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thyssenkrupp Steel, HKM and Port of Rotterdam jointly investigate setting up hydrogen supply chains

German steel companies thyssenkrupp Steel and HKM and the Port of Rotterdam jointly investigate setting up international supply chains for hydrogen. In the course of their transformation paths towards climate-neutral steel making, thyssenkrupp Steel and HKM are going to require large and increasing quantities of hydrogen to produce steel without coal. For decades, both companies have been importing coal, iron ore and other raw materials via their own terminal in Rotterdam, using inland barges as well as rail to transport it to their blast furnaces in Duisburg.

Together, the partners will explore hydrogen import opportunities via Rotterdam as well as a possible pipeline corridor between Rotterdam and thyssenkrupp Steel's and HKM's steel sites in Duisburg. The partnership may serve as a framework for additional initiatives and aims at supporting existing initiatives and projects the partners are involved in.

The Port of Rotterdam is already investigating the import of hydrogen from a large number of countries and regions all over the world. Green hydrogen is a sustainable alternative to coal, oil and natural gas. Vast imports of hydrogen are necessary if Europe and Germany want to reduce CO₂ emissions and become climate-neutral by 2050, while maintaining its strong industrial backbone. Rotterdam is also setting up a carbon transport and storage system, Porthos, which is also being considered as a CO₂ storage site for the production of blue hydrogen by the "H2morrow steel" project, which includes thyssenkrupp Steel as partner as well.

The three partners agree that new, cross-border infrastructure is required to support the energy transition, especially additional pipeline structure is needed. A concrete and significant demand for hydrogen from the steel industry as an alternative to coal as well as the options to store CO₂ can work as a stimulus for the realization of this infrastructure. The cooperation between Rotterdam as Europe's largest port and Duisburg as Europe's largest steel site can have a signaling effect to establish supply chains for the energy transition, building an important sustainable European industry and logistics cluster.



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*The aim of the **Port of Rotterdam** Authority is to strengthen the competitive position of the port of Rotterdam as a logistics hub and a world-class industrial complex in terms of both size and quality. The Port Authority is able and willing to make an impact and so it is focusing on accelerating sustainability in the port and it is a partner in the digitalisation of the port and logistics chains. The Port Authority's core tasks are the sustainable development, management and operation of the port, the maintenance of the smooth and safe handling of shipping and supporting the future-resilience of the port of Rotterdam.*

Port area: 12,500 hectares (land & water, including approximately 6,000 hectares of industrial sites). The port area is more than 40 kilometres long. Employment: (direct and indirect) 385,000 jobs in the Netherlands. Goods throughput: approximately 440 million tonnes of goods a year. Shipping: approximately 30,000 seagoing vessels and 100,000 inland vessels annually. Added value: (direct and indirect) €45.6 billion, 6.2% of Dutch GDP.

*The **Hüttenwerke Krupp Mannesmann (HKM)** are based in the south of Duisburg and are a subsidiary of thyssenkrupp Steel Europe AG, Salzgitter Mannesmann GmbH and Valloire Tubes S.A.S. HKM got 3.000 employees and is producing about four to five million tons of steel in a year, with a share of 12% of the steel production in Germany. The focus is on the production of slabs and round bars, which are further processed within the parent companies.*

***thyssenkrupp Steel Europe** is one of the world's leading suppliers of carbon steel flat products. With around 27,000 employees, the company supplies high-quality steel products for innovative and demanding applications in a wide variety of industries. Customer-specific material solutions and services around steel complete the range of services. With a production volume of approximately 11 million tonnes of crude steel annually, thyssenkrupp Steel is the largest flat steel producer in Germany.*