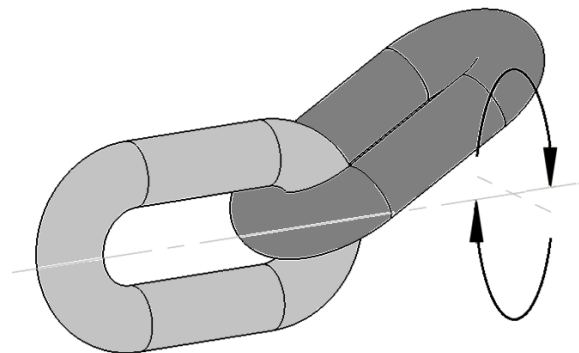
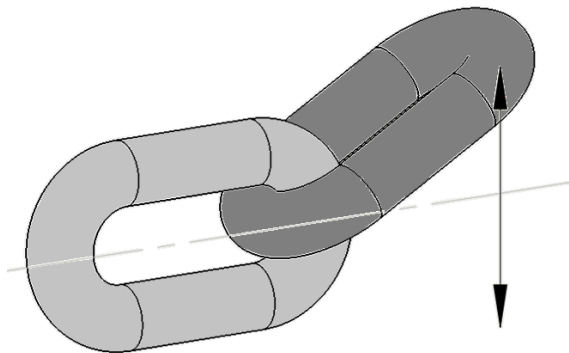
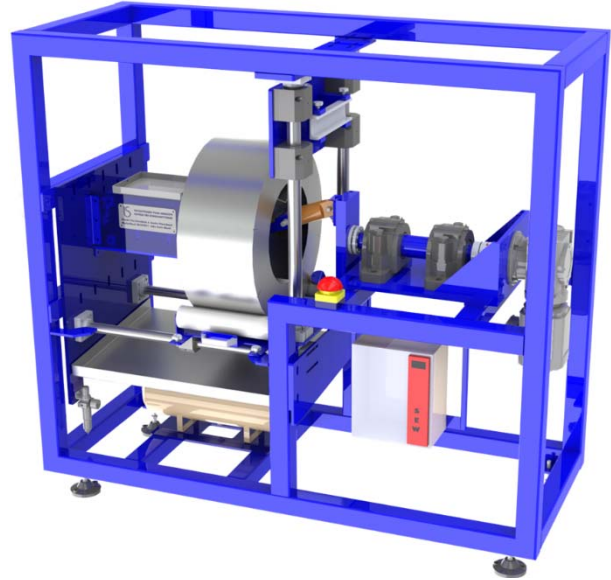


Industry uses link chains because of their beneficial strength to flexibility ratio, for example in hoists, snow chains, sand chains, ... E.g. in industrial fishing, link chains used for churning the seabed (tickler chains) have a lifetime of only six months. The new test rig generates and measures wear in a single shackle contact and uses therefore full scale specimens with the correct geometry.

The tribological test rig has two innovative features. First is the possibility to apply two types of relative motion between neighbouring shackles: planar and circular. The second novel feature is the supply of harsh environmental conditions like seawater, sand or a mixture of both.

The wear rate is measured by weight reduction, volume reduction and chain elongation. The test rig can be used for the validation of new wear models or the comparison of materials.



TEST RIG CHARACTERISTICS

Property	Value
Tensile force	Max. 10 kN
Motion	Planar / circular
Liquid medium	Dry / water / seawater / other
Abrasive medium	Sand / other
Angle	0 to 20°
Motion frequency	0 to 1 Hz
Shackle size	Max. D26P92