



# METEC INDIA

## NEWSLETTER

EDITED & PUBLISHED BY : **STEEL & METALLURGY**  
A COMPLETE STEEL MAGAZINE



# METEC India:

**M**ETEC India is the leading regional event for the metal industry in Maharashtra state. It is held in conjunction with wire India, Tube India and India Essen Welding & Cutting, to create an indispensable event. Riding on the pre-dominant success of METEC India 2022 and METEC 2023 in Düsseldorf (the world's largest and most significant exhibition on the Steel Industry), METEC India 2024 - the 9<sup>th</sup> International Exhibition & Conference on Metallurgical Technology, Processes, Material handling & Services is scheduled from November 27-29, 2024 at Hall 2, Bombay Exhibition Centre, Mumbai.


### HIGHLIGHTS

3* Conferences	398* Exhibitors	500+* Delegates	17350* Visitors	100+* Speakers	23000*m <sup>2</sup> Gross Area
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\*Including wire India, Tube India, METEC India and India Essen Welding & Cutting 2022.


### Exhibitors Testimonials:

We were pleased with the response for METEC India. This is the first time for the Messe Düsseldorf to organize METEC in India and I am more than happy to be here. India is a great market and there has been a lot of customer interaction with our team at the event.




**Mr. Burkhard Dahmen**  
Chairman of the Managing Board & Group CEO, SMS Group GmbH

METEC is very good platform. I would say and most of the Indian companies are here. This is a very good platform to connect with them in Mumbai and I am very confident that the times to come, METEC India will take a much greater shape as India is the second largest producer of steel and needs elaborate exhibition centers and I am hopeful that METEC will play a lead role.



**Mr. V. R. Sharma**  
Vice Chairman, JSP Group Advisory Services Pvt. Ltd.

I have been pleasantly surprised that from the beginning of day 1 of METEC India 2022, the response has been good. We have a lot of customers footfall and I am sure this has benefitted mutually for us as well as the customers.



**Mr. Jyotirmoy Bhattacharjee**  
Sales Director  
RHI Magnesita India

## TOP RESULTS, TOP-LEVEL TALKS AND TOP ATMOSPHERE AT THE BRIGHT WORLD OF METALS IN DÜSSELDORF

- Exhibitors report numerous successful business deals; 78 per cent of visitors plan concrete investment
- Trade fair quartet scores points with 69 per cent international attendance including strong overseas participation (31 per cent)
- Global energy transition topics characterise GIFA, METEC, THERMPROCESS and NEWCAST

**A**fter five eventful trade fair days GIFA, METEC, THERMPROCESS and NEWCAST have clearly exceeded expectations. 63,300 visitors from 114 countries – 58 % of them being decision makers – travelled to the Bright World of Metals in Düsseldorf.

dorf. Approximately 2,200 exhibitors from 56 countries presented the power of the metallurgical industry and set forward-looking impulses with their machines, plants and solutions. Sustainability and Artificial Intelligence were much-discussed topics in the twelve exhibition halls of the four world-leading trade fairs. Investment, also in challenging times for the global economy, spontaneously successful business deals as well as a vivid exchange amongst all parties involved characterised the dynamic atmosphere on the entire fairgrounds. 78 % of visitors are planning concrete investment over the next two years.

“Especially in times of sustainable change it is as important as ever to

**THOMAS SCHLITT**  
MANAGING DIRECTOR  
MESSE DÜSSELDORF INDIA



**I**t is my pleasure to announce the launch of the much-anticipated METEC IndiaNews- letter. This newsletter is the perfect platform to discover trends, updates and insights from the world of metallurgy. The aim of this newsletter is to be your go-to source for stories and news from the entire spectrum of metallurgical technology, processes and metal products.

With the constantly evolving industry, we understand the importance of staying informed and ahead of the curve. Hence, it is our endeavour to provide you with valuable content and platforms for learning and collaborating. For 8 years, METEC India exhibition & conference have hosted a comprehensive trade platform for manufacturers, suppliers, distributors and dealers of metallurgical technology, processes, material handling & services. METEC India Newsletter will add another touchpoint for the stakeholders of the industry to stay informed.

I hope you enjoy the diverse topics that have been meticulously curated and put together in this inaugural issue. I would like to thank Steel & Metallurgy team for editing and publishing this newsletter.





be present here in Düsseldorf and in direct exchange with industry players in order to demonstrate strength in a forward-looking market environment. With their international appeal and high-quality trade audience GIFA, METEC, THERMPROCESS and NEWCAST provided excellent opportunities to do so,” says Bernd Jablonowski, Executive Director at Messe Düsseldorf, summing up the results of the trade fairs.

