

PEINER SMAG offers new bulk handling solution for container cranes

PEINER SMAG Lifting Technologies, Salzgitter, Germany, has introduced a high-volume radio controlled single-rope grab (EGF 60) for operation with a container crane at Port of Aarhus, the largest container port in Denmark.

At the beginning of 2015, PEINER SMAG Lifting Technologies GmbH (PSLT) was approached by its customer the Port of Aarhus with a request for a specific grab that can be operated with an existing container crane to handle bulk cargo. As most of the proven grabs could not be used to fulfill this requirement, the company felt encouraged to develop an efficient solution tailored for customer's needs.

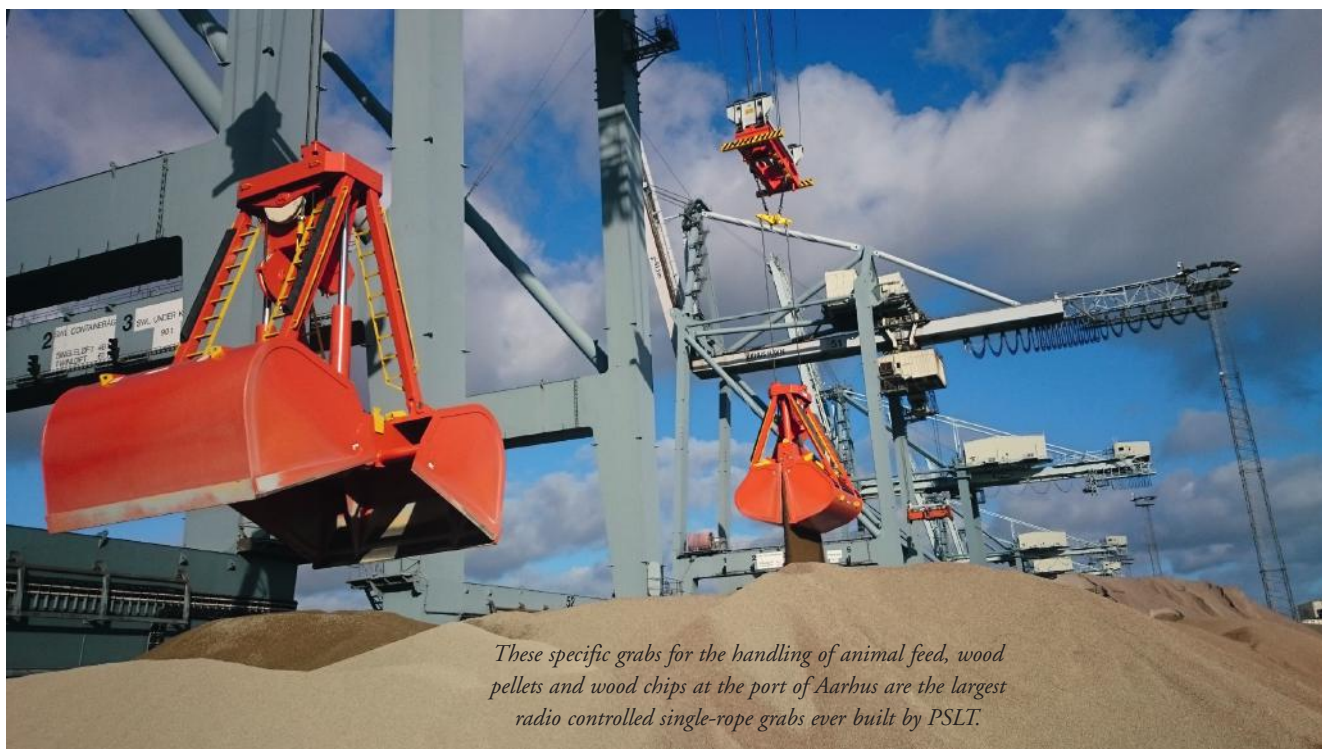
This was a challenging technical task: since the crane is not equipped with the necessary hoisting gear/winches, mechanical two-rope and four-rope grabs are ineligible for operation with this type of crane. Hydraulic and electro-hydraulic motor grabs require a wide range of accessories to be installed on the crane and would go beyond the planned budget, hence also these grabs could not be taken into account. Another alternative is the use of diesel grabs; however they are known to have a negative impact on the industrial safety and, besides, they provide limited operational flexibility. For the required handling capacity of more than 30m³, the grab must have a powerful engine as well as an exhaust system to meet the permissible emission levels.

