \$4,073,000 to México, (US) \$3,487,000 to Canada, (US) \$2,405,000 to Japan, (US) \$1,980,000 to Austria, and (US) \$1,172,000 to India. These amounts represented, respectively, 7.7%, 5.0%, 4.3%, 3.0%, 2.5%, and 1.5% of all Guyanese exports of aluminium ore in 2023. Guyana exported (US) \$976,000 of this product in that year to Spain, (US) \$821,000 to Brazil, and (US) \$700,000 to Ecuador.

[12] In 2019, Guyana exported aluminium ore valued at (US) \$154,130,000 to Germany.

[13] Product valued at (US) \$26,740,000 was exported to Germany in 2023.

[14] Aluminium ore valued at (US) \$56,251,000 was exported to Ukraine in 2019.

[15] In 2019, (US) \$34,195,000 of this product was exported to the USA.

[16] Aluminium ore valued at (US) \$31,460,000 was exported from Guyana to the USA in 2023.

ALUMINIUM INTERNATIONAL TODAY

The leading journal for the global aluminium industry. Each issue contains a digest of global news, events, interviews, company and country profiles and regular regional economic briefings.

Choose your subscription package...

PRINT + DIGITAL SUBSCRIPTION

- ✓ 6 print copies and a printed copy of the Aluminium International Today Directory
- ✓ Digital copy of the magazine delivered to your inbox every month
- ✓ Access to our digital archive of past issues, webinars and podcasts
- ✓ Weekly Aluminium International Today newsletter
- ✓ **PLUS** access to all digital issues of Furnaces International

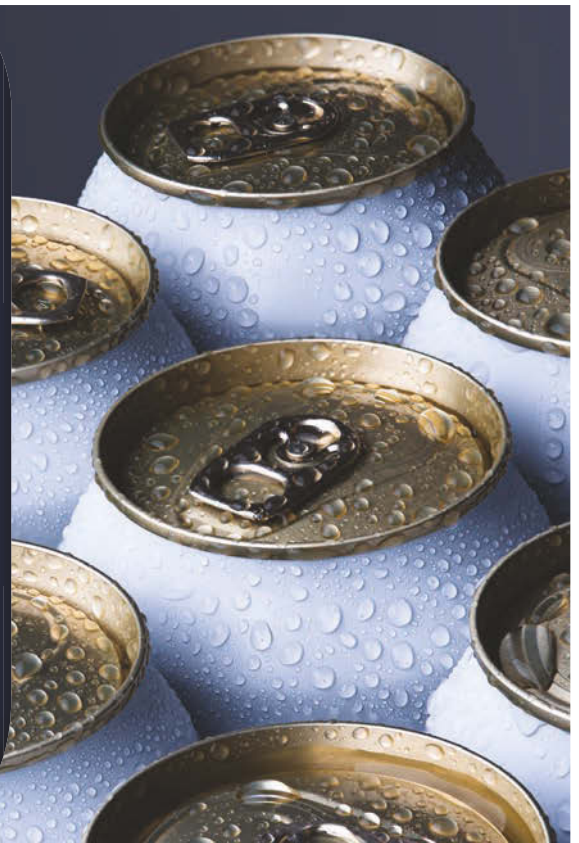


DIGITAL ONLY SUBSCRIPTION

With a digital subscription you will receive all the benefits of the Print + Digital option, excluding print copies!

Contact us today

✉ subscriptions@quartzltd.com to take advantage of our special subscription packages | WWW.ALUMINIUMTODAY.COM

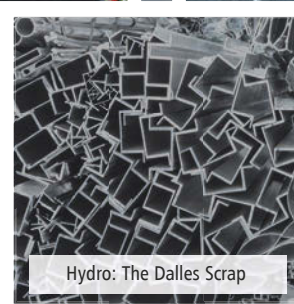




Hydro: Hydro Cassopolis Furnace



Hydro: Cassopolis Operator with Scrap



Hydro: The Dalles Scrap



Hydro: Cressona Bay Zero Scrap Conveyor

The Uncertain Path Ahead

As the push for sustainability and recycled content continues to grow, and production capacity increases, North American aluminium scrap availability remains tight. This trend is expected to persist.

By **Myra Pinkham***

According to Jason Kaplan, Director of Nonferrous Metals Analysis at S&P Global Market Intelligence, aluminium scrap is increasingly being seen as a valuable resource. He explained that as the US is reliant on imports for approximately 44% of its primary aluminium needs, it could benefit from utilising its 'urban' mines by increasing its recycling rates and its remelting of scrap for its domestic use.