GIFA, METEC, THERMPROCESS and NEWCAST proved again even more internationality in terms of both exhibitors and visitors: 76 % of the exhibiting companies came from abroad. For visitors this percentage stood at 69 % with a large share from Asia and overseas. “Trade fair at last!” was a sentence frequently heard in the halls, because after four years the international community was able to network again face to face. This underlines the very positive mood in the exhibition halls.

“GIFA, METEC, THERMPROCESS and NEWCAST are covering almost the entire international market,” says Malte Seifert, Director Messe Düsseldorf. The demand for European metallurgy and foundry technology is especially high overseas – and here particularly in India, the USA and China. This is also reflected by the international ranking of countries: here India and the growing market Turkey rank first – followed by Italy, China and France. “This high international attendance on both the exhibitors’ and visitors’ part is a key guarantee for the success of the Bright World of Metals making this trade fair quartet so unique. For metal and foundry professionals from all over the world GIFA, METEC, THERMPROCESS and NEWCAST are an absolute ‘must,’” adds Seifert.

#### INDUSTRIAL TRANSFORMATION AS A ‘SIGNPOST’

Current market developments, enormous challenges such as (skilled) labour shortage, extremely high energy costs that are putting a special burden on German companies, but also the opportunities that the energy transition is bringing – there was a plethora of dominating topics featured at the Bright World of Metals. Possible solutions such as the introduction of an internationally competitive electricity price for industry, for example, were discussed on the first day of the trade fair in a top-level talk between the leading minds in the industry and Mona Neubaur, Minister of Economy, Industry, Climate Protection, and Energy in North Rhine-Westphalia. These topics also determined the lecture programme of the forums and conferences accompanying the trade fairs. The need for digitalisation and the use of artificial intelligence, the will to achieve sustainability as well as changed manufacturing processes are all an expression of the transformation in the energy-intensive industries.

#### MANY IDEAS AND TRENDING THEMES FOR A SUSTAINABLE FUTURE

The focus of the Bright World of Metals on the four key subjects sustainability, digitalisation, circular economy and new production technologies determined activities in the exhibition halls and at the side events – such as the conferences and many ecoMetals formats.

Some 20 metallurgical industry players participated in Messe Düsseldorf’s ecoMetals campaign. Since 2011 Messe Düsseldorf has already supported changing the image of energy-intensive industries towards more sustainability. The fact that the exhibitors at GIFA, METEC, THERMPROCESS and NEWCAST are not only innovative, but are also increasingly producing in an energy-efficient and resource-saving manner, could be experienced live at the ecoMetals Trails.

The opportunities and chances on the path towards a green transformation were also discussed at the ecoMetals Forum in Hall 9. The Forum was organised by VDMA Metallurgy and Messe Düsseldorf for the first time with great success.

In addition to numerous lectures and expert panels on the live stages

in the exhibition halls, interviews were broadcast live from the ecoMetals TV studio on all days of the trade fair, giving the trends additional reach through digital live streams.

The next Bright World of Metals comprising the leading trade fairs GIFA, METEC, THERMPROCESS and NEWCAST will feature on the agenda in 2027; the exact dates will be announced over the next few months.

## FUTURE MARKET MIDDLE EAST AND NORTH AFRICA

### Premiere for GIFA and METEC Middle East Africa

In two months’ time, the four newcomers GIFA Middle East Africa, METEC Middle East Africa, wire Middle East Africa and Tube Middle East Africa will celebrate their premiere at the Egypt International Exhibition Center in Cairo/Egypt.

From 2 to 4 September 2023, technological highlights from the individual trade fair sectors will be presented as part of the established Egyptian trade fair METAL & STEEL EGYPT.

AGEX (Arabian German Exhibitions & Publishing Ltd) has already been organising the successful METAL & STEEL EGYPT since 2010, which offers a comprehensive range of machinery, equipment and products from the steel and metal industry for the Middle East and North Africa.

For the eagerly awaited trade fair quartet already 55 exhibitors from 13 countries have registered. They will occupy an area of 1,032 square metres. Registrations for all four events are still possible.

For GIFA and METEC Middle East Africa, Sarah Möller is looking forward to receiving your registration at MoellerS@messe-duesseldorf.de, Cem Bagci and Patrick Hayek are accepting registrations for wire and Tube Middle East Africa at BagciC@messe-duesseldorf.de and HayekP@messe-duesseldorf.de.

