

## Press Release

### **Gottwald Launches New E AGV with Diesel-Electric Drive – First Order from CTA Hamburg, Germany**

*Antwerp (Belgium), TOC Europe 2005, 15 June 2005* – Gottwald Port Technology, the world's first and to date only supplier of Automated Guided Vehicles (AGVs) for automated container handling in ports, has launched a new E AGV series with diesel-electric drive as an addition to the existing diesel-hydraulic AGVs. The first 11 units of the new Gottwald E AGVs will be supplied to HHLA's Container Terminal Altenwerder (CTA) in the Port of Hamburg, one of the most modern, fully automated container terminals in the world.

Gottwald's AGVs have been on the market for more than 15 years now. More than 300 units are in operation or on order worldwide. With pinpoint accuracy, these unmanned vehicles move containers between quay and stackyard, fully automatically, and fast, guided by transponders embedded in the ground and controlled by Gottwald's navigation and management software that can easily be integrated into a host terminal management system.

#### **New Diesel-Electric E AGVs**

The new diesel-electric E AGVs are similar to the known diesel-hydraulic AGVs in that they offer the same handling features. The difference: they use another drive technology. The standard diesel-hydraulic drive has been replaced by the diesel-electric concept, a design that has already successfully been implemented in Gottwald Mobile Harbour Cranes and that offers a superior degree of efficiency, exceptional reliability and overall cost savings. The advantages in a nutshell are: cuts in fuel use, reduced maintenance requirements, greater availability, enhanced performance, and last but not least environmental benefits, thanks to significantly reduced noise emissions and diesel consumption. Together these features have a productivity boosting effect for the customer: Commenting on the new product line, Dr. Mathias Dobner, Gottwald's Chief Technical Officer (CTO), said: "As the world's leading supplier of Mobile Harbour Cranes, with more than 950 cranes sold globally, Gottwald is renowned for its diesel-electric drive concept. Now that we have incorporated this know-how into the AGVs, terminal operators can choose between two types of AGVs

according to their individual requirements. The new product line again exemplifies Gottwald's commitment to constantly review and further develop the products to meet current and future technical and commercial demands.”

### **New E AGVs for HHLA Container Terminal Altenwerder (CTA)**

First customer for the new E AGV is HHLA's Container Terminal Altenwerder (CTA) in the Port of Hamburg. Since 2002 CTA relies on AGVs and in the meantime operates a fleet of 53 AGVs with diesel-hydraulic drive, complete with navigation and management system. Ingo Witte, Managing Director of CTA, comments on the fleet expansion with the new E AGVs: “The high productivity in our container terminal is guaranteed to a large extent by Gottwald's AGVs. Over the years, the existing AGV system in our terminal has proven its reliability and performance. Since we know that Gottwald can draw on extensive production experience with the diesel-electric concept, we trust that the new E AGV series with its competitive features will further enhance productivity and lead to further cost reductions, helping us deliver competitive service to our customers also in future.” The 11 new E AGVs type CT 60-E for CTA Hamburg will be supplied in two stages. The first unit – a pilot equipment for pre-qualification testing – will be delivered to CTA in January 2006, the remaining 10 units are due for delivery in April 2006.

### **E AGVs – Technical Details**

The new diesel-electric E AGVs feature the same functionality as the diesel-hydraulic AGVs already in operation at CTA. Designed for all container sizes the E AGVs type CT 60-E can carry one 20-ft to 45-ft container or two 20-ft containers. Maximum loading weights are 40 tonnes for a single container or 60 tonnes for two 20-ft containers. Refuelling is automatic – carried out by means of a robot refuelling vehicle. Both axles are steered independently of each other. This ensures excellent manoeuvrability. However, compared to the existing AGVs the E AGVs axles are no longer driven by hydraulic engines, but instead by electric motors. The electricity is provided by a diesel-powered generator. Thanks to the elimination of some hydraulics, the E AGVs are fitted with a smaller hydraulic-oil-tank in favour of a larger diesel-tank. This plus the fact that the diesel-electric concept itself reduces diesel consumption leads to fewer fuelling intervals, which further boosts productivity.

### **Future Market**

Dr. Mathias Dobner is very happy about the company's first success with this new product: “Gottwald Port Technology is pleased to play a part in the future development of one of the

most technologically advanced terminals in the world. This first order represents a major step for Gottwald in further expanding this important market. The AGV concept itself has already proven its profitability with more than 300 units in operation or on order worldwide. These figures speak for themselves.” It is not only CTA in Altenwerder that successfully relies on Gottwald AGVs. Europe Container Terminals (ECT) in Rotterdam, part of the Hutchison Port Holdings (HPH) group, was the first port to introduce AGVs in 1990 and has in the meantime more than 180 AGVs in operation along with automated container stacking cranes. Dr. Dobner: “AGVs are well-proven and very high performance vehicles which are very suitable to achieve an extreme high degree of automation. Together with Gottwald’s Automated Container Stackers (ACS) for automation of storage areas, AGVs offer a complete systems solution aimed at increasing automation in container handling. Now with the extension of the AGV product line, customers have the choice of working with AGVs in whichever way is most convenient to them.”

### **About Gottwald Port Technology**

Gottwald Port Technology GmbH, located in Düsseldorf (Germany), is the world’s leading supplier of Mobile Harbour Cranes (HMK series). The company produces a comprehensive range of Mobile Harbour Cranes with lifting capacities of up to 120 tonnes and radii of up to 56 m, in addition to the rail-mounted Portal Harbour Cranes (HSK series), the Wide Span Gantries (WSG series) launched at the beginning of 2003 and the HPK Harbour Pontoon Cranes launched in summer 2004. Apart from this, Gottwald offers a multitude of services for terminal operators. These services range from conceptual design and operational layout, basic engineering of equipment and systems to Automated Guided Vehicles (AGV) and Automated Container Stackers (ACS). The company presently has a workforce of around 700 employees in Düsseldorf and the turnover for the financial year 2003/2004 (as of 30 September) was €195 million.

### **About HHLA/CTA**

HHLA Container-Terminal Altenwerder GmbH is a subsidiary of the Hamburger Hafen- und Lagerhaus-Aktiengesellschaft – a leading European container terminal operator – and Hapag Lloyd. As one of the first largely automated systems of ship to shore cranes, gantry cranes, automatic guided vehicle systems and rail loading cranes, Container Terminal Altenwerder is regarded worldwide as "state-of-the-art". The annual volume of containers handled has grown continuously ever since summer 2002, when the terminal was taken into

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operation. By 2004 this had already reached 1.26m TEU. Following completion of the extension annual capacity will rise to about three million TEU.

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