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A reliable partner: KAMAG IHT for sustainable steel production in Salzgitter

Using special technology, Salzgitter AG plans to produce steel in future by means of an almost climate-neutral process. Steel scrap is also required for the production which the steel manufacturer transports with the KAMAG IHT. Salzgitter Flachstahl, a subsidiary of the company, has purchased several of TII KAMAG's industrial lift transporters in order to maintain the logistics chain in the round-the-clock operations. The special vehicles, each with a payload of around 350 tonnes, greatly impress through a very high level of safety, excellent reliability and cost-effectiveness as well as state-of-the-art operating comfort.

In the coming years, Salzgitter AG will be gradually converting its steel production to a virtually climate-neutral technology as part of the SALCOS® (Salzgitter Low CO2 Steelmaking) program. This is made possible with the help of so-called direct reduction plants whereby iron ore is reduced directly to iron in a solid state using green hydrogen. Unlike conventional blast furnaces that use coal, only water vapour and no climate-damaging CO2 escapes into the atmosphere.

In order to be able to process the resulting sponge iron efficiently and sustainably, it is melted together with steel scrap in an electric arc furnace. The steel producer transports the scrap metal in six-metre-high and wide scrap baskets on industrial lift transporters (IHT) from TII KAMAG, a subsidiary of the TII Group, the industry expert for intra-company transport assignments. A key requirement of Salzgitter AG is having particularly stable and reliable vehicles so that the logistics chain can be maintained at all times thus ensuring that the expensive-to-run facility plant can be operated around the clock.

State-of-the-art: Salzgitter uses redundant obstacle detection by means of laser and radar sensors

"The KAMAG IHT at Salzgitter AG corresponds to the highest state-of-the-art technology and is characterised, among other things, by a wide range of safety systems," according to Area Sales Manager, Dr. Ulrich Veyhl. This includes optional obstacle detection which is designed to protect the vehicle as well as its surroundings. The innovative system has been specially adapted to suit the customer's vehicles and designed redundantly to ensure a particularly high level of safety even when individual sensors are not available.

Four laser scanners monitor the vehicle's immediate vicinity; they are secured by eight radar sensors complete with the same function. If the assistance system detects an obstacle in the monitoring area, it causes the transporter to brake until it comes to a standstill. The driver can see where the obstacle is via the display in the cab and can leave the danger area at only minimal speed. To facilitate driving under the scrap basket pallet, the monitoring area for the width of the load carrier can be deactivated.

Innovative assistance systems increase the service life of vehicles and load carriers

The so-called Pathfinder Palette System is also part of the optional equipment. At the push of a button, the assistance system supports the driver when driving under the scrap basket pallet by independently

aligning the bogies of the pendulum axles and steering the IHT precisely under the pallet while the driver needs only to accelerate or brake the vehicle. As a result, the driving under procedure causes less wear and tear on the vehicle and load carrier thus increasing the service life of both. Various cameras complement the operator's direct view when reversing whereby a blue spot marks the vehicle's path so that people in the area are aware of the IHT while a beeper acoustically warns the driver of an obstacle.

An additional highlight of the electronic multi-directional steering system is the transverse steering program. This allows the IHT to manoeuvre between the buildings on the factory premises in an extremely space-saving manner. The spacious overfloor cabin with excellent visibility meets all the vehicle operator's requirements for a modern, ergonomic and safe workplace; an underfloor cabin is available as an alternative.

Service-friendly, high availability and robust construction facilitate low operating costs

In addition, the KAMAG IHT generation of vehicles, which was recently launched on the market, distinguishes itself through its high level of serviceability. The IHT's engine unit is now accessible through a large flap on the side of the vehicle when maintenance and service are required, and can also be quickly removed using a forklift. This reduces downtime, increases availability and thus contributes to ensuring that operating costs are kept to a minimum. Remote access, which enables TII KAMAG service technicians to provide rapid assistance when needed and avoid any travel costs, further contributes to the high level of vehicle availability.

TII KAMAG offers the steel industry sector a comprehensive range of vehicles

The KAMAG IHT is available to accommodate payloads from 40 to 400 tonnes and is suitable for the transport of sheet metal, slabs, coils and beams as well as scrap pallets and buckets. TII KAMAG and TII SCHEUERLE have been building these vehicles for more than 50 years and have several hundred units in operation with customers in the metallurgy sector worldwide. Practical experience has been incorporated into the further development of the KAMAG IHT and has made it one of the leading products in this segment. Furthermore, TII KAMAG supplies the steel industry with a comprehensive range of special vehicles for the transport of scrap, molten steel, slag, slabs and semi-finished products and provides all operators with an efficient service network, a 24-hour supply of spare parts and high-quality training.

Photo



Company profile

The TII Group, a company owned by the Heilbronn-based Otto Rettenmaier family, is a globally active manufacturer of heavy-duty and special vehicles and has a workforce of around 900 employees. The Group includes industry specialists, TII SCHEUERLE and TII KAMAG, and has production sites in Germany and India along with a worldwide organisation of sales and service partners. With innovative vehicles for manoeuvring and transportation operations, the TII Group, which is listed in the index of world market leaders, supports its customers in the transport and logistics sectors, building industry, plant engineering, air and space travel, shipbuilding, energy, steel and mining as well as yard logistics for realising a wide range of complex transport tasks. The TII Group holds the current world record of over 23,000 tonnes for transporting extremely heavy loads on vehicles. TII stands for the tradition of innovation, customer orientation and partnership as well as for high product quality and sustainability in heavy-duty mobility.

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