GHENT UNIVERSITY

SOETE LABORATORY

Large Scale Tribometer

6000kN normal force

The MTS load frame (figure 1) frame allows to test pieces with a section up to 800 x 1000 mm and a length of 1500 mm in static and dynamic (fatigue) loading. The load frame is equipped with an MTS 407 controller. The load frame can be used as a tribotester by placing a horizontal clamp consisting of two end plates, four load bars and 6 pistons inside the load frame as shown in figure 2. The horizontal clamp provides the normal force (max. 6000 kN) on the specimens while the MTS load frame provides the relative movement of the specimens. The friction force is measured with strain gauges placed on the holder of the central sliding specimen. The load frame is equipped with an individual hydraulic service manifold (HSM) and an MTS 406 controller. The 6 pistons of the load frame are controlled (in parallel) based on the differential pressure over both sides of the pistons.

Figure 1: MTS load frame

Figure 2: 6000 kN tribotester

TEST RIG CHARACTERISTICS

Property	Value
Sliding stroke	Max. 150 mm
Normal load	Max. 6000 kN
Horizontal load (friction)	Max. 2500 kN
Sliding speed	Max. 5 mm/s
Specimen dimensions: Rectangular shapes	300 mm x 80 mm x 15 mm
Counterface: dimension Standardized	400 mm x 105 mm x 90 mm

Soete Laboratory
Technologiepark 903
9052 Zwijnaarde – België

services.soete@ugent.be
www.ugent.be/soete
+32 9 331 04 73