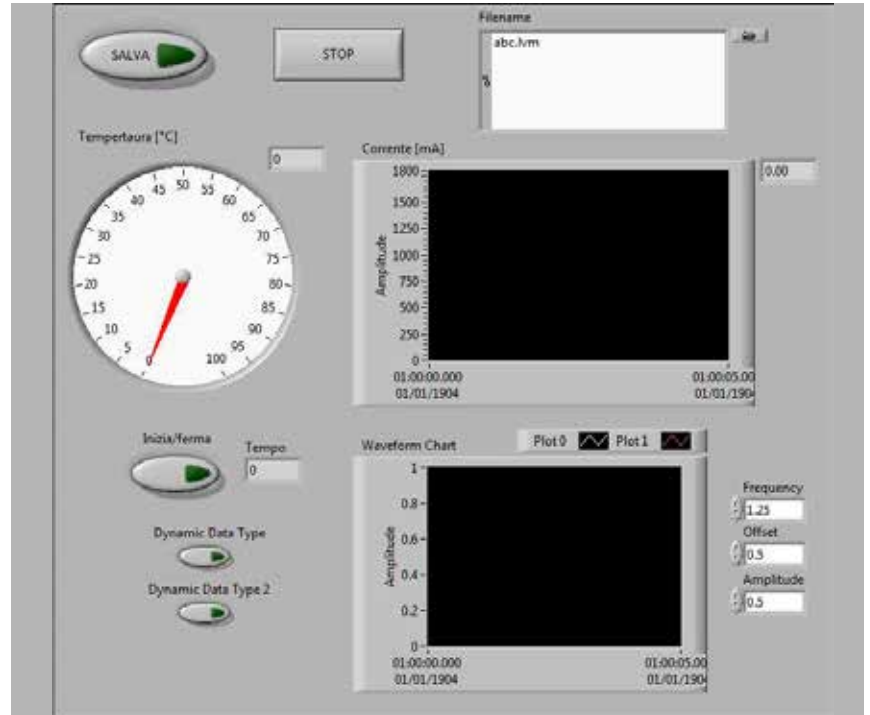


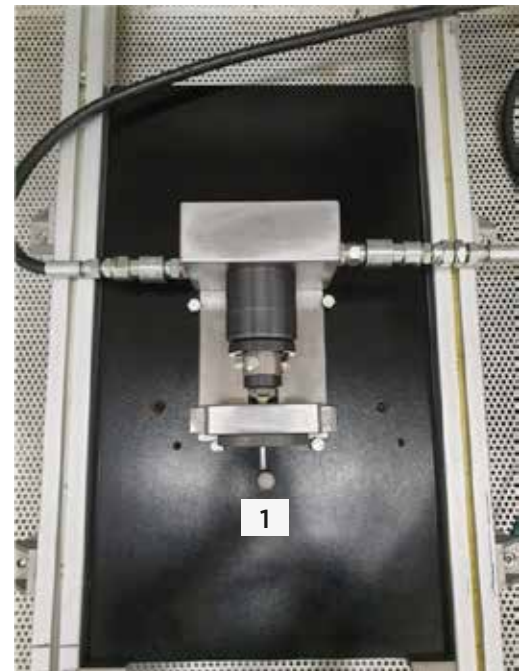
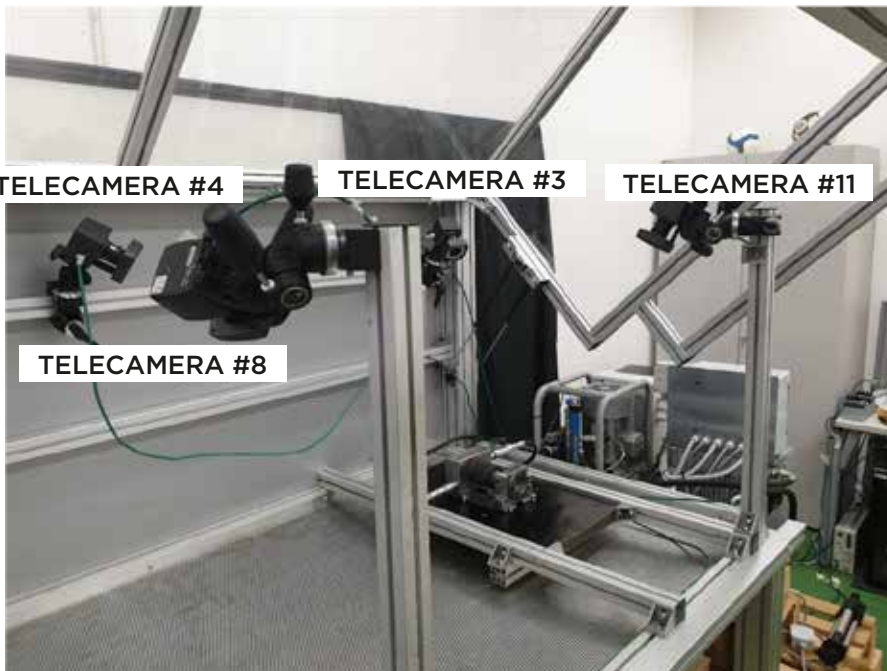
STUDYING THE INFLUENCE OF FATIGUE CYCLE ON THE DYNAMIC PERFORMANCE OF SELF-ADJUSTING SWING CLAMP CYLINDERS

SOLENOID VALVE CONTROL SYSTEM



100,000-cycle test (2019) - what was tested?