Finally, after all possibilities had been checked, PSLT decided on the only workable solution: the PEINER radio-controlled single-rope grab (EGF). This has already proved to be successful on board bulk carriers over the past 15



PEINER radio-controlled single-rope grab (EGF 60) handling granite pebbles at the Port of Aarhus in Denmark.

years; however, the grabs were primarily used for handling volumes from 12m³ to 15m³. The goal of the Aarhus project was to construct an EGF with a volume of 32m³ in order to use the



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existing crane lifting capacity even during grab operation.

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In addition to a new design, engineering of the basic unit with special cylinders the grabs offer a sensor attachment transmitting actual operational states to the crane controls and crane driver

by wireless communication. This innovative feature helps crane operators to work even faster and more effectively. The grabs are provided with a centralized shift of lubricating points and are therefore easy to maintain.

An intelligent climbing assistance system ensures the highest standards of job safety for the maintenance staff on the job site. The grabs are assembled with a universal suspension that enables

Variable grab height: transport of a wheel loader into the ship's hold.



the operation both lengthways and crosswise. PSLT's scope of supply also includes an adapter unit in the form of special load traverses to connect the grab with the crane headblock. The traverses feature a range of supplementary technics, e.g. proximity sensor, light and camera systems, control cabinets and electrical plugs.

Additionally, the EGF 60 is equipped with a unique locking system that considerably reduces the grab height. This feature particularly supports ship-to-ship bulk handling processes, for example during transportation of wheel loaders into the ship's hold, where high structures on deck often block the way. The grab shell can easily be fixed in position by hand without using any tools so that the grab height is reduced by half.

It is the first time that a PEINER radio-controlled single-rope grab of such a large size will be operated by a container crane. PSLT expects this pilot project to serve as a positive drive for further developments in this field and sincerely hopes that it could be a starting point for the realization of more projects with this innovative technology. Jens Hvidegaard Dissing, Project Manager at the Port of Aarhus, who accompanied the project from the idea stage to the first commissioning, is convinced about the new development. "Bulk material handling is essential to the success of ports. Our goal was to have an intelligent solution for our container cranes, with significantly better efficiency in terms of speed and handling volume. We had an idea, and we found the right product: a PEINER radio-controlled single-rope grab, that combines all the required features, together with additional benefits to meet today's material handling challenges in the Port of Aarhus."

ABOUT PEINER SMAG LIFTING TECHNOLOGIES GMBH

PEINER SMAG Lifting Technologies GmbH (PSLT), a subsidiary of SMAG, is a major global manufacturer of grabs and other lifting accessories for cargo handling. Based in Salzgitter, Germany, PSLT runs manufacturing sites in Germany, China, India and Singapore. On the basis of the proven PEINER product design, the special-purpose machinery manufacturer develops, manufactures and services lifting accessories for various industries, e.g. ports, ships,

steel mills, waste-to-energy plants and recycling/scrap handling businesses.

ABOUT SALZGITTER MASCHINENBAU AG

Salzgitter Maschinenbau AG (SMAG) is the holding company of a German group of mechanical engineering companies with factories in Germany, China, India, Singapore and Slovakia. At these sites, grabs and spreaders for loading and unloading seagoing cargo vessels, fully equipped driver cabins, automated drilling technology for the open-pit and underground mining industry, special-purpose vehicles for the process industry as well as mechanic and hydraulic telescopic antenna masts are in-house-developed, manufactured and worldwide distributed.