There has already been some progress in this direction. Charles Johnson, President and Chief Executive Officer of the Aluminium Association, highlighted that more than 80% of the aluminium used in US factories is recycled. However, while the US aluminium recycling market has been expanding, Bret Biggers, Senior Economist at the Recycled Materials Association (ReMA) – formerly the Institute of Scrap

Recycling Industries (ISRI) – acknowledged that the overall growth rate in 2024 was slower than anticipated.

Concerns remain regarding adequate supply of scrap and other recycled metal as production capacity continues to emerge. Stephen Moss, vice president of Stanton A. Moss, reported that flows of material coming into scrap processors have declined by approximately 10-15% over the past year.

However, despite this decline, demand for aluminium scrap remains positive, especially for mill-grade material.

Kaustubh Chandorkar, Head of North American Aluminium Analysis at CRU, noted that US aluminium sheet demand in 2024 was somewhat subdued, with key markets such as automotive and construction affected by high interest

rates and a seasonal slowdown in electric vehicle (EV) sales. However, he observed that demand has since recovered, ending the year up by 3-4% year on year.

Despite this, Bea Landa, Vice President of Procurement, Planning, and Recycling at Novelis, stated that the US automotive market remains strong, with domestic automakers increasingly incorporating aluminium to reduce vehicle weight, particularly for EVs. She added that the US can-sheet market has remained strong, experiencing 3-4% year-on-year growth. Meanwhile, although the US building and construction market has softened slightly, it remains strong overall with variations across different construction sectors.

US aluminium consumption has increased not only for flat-rolled products but also for extrusions and billets.

* US Correspondent



Hydro: Cassopolis Operator with Scrap

Timothy Chimera, Senior Director of Metal Procurement at Norsk Hydro's Extrusion North America unit, noted a need for an industry push to increase the recycled content in newly produced aluminium to as much as 75%.

Despite positive developments, mixed economic signals persist. ReMA's Biggers pointed out that while GDP increased by 2.9% in 2024, forward-looking indicators such as manufacturing purchasing managers' indices and construction sector indices continue to reduce.

This, he noted, occurs while US inflation rose to 2.8% in December, raising questions over the Federal Reserve interest rate cuts, despite forecasts predicting that core inflation will decrease in 2025 and 2026.

Even though high interest rates typically slow spending on automotive, construction, and equipment, Biggers

stated that demand for recycled aluminium continues because of the expansion of aluminium production capacity.

Chandorkar pointed out that over two million tonnes of new flat-rolled aluminium capacity are expected to come online between 2024 and 2029.

Mike Stier, its vice president of finance and strategy, noted Hydro's projects: Hydro has recently expanded its recycling facility in Cressona, Pennsylvania, by 50,000 tonnes and is installing a new 12-inch indirect extrusion press to replace two older units. In November, Hydro opened an extrusion ingot facility in Cassopolis, Michigan, marking its first US plant to produce Hydro CIRCAL, which contains at least 75% post-consumer scrap.

Other significant investments include Novelis' new Guthrie, Kentucky, facility, which primarily produces automotive ingots as part of the company's target

to achieve 75% recycled content by 2030. Additionally, Novelis is developing an integrated can and auto-sheet mill in Bay Minette, Alabama, scheduled to commence operations in 2026. Meanwhile, Aluminium Dynamics is constructing two remelt slab casting facilities in Mississippi and Mexico, set to launch in 2025-26.

Johnson highlighted concerns that increased remelt capacity could further tighten aluminium scrap availability. However, he maintained that this was ultimately a positive issue, reflecting strong market demand

"But that hasn't hurt the optimism in the US market as it is a great problem to have." – Chuck Johnson

One challenge that aluminium producers face is sourcing scrap, as significant volumes of US aluminium scrap are exported.

Additionally, the price gap between Midwest premium and aluminium scrap has narrowed over the past year, leading to high prices. Sam Padnos, manager of nonferrous trading at Padnos Co., said that this has prompted companies to explore alternative recycling streams that were previously considered to be too dirty, or would have been lost to the export market. Padnos noted that improved sorting technologies have facilitated these efforts, enabling recyclers to "dig deeper into the pile and create more on-specification material streams." He added that recycling technology continues to develop, including those that utilise artificial intelligence, which will further improve sorting.

While sustainability remains a key driver for scrap use, Chandorkar suggested that considerations for Environmental, Sustainability, and Governance (ESG) may be less prioritised in the coming years, especially as a Trump administration rolls in.

Nonetheless, there has been a major push in the US for closed-loop recycling, particularly in the automotive sector, where scrap from manufacturers is increasingly being reclaimed for new vehicle production.

