



ZEDEX[®] in
Tribological Polymer Solutions

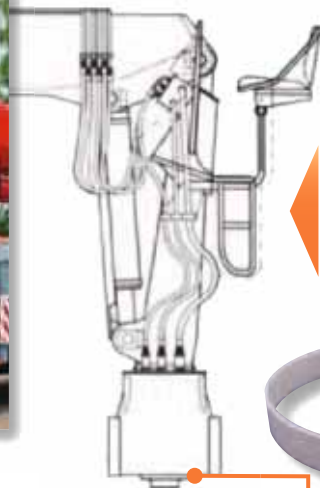
Crane and Bridge Construction



HIGH PERFORMANCE PLASTIC SOLUTIONS

EN 2.0

CRANE CONSTRUCTION



In crane bodies for trucks, bearing strips of **ZX-100K** are applied on the crane base. Previously bearing strips of cast nylon with oil were used causing dimension stability problems



ZX-100K as sliding guide in crane boom.

The **ZX-100K** sliding guide must be lubricated only once when installing in contrast to the substituted part of modified PA6. Earlier when the PA6 was used, there were serious problems with the stick slip effect, which it brought immense difficulties in this application with it. The polyamide sliding guide had also big problems at extreme ambient temperatures e.g. from -30°C to $+40^{\circ}\text{C}$, because it is hygroscopic material which leads to dimensional stability problems, or jam. For our material however, these tasks are not a problem. There were an improvement of the sliding value under extreme temperatures and maximum loads, archiving a stable operation and avoiding periodic maintenance efforts. **ZX-100K** is now used as standard feature.



ZEDEX® in action

Winch bushing



Sliding guide crane boom



Winch bushing



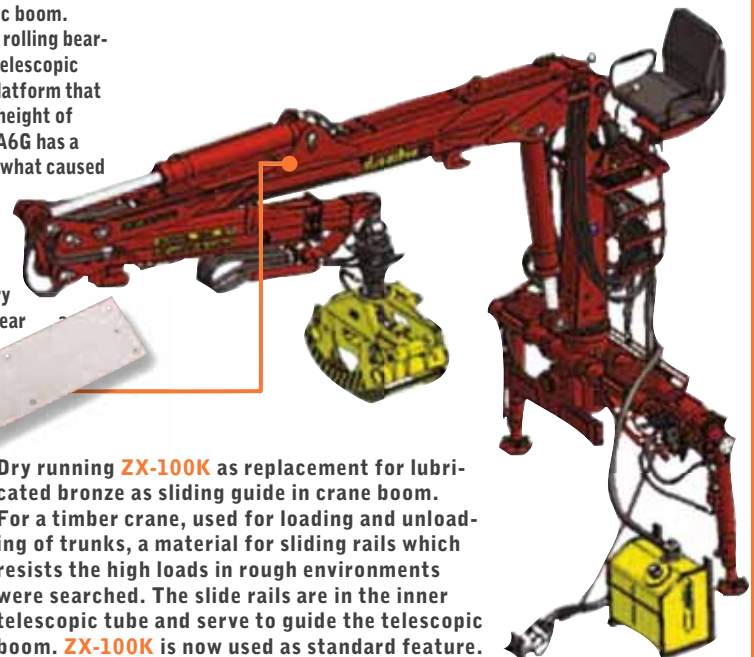
Track rollers in telescopic booms of working platform



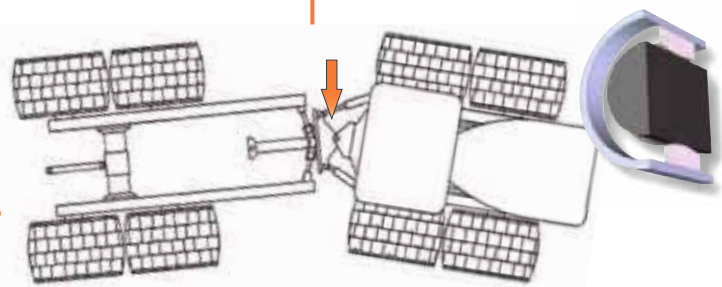
ZX-100K rollers in telescopic boom. The rollers are pressed onto rolling bearings and serve to guide the telescopic boom of a mobile working platform that allows a maximum working height of 50m. The previously used PA6G has a very high water absorption, what caused poor dimensional stability and led to a losing of the tight fit of the rolling bearing. The newly built track roller of **ZX-100K** have a very low water absorption, low wear thus a longer life time.



