

SUCCESS STORIES

Create Synergy –
Connect Processes

KOMATSU

Engineering with leverage

Komatsu Düsseldorf benefits from a new engineering concept

Komatsu Mining Germany GmbH (KMG), based in Düsseldorf, is part of the Japanese group Komatsu Limited. KMG's history dates back to 1907. With a global market share of 30%, the company is now one of the leading manufacturers of large hydraulic excavators for the surface mining industry. While the electrical diagram of such an excavator consisted of approximately 37 pages 20 years ago, it has 500 pages today. Since the first full hydraulic diesel excavator was introduced in 1954, significantly more control and monitoring electronics were added than new functions. This requires a software system that can cope with such complexity. KMG opted for Engineering Base (EB).

The models of up to 760 tons in tare weight and with bucket volumes of up to 42 cubic metres are available in different versions, have several controller specifications, and also allow many custom-specific additions. All predefined options are illustrated in a baseline plan that includes the entire design space and is then reduced to the final design for the real job.

„Outstanding“

„Using EB to handle our diversity of versions is very convenient and always consistent,“ recounts Herbert Südbeck, Senior Manager of Engineering at KMG. „I see the database orientation in particular and the resulting consistency as outstanding features of EB“.

Everything can be planned from a single source, the electrical diagram, hydraulics, wiring harnesses, BOMs and manufacturing information - linked in a navigable manner. „This saves a huge amount of time“, says the manager.

EB automatically updates all parallel representations when changes are made. Any editing, in whichever discipline, can be seen and used immediately by all involved. „We didn't want a simplistic tool operation where the right system doesn't know what the left is doing,“ the engineering expert explains in reference to the Komatsu decision.

Rapidly ready for production

The KMG employees appreciate especially the rapid editing of large amounts of data in worksheets, and the manufacturing support. They save several months of work that previously had to be invested in labelling lists. Today, EB generates an xls list of the texts with one click. Print lists and order lists match automatically. Furthermore, EB consistently calculates the lengths from the given topology information in the database so that costly mistakes during the wiring harness mounting are minimised.

At the beginning, says Herbert Südbeck, extra effort is required to develop a concept for the new work options and to create the first project, but it was worth it for KMG.