Despite this, recycling rates vary according to the value stream and end use market.

Hydro's Chimera observed the growing demand for recycled content in automotive applications, emphasising the importance of returning scrap from both auto OEMs and part stampers for new auto sheet production.

In contrast, Daria Efanova, head of research at Sucden Financial, commented on the unexpectedly lower recycling rates



Novelis: Bay Minette



Novelis: Guthrie



Novelis: Guthrie

for used beverage cans (UBCs), which declined to 43% in 2023.

Although this still exceeds equivalent recycling rates for glass (39.6%) and plastic (PET) bottles (20.0%), it represents the lowest UBC recycling in decades. As result, the total US aluminium recycling rate is only about 50%.

To combat this issue, the US aluminium industry is campaigning for federal can deposit legislation. Recycling rates in states with deposit laws exceed 60%, whereas those without deposit laws have recycling rates of 30% or lower.

The industry is also pushing for improved infrastructure; "There is a need to improve the infrastructure for collecting cans and processing them," Chandorkar noted. Johnson stated that the Aluminium Association supports broad policy reforms, including increased federal funding to facilitate scrap recovery.

The Aluminium Association also backs two bipartisan bills, the Recycling Infrastructure and Accessibility Act (RIAA) and the Recycling and Composting Accountability Act (RCAA). Although these bills were included in early federal budget proposals, they did not make it into the final legislation.

Meanwhile, uncertainty remains regarding the potential policy changes under a Trump administration, including new import tariffs ^[1]. Chandorkar noted that around 70% of primary aluminium in the US originates from Canada. If a 25% tariff is imposed on Canadian primary imports, prices will rise, further incentivising scrap use and tightening supply. However, some believe this may simply be a negotiating tactic.

ReMA's Assistant Vice President for International Trade and Global Affairs, Adam Shaffer, emphasised the need to engage with the Trump administration early to clarify the implications of proposed tariffs. While he noted his concern regarding the impact on manufactured goods containing recycled content rather than on scrap itself, he acknowledged that tariffs could influence international investments in recycling facilities. "It is a multi-faceted issue," Shaffer explained. "It isn't just whether new tariffs will be imposed upon US scrap exports but also whether overseas companies are going to invest in facilities that want to use recycled content."

"We plan to work with the Trump administration as early as we can to be sure they understand the implications of these proposed tariffs" - Adam Shaffer

US aluminium scrap declined by 0.7% year-to-date through October. US aluminium scrap exports to India and South Korea fell by 12.7% and 15.5% over that time period, respectively, likely due to weaker manufacturing activity. On the other hand, US exports to China, while still low, increased by 47.8%, likely due to the easing of some import restrictions, while exports to Thailand increased by 50%.

Looking ahead, US aluminium scrap exporters could face some headwinds this year given the strong US dollar and the restricted scrap supply. However, Chandorkar predicted that availability could improve in 2025, depending on policy developments and market conditions: "But while we believe that US aluminium scrap availability will continue to tighten over at least the next six to seven months, that could gradually change should demand increases to a point where more scrap comes into the system."

In the meantime, Padnos said that scrap recyclers need to focus on aligning supply with demand and supporting customers in achieving sustainability goals. ■

[1] This article was written before Donald Trump's announcement of tariffs on all steel and aluminum imports into the US on the 9th February 2025.

Novelis PAE

Expert in Casthouse Technology

Centr'Alp BP 24
38341 Voreppe Cedex, France
Tel +33 4 76 57 87 00
pae@novelis.adityabirla.com
www.novelispae.com

Join us
March 23-27, 2025
at TMS 2025, Las Vegas

Visit us May 28-29, 2025
at Aluminum USA,
Stand 811



Autopak®
Automatic hands-free casting – Industry 4.0 ready



Alpur®
High efficiency degasser



Automatic slab vertical DC casting



Jumbo 3CM®
Twin-Roll continuous strip casting

Novelis

The next thing you buy could be made of the last aluminium you recycled.



At Hydro, we're changing the aluminium game by using innovative technology and a higher percentage of post-consumer aluminium scrap to produce premium, recycled aluminium.

Using advanced recycling sourcing and sorting technology, we're turning your old cans and cars into high-quality, lower-carbon aluminium—helping aluminium-dependent industries like automotive and construction meet their sustainability goals.

Our recycled aluminium products offer the same strength and reliability as primary aluminium, with a fraction of the environmental impact.

By choosing recycled aluminium, you're investing in a circular economy where the materials of today become the products of tomorrow. Together, we can shape a more sustainable future.

hydro.com/changingthegame



Industries that matter