Dry running ZX-100K as replacement for lubricated bronze as sliding guide in crane boom. For a timber crane, used for loading and unloading of trunks, a material for sliding rails which resists the high loads in rough environments were searched. The slide rails are in the inner telescopic tube and serve to guide the telescopic boom. **ZX-100K** is now used as standard feature.



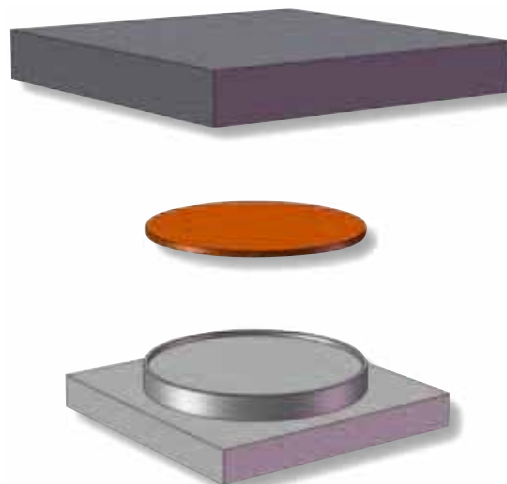
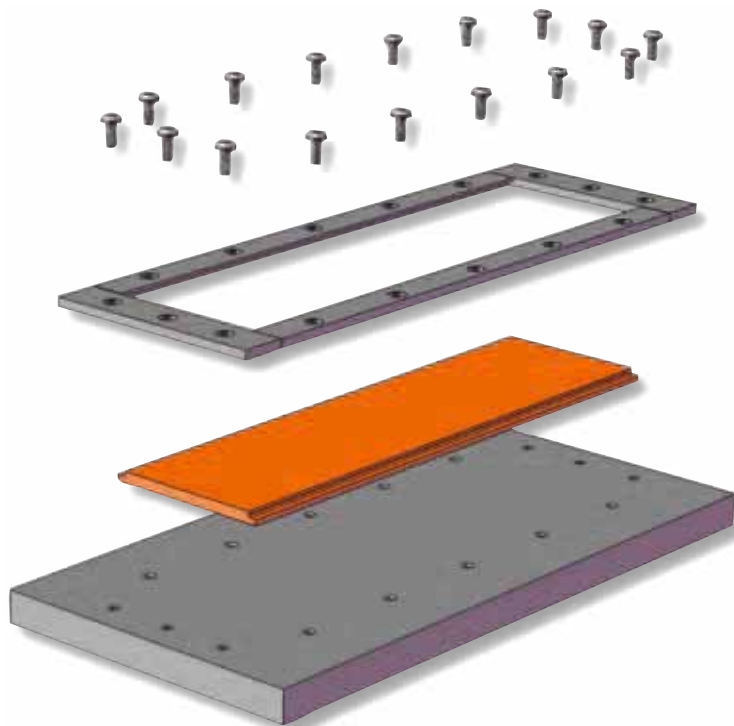
ZX-100K as replacement for bronze. The thrust bearing hinge in forestry machines (previously bronze) is assembled between tractor and trailer. **ZX-100K** plain bearing bushes are now used in dry running conditions.



BRIDGE CONSTRUCTION



ZX-100K and **ZX-410VMT** as sliding guide in bridge bearing.
Previously a bearing pad of PTFE was used as a bearing in the bridge structure. The PTFE was too much sensitive to stress and wear, which led to creep and to permanent deformation. The PTFE could not meet the requirements of the application already after short time, and that is why the search for alternatives was initiated. We replaced the previously used material by our material **ZX-100K**, which has allowed a durable surface pressure up to 30 MPa, brought a reduction in the wear values thanks to the excellent tribological properties and an considerably extension of the life-time. At this time our materials **ZX-100K** and **ZX-410VMT** (for higher loads) are intensively tested, so far with great success and satisfaction.



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