“With Egypt, the Middle East and North Africa, we offer many of our customers new, promising regions. Investing here can be a decisive step towards sustainability for a company”, add Malte Seifert and Daniel Ryfisch, Directors of the homebase fairs GIFA, METEC, wire and Tube at the Düsseldorf location.

## THE BRIGHT WORLD OF METALS ON COURSE FOR EXPANSION: MESSE DÜSSELDORF EXTENDS ITS PORTFOLIO TO INCLUDE GIFA MEXICO 2024



By holding GIFA Mexico from 16 to 18 October 2024 in Mexico City, Messe Düsseldorf will not only provide enterprises from Mexico and the region with a new platform for the global metallurgy and foundry industry but also give international exhibitors and industry experts a unique opportunity to build their business relations and gain a foothold on the emerging Mexican market. Together with the world-leading trade fairs GIFA, METEC, THERMPROCESS and NEWCAST, held as “The Bright World of Metals” at the homebase Düsseldorf from 12 to 16 June 2023, and its satellite events in India, Southeast Asia and Indonesia, GIFA Mexico will become the hub for innovations, know-how and business opportunities in the metal-working industries next year.

Mexico is gaining in importance as an emerging market located between the USA and Latin America, and in this key position constitutes an important growth market for the global foundry and metallurgy industry. Demand for cast components is rising, especially strongly from the Mexican automotive industry. Worth a total of US\$ 41.6b, cars are the country’s most important export goods, followed by car components (US\$ 27.1b), computers (US\$ 31.5b) and delivery vans (US\$ 23.8b). This is why Mexico holds particularly high potential in the segments of die-casting technology



and aluminium casting and is of tremendous importance to equipment providers and upstream suppliers serving die-casting companies. A major share of the metal die-casting production is accounted for by aluminium, grey iron (29% each) and ductile iron (20%). Far more than half of the output (63%) goes to the automotive sector, in which more and more international industrial groups are establishing production sites in Mexico. These are decisive reasons for Messe Düsseldorf to enter the Mexican market – initially as an investment business with GIFA Mexico held as part of the long-established Mexican trade fair FUNDIEXPO. GIFA Mexico is planned to run every two years from 2024.

“Mexico is a booming international location offering vast growth potential especially for the foundry industry. This is why we are consistently expanding Messe Düsseldorf’s “Metallurgy & Foundry Technology” portfolio to include GIFA Mexico. Following METEC India (2004), GIFA and METEC Southeast Asia (2022), GIFA and METEC Middle East Asia (2023), GIFA and METEC Indonesia (2023), GIFA Mexico forms the next milestone,” rejoices Malte Seifert, Director Portfolio Metals, Energy & Autonomous Technologies.

Since 1960 the leading trade fair for the metal and foundry industry, FUNDIEXPO, has been a firm fixture in Mexico’s event calendar. It is organised by the Mexican Foundry Society, A.C. (Sociedad Mexicana de Fundidores, A.C./ SMFAC), the internationally acting partner of Messe Düsseldorf.

Mexico’s appeal for foreign investors is reflected by the fact that 1,900 companies from Germany are already engaged locally. In addition, Mexico is a focal country of the Federal Ministry of Economic Co-operation and Development (BMZ) and the Society for International Cooperation (GIZ). With its just under 130 million inhabitants, large crude oil and gas deposits as well as rich mineral resources such as gold, silver, lead, zinc and copper, Mexico is an attractive destination especially for European and German investors and is considered the USA’s extended workbench.

GIFA Mexico will cover a comprehensive spectrum of machinery, plant, materials and technological innovations ranging from additive manufacturing and foundry machines to castings for a variety of application industries – from the automotive industry, construction and the energy and gas industry to users from metal works and steel mills.

Those interested in exhibiting at GIFA Mexico as a participating business in FUNDIEXPO from 16 to 18 October 2024 can register with Ms Sarah Möller at MoellerS@messe-duesseldorf.de. Further information will be available shortly at [www.gifa-mexico.com](http://www.gifa-mexico.com).

## THYSSENKRUPP NUCERA: ANOTHER COMPANY PURCHASES GREEN HYDROGEN

Another company has signed a reservation agreement with thyssenkrupp nucera for production capacities for its highly efficient water electrolyzers for the production of green hydrogen. For a project in North America, the company has contractually secured the supply of the standardized 20 MW “scalum” electrolysis modules with a total installed capacity in the high three-digit MW (megawatt) range.



thyssenkrupp nucera offers reservation agreement for green hydrogen production capacities.