- CE16 - Hydraulic power unit, 3 l/min - 250 bar
- CCL40
Centric element, self-adjusting PATENTED
- VSQM30R Sequence valve
(three different sizes)
- VRP3-11M - Pressure reducing valve
- RPSM
Hydraulically pilot-operated check valve
- FIC14-10 - Built-in filter, mesh size 10 micron



MACHINING CYCLES:

TOTAL OPERATING TIME: 646383 seconds = 179.6 hours

TOTAL NUMBER OF CYCLES: 113117

OPERATING TIME: from 13-05-2019 to 21-05-2019 = 7.5 days in total

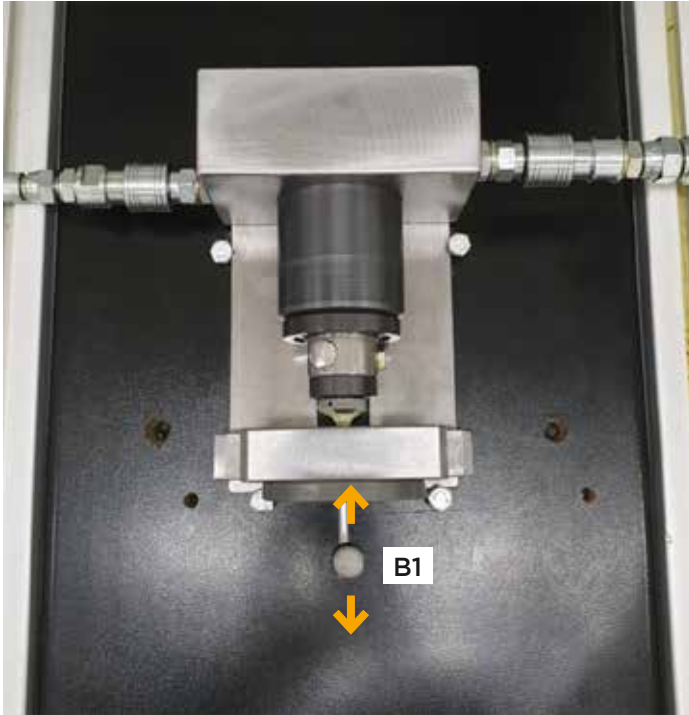
AVERAGE CYCLE NO. IN 24H: 15120

MARKER:

1 - B1

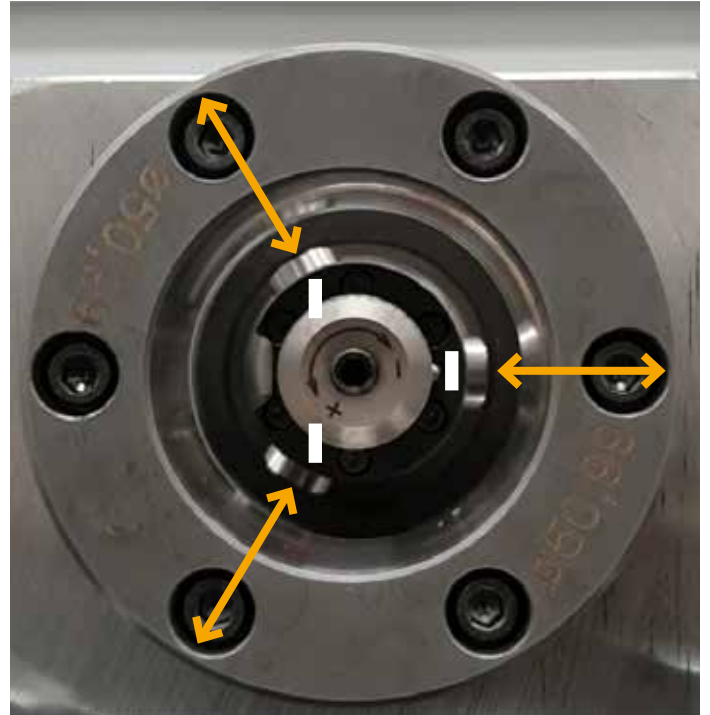
The marker was positioned above a 70-mm hexagon metal arm fixed to the head of the block, so that measuring the piston advance during the load cycle was easier.

MOTION CAPTURE USING VICON



MOTION CAPTURE USING KINOVEA

1: BOLT A - 2: BOLT B - 3: BOLT C



MARKER B1 ASSE X

