

LiSIM: Virtual training under realistic conditions

- Simulator for deep foundation machinery and crawler cranes up to 300 tonnes
- Simulation of machines' real functions
- Focus on efficiency, safety and costs

Paris (France), 22 January 2015 – Liebherr will present the new simulator for deep foundation machinery and crawler cranes up to 300 tonnes for the first time in Europe at the Intermat 2015. The world premiere was at the Conexpo Con/Agg 2014 in Las Vegas (USA). Liebherr simulators increase both productivity as well as the safe operation of construction machinery. They represent a cost-effective and efficient training solution.

Liebherr simulators offer sophisticated solutions allowing operators of crawler cranes and deep foundation machinery to train their skills in a virtual but realistic environment. The efficient and cost-effective training of machine operators adheres to the highest safety standards and is one of the major requirements of the construction industry.

For the new simulator, the LB 28 rotary drilling rig with continuous flight auger (CFA) and Kelly bar as well as the LR 1300 crawler crane have been modelled. A realistic construction site has been created with adjacent buildings, roads and fences as well as obstacles such as uneven ground or rock.

The deep foundation simulation replicates all aspects of a machine's real functions: the centre of gravity changes automatically depending on the working tool; different soil conditions and their effects on both the drilling process and the crawlers of the machine are considered. It offers different training scenarios including drilling with Kelly bar as well as travelling with Kelly bar and CFA.

Using the crawler crane simulator the operator learns, easily and efficiently, how to operate crawler cranes in a safe environment. Above all, the various lifting tasks such as loading and unloading a semi-trailer represent a special challenge for the operator and can be fulfilled at different difficulty levels. The operator is ideally prepared thanks to simulator training even for demanding situations in the practice such as wind and

can make the right decisions intuitively and fact-based, so reducing danger to a minimum for all persons concerned. Along with many other aspects the simulator training brings the handling of various load types as well as travelling and lifting in demanding environments to perfection.

Liebherr simulators allow for challenging training. Full HD flat screens and high-quality surround speakers produce pictures and sounds which are typically seen and heard in an operator's cab. Moreover, the moving platform assures that the machine operator experiences accurate movements.

Focus on safety and efficiency

Using this virtual training method trainees gain valuable experience in demanding situations without being exposed to any safety risks. It is also possible to simulate rough environmental conditions. By training the skills in a virtual environment safety as well as productivity in real life operation can be improved.

Thanks to the realistic simulation of the environment, machine operators can test limits during operation without having to fear real damages. Thus, valuable experience can be gained for efficient machine operation.

Original software and hardware

The installation of the original Liebherr control system, software and hardware guarantees realistic training experience and so machine operators are able to optimally implement the gained experience on the jobsite on the real machines.

The control system imitates movements in space and time. LiSIM is the only virtual solution on the market to train the precise operation of Liebherr crawler cranes and deep foundation machinery.

Configuration depending on customer requirements

The simulator is available in three configurations: as classroom, cab or containerized solution. The classroom solution is easily integrated into existing training centres. The

space-saving cab solution allows for an extremely real-life environment. The easy-to-transport containerized solution houses the simulator in a 40-ft container and features a training room, utility room and cab simulator. Each of the three models is equipped with a multifunctional instructor station.

The development of this advanced training tool is driven by Liebherr's extensive experience in highly comprehensive crane operator training – in 2013 the company launched its range of maritime simulators including, for example, ship to shore, rubber tyre gantry, mobile harbour and offshore cranes.

Captions

liebherr-simulator-lisim-cab.jpg

Cab solution of the new Liebherr simulator for construction machinery

liebherr-simulator-lisim-training.jpg

Training on the Liebherr simulator

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