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**Hydraulic engineering: River engineering specialist equips pontoon with uppercarriage of duty cycle crane**

**Over the past decades, the French company Société Alsacienne de Renflouement et de Sauvetage, or SARS for short, has become one of the most important players and specialists in hydraulic engineering on the Rhine. Recently, the Strasbourg-based river engineering specialist refitted one of its pontoons. As it intends to use it to carry out particularly heavy special civil engineering work, it is relying on the 55 t SENNEBOGEN 655 HD duty cycle crane.**

**SARS - the specialist for hydraulic engineering on the Rhine**

With its 75 years of experience, SARS is one of the absolute professionals when it comes to river engineering. Maintenance and construction work on the Rhine is daily business for the family company, which has now been managed for some time by the third generation of the family, Julien Furst. It specializes in particular in riverbank stabilization by means of heavy-duty pontoons, using very specific civil engineering techniques adapted to river construction.

**Looking for a duty cycle crane to be mounted on heavy duty pontoon**

A few months ago, the company decides to upgrade its own machinery and renew the crane superstructure of one of its pontoons. This platform is intended for particularly heavy and dynamic work. Accordingly, the requirements for the crane to be mounted on it were high: On the one hand, the machine should be able to carry out lifting, loading and even pile-driving work with vibratory hammer. On the other hand, it is also needed for dredging as well as the construction of riprap with special attachments (clamshell and orange peel grab). The connection to the pontoon must be firm, however the uppercarriage must also be able to rotate flexibly so that the stability of the platform is guaranteed at all times and at the same time the best performance can be achieved in terms of working radius and capacity.

**Well equipped for all applications with the 55 t duty cycle crane**

The river engineering specialist was soon convinced by the concept of the SENNEBOGEN 655 HD. The duty cycle crane was specially designed by the Bavarian manufacturer for the installation as superstructure on the pontoon. On site, the local dealer SYGMAT then mounted it to the floating base. Equipped with a cabin that can be elevated by 2.70 m, the operator has a comfortable view of his attachments and the surroundings at all times. The two free-fall winches each have a winch pull of 160 kN. This is essential for lifting and precisely controlling heavy equipment such as the clamshell grab for dredging operations or the orange peel grab for the riprap construction. A third winch adjusts the boom angle. The fourth winch, known as the tagline winch, ensures that the attachments can be positioned precisely. In addition, the duty cycle crane also drives the equipment that is not visible, such as the pontoon's four hydraulically extendable mooring piles. These help to stabilize the floating platform on the river.

**Environmental protection always has top priority in hydraulic engineering**

The protection of nature is a constant concern for SARS. Therefore, it is important to them that a biodegradable hydraulic oil is used in the duty cycle crane. Likewise, the engine complies with the latest Stage V emission standards.

**SENNEBOGEN material handler and duty cycle crane in joint operation on major projects**

The 655 HD crawler crane is not the first SENNEBOGEN machine that SARS has acquired. In 2015, the river construction company had already opted for an 830 E handling excavator from the brand. Now, when it came to refitting the pontoon, Julien Furst approached SYGMAT again - just as his father had done five years earlier. Today, the two SENNEBOGEN machines work together on major projects on the Rhine.

**Captions:**

Image 1: *The SENNEBOGEN 655 HD, firmly attached to the pontoon, during riverbank stabilization work on the Rhine*

Image 2: *SYGMAT's service technicians mount the uppercarriage of the duty cycle crane on the pontoon*

Image 3: *Lifting work during the replacement of a sluice gate*

Image 4: *Use with vibratory hammer for pile driving*

Image 5: *The joint operation of the SENNEBOGEN 830 E material handler and the 655 HD Duty cycle crane in major projects on the Rhine*