The “scalum” modules from the supplier of world-leading technologies for high-efficiency electrolysis plants can be used to produce green hydrogen on an industrial scale. The company needs the alkaline water

electrolyzers to implement its growth strategy in the green hydrogen market. The two companies have agreed not to disclose further details of the contract.

This is the second time in just a few months that a company has decided to take advantage of a reservation agreement offered by thyssenkrupp nucera to secure its supply chain at an early stage. Due to the very dynamic growth of the market for green hydrogen, demand for the climate-neutral energy carrier and thus thyssenkrupp nucera’s solution for the production of green hydrogen on an industrial scale is very high. “With our capacity reservation agreements we enable companies to plan with greater certainty for projects in the megawatt and also gigawatt range. This allows us to help our customers realize their expansion plans in the fast-growing green hydrogen market. The hydrogen economy is picking up speed in North America and will certainly set the global pace in the coming years. With this agreement, thyssenkrupp nucera has reached an important milestone for its third project in this important key market,” said Dr. Christoph Noeres, Head of Green Hydrogen at thyssenkrupp nucera AG & Co. KGaA.

### RESERVATION AGREEMENT FOR PRODUCTION CAPACITIES

H2 Green Steel was the first company to secure production capacity by signing a reservation agreement and later signed a supply agreement with thyssenkrupp nucera. The industrial start-up from Sweden is using thyssenkrupp nucera’s large-scale electrolyzers to produce green hydrogen for the first commercial-scale green steel plant in Europe. With a total installed capacity of more than 700 megawatts, one of the largest water electrolysis plants in Europe is also being built.

thyssenkrupp nucera has already signed binding contracts for more than 3 gigawatts of alkaline water electrolysis capacity. These include a more than 2 GW electrolysis plant for Air Products in Saudi Arabia, making it one of the world’s biggest green hydrogen projects, the supply of Shell’s new 200 MW hydrogen plant in the port of Rotterdam, and H2 Green Steel’s green steel mill. These reference projects prove that thyssenkrupp nucera is a leading global technology provider for industry in the range of several 100 MW up to the gigawatt power range.

## ARCELORMITTAL HAMBURG USES GRANULATED MUNICIPAL WASTE AS SUBSTITUTE FOR COAL IN EAF

By adding granulated municipal waste material to its electric arc furnace process, ArcelorMittal will be able to half the use of coal at its Hamburg electric steelworks. This will save valuable resources and further reduce CO2 emissions.

### TESTS WITH SEWAGE SLUDGE AND PAPER

The innovative granulated waste product is the result of two years of development, during which a wide range of materials were examined and tested. “We tested materials as diverse as sewage sludge, paper fibers, specially prepared orange peel, and non-recyclable waste,” says Project Manager Michel Wurlitzer.

### CONVEYABILITY GUARANTEED

German technology provider Stein Injection Technology GmbH made



ArcelorMittal uses granulated municipal waste material to substitute coal in its EAF (photo: ArcelorMittal)

an important contribution to the success of the project. The company tested the materials’ conveying properties with its injection technology to ensure good conveyability.

Eventually, granulated materials from municipal waste proved to be best suited as a coal substitute. The biogenic carbons contained in paper and cotton fibres, for example, and hydrogen present in this kind



of waste made it best suitable for this process.

SUBSTITUTE PRODUCT BURNS EMISSION-FREE

The process takes place at a steel bath temperature higher than 1,600 °C. This ensures that the municipal waste added to the steelmaking process as granules burns completely, without residues. “Our off-gas analyzes have shown that the substitute product does not cause any measurable emissions,” adds Wurlitzer.

ArcelorMittal expects that the new product made of material from municipal waste will achieve annual CO2 savings of about 3,500 t at its Hamburg steelworks. Through this, the steelmaker is making a further contribution to the decarbonization of steel production.

POSSIBLE IMPROVEMENT OF THE MOST RESOURCE-INTENSIVE INDUSTRIES THROUGH METAL 3D PRINTING



Politecnico di Milano is leading an international consortium dedicated to improving resource efficiency in the construction and automotive sectors through metal 3D printing. The consortium’s goal is that additive manufacturing technology will help usher in a new era of increasing customization and optimization, allowing companies to reduce waste and energy consumption during the steel manufacturing process.

30% of all waste produced annually in the EU comes from the construction and demolition industries, according to the European Commission. That’s why an international research project coordinated by Politecnico di Milano is focused on reducing the carbon footprint of the sector and the automotive industry through innovative 3D printing technology for steel.

CONSTRUCTADD

ConstructAdd is funded by the European Coal and Steel Research Fund and brings together companies, technology, and research centers from five European countries to improve resource efficiency in the steel industry.

