



CONTROL 
TECHNIQUES

SUPERIOR UNIQUE SOFTWARE

NTK TECHNIK GMBH | CRANES & HOISTS

DRIVE OBSESSED

INTEGRATED SPACE-SAVING & SUPERB DYNAMIC RESPONSE

Crane control software incorporated into Unidrive SP AC drives has enabled crane control specialists NTK Technik GmbH to build unique operational features into a new design of crane recently launched by Jost Cranes of Germany.

The Challenge

The operational software used by luffing cranes usually needs to perform static weighing by a load cell after the initial lift, which creates an uncomfortable jolt for the operator caused by the start-stop-start of the hoist.

NTK Technik GmbH wanted to develop more sophisticated crane control software that would eliminate this jolt, making the process more comfortable for the operator and the hoisting system more efficient.

The Benefit

"The Unidrive SP has many features that are ideal for crane control," - Bernd Niehoff.

"Its vector control, integrated space-saving braking and its superb dynamic response are all important, of course. But what makes it the best for our needs are the application modules with pre-loaded crane specific software, which make the process of design much easier. They are a key part of our double-redundancy ultra-safe design that meets grade 4, the very highest level of crane safety. Because the drives are compact and programmable, we can also keep the panel size to a minimum, this has been important in the overall crane design."

The Solution

"We have worked closely with Control Techniques to produce sophisticated crane control software that runs in the drives' application modules," explained Bernd Niehoff, Managing Director of NTK Technik GmbH.

"This incorporates two completely new features that include a new method of assessing load during the lift to eliminate the weighing delay – and its accompanying jolt – and a selectable operating mode that gives a constant load height irrespective of the luffing position of the crane."

Unlike other crane control systems, the NTK-Technik system weighs the load during the smooth S-ramp lift, using the 55kW hoist drives internal torque measurement. The unique constant load height feature makes the crane operation both easier and safer. The tower crane company Jost has adopted the NTK-Technik system for their new generation of topless luffing cranes, which will become the backbone of the company's product line.



Unique crane software



Highest level of safety



Optimised hoist speed & comfort



Compact & programmable drives

