

## PRESS RELEASE

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Luxemburg, February 23, 2021

# **LIBERTY, Paul Wurth and SHS - Stahl-Holding-Saar to develop major hydrogen-based steel making plant in France**

- **LIBERTY Steel, Paul Wurth and SHS - Stahl-Holding-Saar sign Memorandum of Understanding to develop a major hydrogen-based steel making plant in France**
- **Pan-European partnership will assess the development of a 1 GW hydrogen plant and 2 million tonne DRI plant next to the ALVANCE Aluminium Dunkerque site**
- **An important step in LIBERTY's GREENSTEEL strategy and ambition to be carbon neutral by 2030**

LIBERTY Steel Group, part of Sanjeev Gupta's sustainable industry leader GFG Alliance, has signed a Memorandum of Understanding (MoU) with Paul Wurth and SHS - Stahl-Holding-Saar (SHS) to assess the building and operating of an industrial-sized, hydrogen-based steel making plant at Dunkerque in France. If developed, the plant would be one of the first operations of its type in France.

The pan-European partnership will work together on a project to incorporate a 2 million tonne Direct Reduced Iron (DRI) plant, with an integrated 1 GW capacity hydrogen electrolysis production unit, next to GFG's ALVANCE Aluminium Dunkerque site. The DRI plant will initially use a mix of hydrogen and natural gas as the reductant to produce DRI and hot-briquetted iron (HBI), before transitioning to using 100% hydrogen once the

electrolysis production unit is complete. The DRI/HBI produced will primarily be used in the electric arc furnace of LIBERTY Ascoval in France but any surplus will be used at LIBERTY's Ostrava and Galati integrated steelworks as well as the SHS-group's Dillinger and Saerstahl plants in Germany.

LIBERTY has been working with Paul Wurth and SHS on the technical and economic viability of the project since early last year. Now that initial feasibility work has proved successful the partners have signed a MoU which covers two phases:

- **Phase 1** – will improve the accuracy of the project's commercial and technical feasibility including the reducing gas mix, potential partners (energy supply, hydrogen production and operation, DRI/HBI equipment etc) and funding opportunities. This phase is expected to take around 12 weeks; and
- **Phase 2** - deliver the level of detail required (technically and financially) for the effective implementation of the project. This phase will be determined as part of Phase 1.

Between them the partners are strategically focused on developing technology which will allow the steel industry to achieve its ambitious green targets, with LIBERTY undertaking carbon neutral programmes worldwide as part of its ambition to be carbon neutral by 2030. Paul Wurth is a Luxembourg-based company, and member of the SMS group, which has a proven track record as a plant builder and service provider. Through its partnership with Sunfire, a German technology provider which develops high performance electrolyzers for highly efficient hydrogen generation, Paul Wurth is looking to drive the maturity of this technology for industrial application. SHS - with both companies Dillinger and Saerstahl - is a highly regarded German steel producer. The SHS-group is dedicated to the goals of the Paris Climate Agreement and is committed to producing iron and steel with a reduced CO2 footprint. The partners will consider using other hydrogen producers as part of the project.

Commenting on the news, Sanjeev Gupta, Executive Chairman of GFG Alliance and LIBERTY Steel Group, said: "This project will realise the potential of steel and hydrogen working together to solve each other's problems. Our industry needs to reinvent steel production fast, as the need to cut our emissions gets ever more pressing against a backdrop of rising global

demand for our products and legislative pressure to become carbon neutral. Hydrogen steel making has the potential to solve this issue and we're determined to collaborate with like-minded partners to make it happen. France is the ideal place to try, thanks to its strong industrial heritage, skilled workforce and low carbon energy infrastructure. Together with these technologically advanced and committed partners we are looking forward to exploring the potential for truly carbon neutral steel making, using green hydrogen to help us make GREENSTEEL products."

Georges Rassel, Chief Executive Officer at Paul Wurth, said: "Paul Wurth is delighted and thankful to support LIBERTY Steel Group in its GREENSTEEL agenda. We are convinced that this project will contribute to paving the way for the urgently required technology switch in the metals industry."

Martin Baues, Member of the Board of Directors for Technology at SHS - Stahl-Holding Saar, Dillinger and Saarlouis, said: "Despite the high hurdle of immense investment and operating costs, Dillinger and Saarlouis are determined to consistently pursue the path to climate neutrality. This partnership represents an important building block on the way to carbon neutral steel production and will help us to further reduce our carbon emissions on the basis of this technology and at the same time gain important experience in the use of hydrogen in steel production."

**Further information from:**

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**Note to Editors:**

**LIBERTY Steel Group** is a global steel and mining business with a rolling capacity of over 20 million tonnes per annum (mtpa), a liquid steel capacity of over 14mtpa and has around 30,000 employees and contractors based in more than 200 locations worldwide. LIBERTY is now the 8<sup>th</sup> largest steel manufacturer globally (excluding China). LIBERTY is part of GFG Alliance, a collection of global businesses and investments focused on the metals and renewable energy sectors owned by Sanjeev Gupta and his immediate family. GFG Alliance is a leader in sustainable industry with a mission to become Carbon Neutral by 2030 (CN30).

For more information please visit [www.gfgalliance.com](http://www.gfgalliance.com).

**Paul Wurth:** Headquartered in Luxembourg since its creation in 1870, the Paul Wurth Group can look back on 150 years of excellence, during which the firm has developed into an international engineering company and an established technology provider for the global ironmaking industry. As a company of SMS group, Paul Wurth is a leading market player for the design and construction of complete blast furnace and coke oven plants. Direct reduction plants, environmental protection solutions and recycling technologies complete Paul Wurth's product portfolio. Presently, the company is focusing on the development of innovative solutions for leading the transformation of the steel industry towards carbon-free steel production. With more than 1500 employees, Paul Wurth is active worldwide, operating entities and affiliated companies in the main iron and steelmaking regions of the world.

For more information please visit [www.paulwurth.com](http://www.paulwurth.com)

### **SHS -Stahl-Holding-Saar (SHS)**

SHS was established in 2010 as an operational management holding company, which has since actively taken on tasks for the Saarland steel industry. This has enabled the Dillinger and Saarländische Stahl companies to work more closely together beyond the previously existing cooperative ventures and to have a stronger presence in their markets. They are working in unison to grow, to become more flexible and to increase competitiveness

in their respective markets.

### **About Dillinger and Saerstahl**

Dillinger is a world leader in the manufacture of steel heavy plate for the steel construction, machine manufacturing, offshore, offshore wind power and line pipe sectors. Saerstahl is a world leader in the manufacture of wire rod and bar steel for the automotive industry, the construction industry and for general machine manufacturing.

More information can be found at [www.dillinger.de](http://www.dillinger.de) or [www.saerstahl.de](http://www.saerstahl.de) .

*SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of more than EUR 2.9 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.*