*“The main goal of ConstructAdd is to bring metal 3D printing technology into regular use in the construction and automotive industries. This is because the current goals of governments around the world and society at large are to reduce carbon emissions and address waste issues. These problems, which are particularly challenging for the construction industry, cannot be easily solved with conventional techniques, simply because conventional techniques were invented for problems from the past,” said project coordinator Dr. Alper Kanyilmaz.*

Specifically, ConstructAdd aims to demonstrate that the adoption of metal 3D printing can reduce energy consumption by about 30% and generate less waste during manufacturing. In addition to the Politecnico di Milano, ConstructAdd’s project partners include the IMDEA Materials Institute in Madrid, the University of Pisa, RWTH Aachen University, Prima Industrie S.p.A., BLM Group, Det Norske Veritas, CIMOLAI SPA, VALLOUREC, MIMETE and ArcelorMittal Vitry.

“In view of the fact that around one third of all waste generated worldwide each year comes from the construction industry, steel production has an important role to play here. The manufacturing processes currently available cannot be easily optimized, and a lot of material is wasted. For example, in the cutting and welding of steel plates. In addition, conventional design techniques use a lot of material in places where it is not needed and place it in unnecessary places,” says Dr. Kanyilmaz.

This is where 3D metal printing becomes relevant. Printing custom parts and connections from scratch eliminates the production of scrap

metal that would otherwise be a byproduct of making parts from an existing steel plate. The manufacturing process can be streamlined, and it allows greater flexibility for contractors, who can print specific components on-site instead of relying on them to be shipped.

*“When we talk about additive manufacturing, there are already some very interesting results in other industries. For example, some small houses are being built out of concrete using this method. Steel comes into play when printing critical components that can be integrated into larger structures. Steel is much more resistant and ductile compared to other materials. So it offers more opportunities to produce more complex geometries that can withstand higher loads and fatigue,” Kanyilmaz says.*

Steel 3D printing is particularly attractive to the construction industry because of its high strength-to-weight ratio, tensile strength, flexibility, and versatility. The EU is currently the world’s second-largest steel producer after China, producing more than 170 million tons of the metal annually.

GERDAU TASKS PRIMETALS TECHNOLOGIES WITH ENGINEERING AND SUPPLY OF ONE-OF-A-KIND POWER SOLUTION

- First 69-kV STATCOM for use with an electric arc furnace in North America to be implemented at Gerdau’s Petersburg plant
- STATCOM will stabilize local electrical grid at connection point
- Power solution has capacity to accommodate future production demand from electric arc furnace

Primetals Technologies has won a contract to provide the Gerdau Petersburg plant in Virginia, U.S.A., with a 69-kV static synchronous compensator (STATCOM) to support the operation of the plant’s alternating current electric arc furnace (AC EAF). Once commissioned, it will be the largest industrial STATCOM ever implemented at a steelmaking plant in North America.

GRID STABILIZATION

In steelmaking, large and varying electrical loads coming from electric arc furnaces (EAF) may cause disturbing effects in the electrical supply system. The disturbance is caused by fluctuations in reactive power and/or unsymmetrical loads. A STATCOM mitigates flicker by providing or absorbing reactive current at the point of connection between the mill’s electrical distribution infrastructure and the utility power system. The 69-kV STATCOM with an insulated-gate bipolar transistor (IGBT) module provides a dynamic and fast response, which cannot be achieved by a conventional static voltage compensator (SVC) system with thyristor-controlled reactors. Implementing complex technology



In 2022, Primetals Technologies worked with a team at the Gerdau Petersburg plant to develop the conceptual design for the 69-kV STATCOM and model AC EAF operation under present and future conditions. Gerdau Petersburg has accepted the conceptual design for the project and groundbreaking is imminent. All work will be completed within the next 27 months.

This order demonstrates Gerdau’s confidence in the Primetals Technologies team. Implementing such complex technology requires deep knowledge of AC EAFs and grid-level electrical power systems —expertise that differentiates Primetals Technologies from most electrical power designers.

KEY FACTS: THE STATCOM AT GERDAU PETERSBURG

Most STATCOMs used in steelmaking operations have a direct-connection voltage of only 13.8 kV or 34 kV. This STATCOM provides 69 kV, which the Gerdau Petersburg plant will use to:

- Ensure continuity of operation for the current plant and its 69-kV primary AC EAF transformer
- Double dynamic reactive power support
- Sustain AC EAF production volume without any impact on the power grid of the electrical utility