

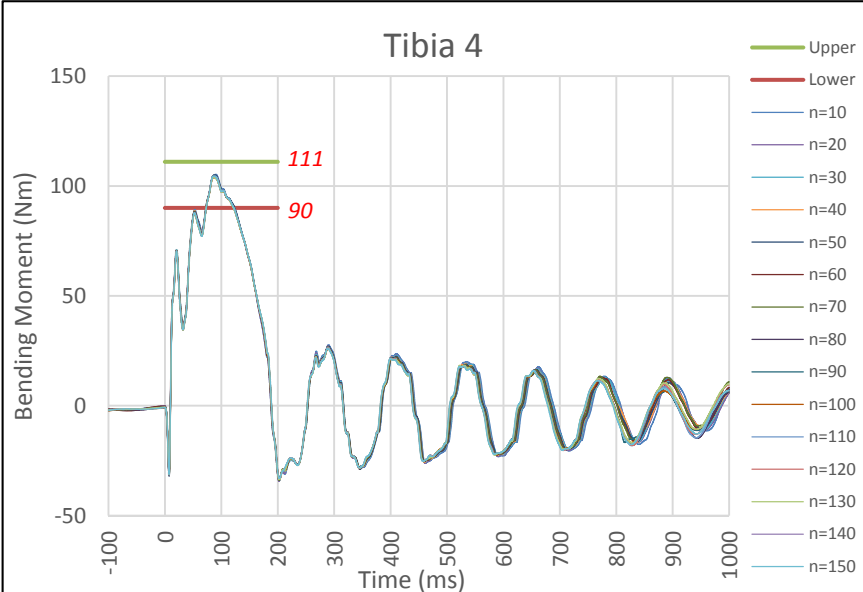
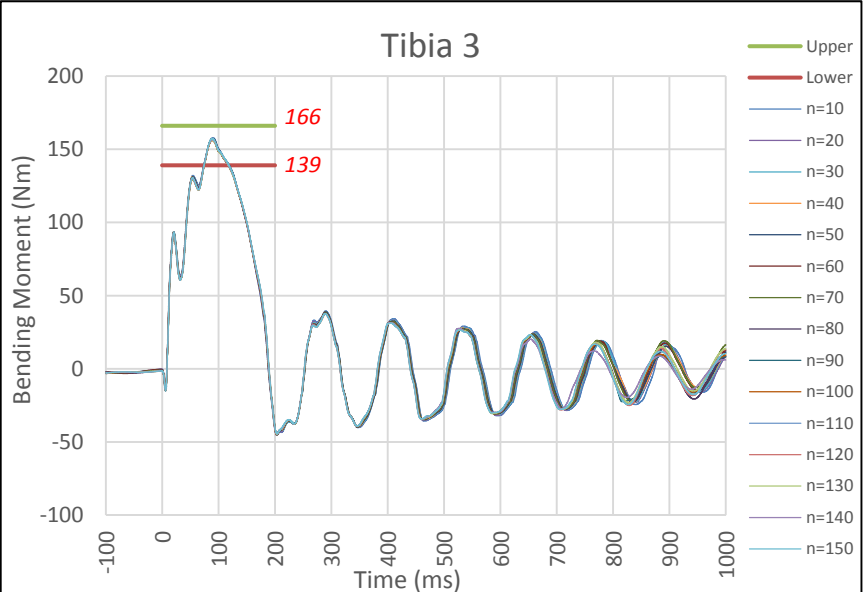
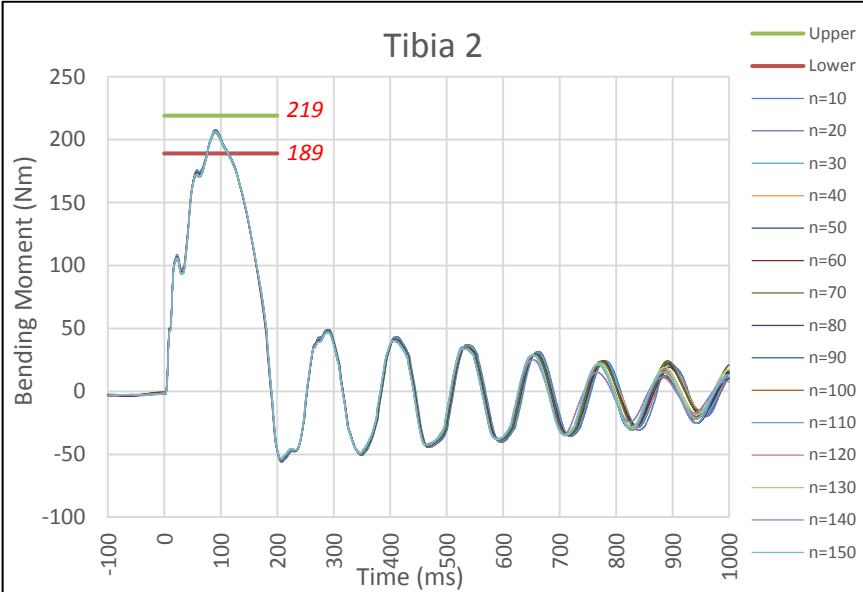
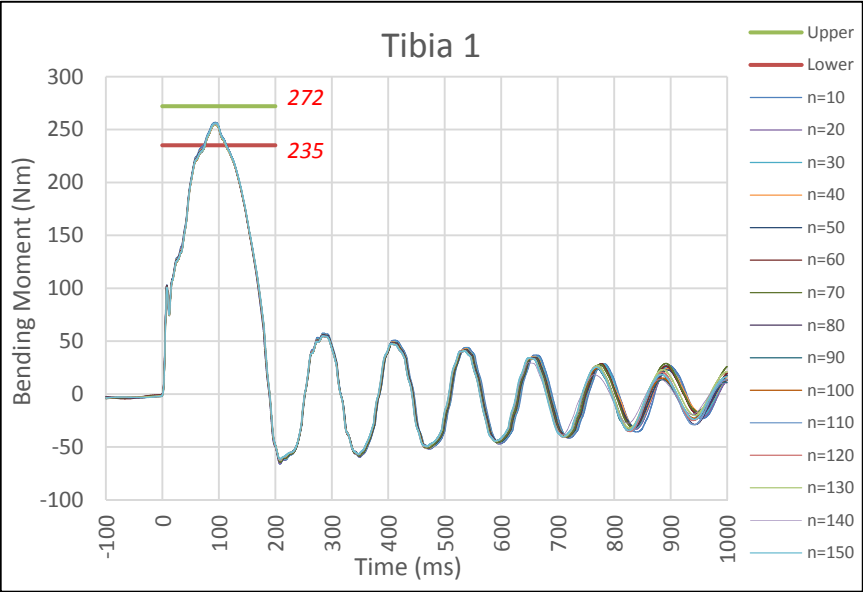
FLEX-PLI Final Report

Repeatability & Durability

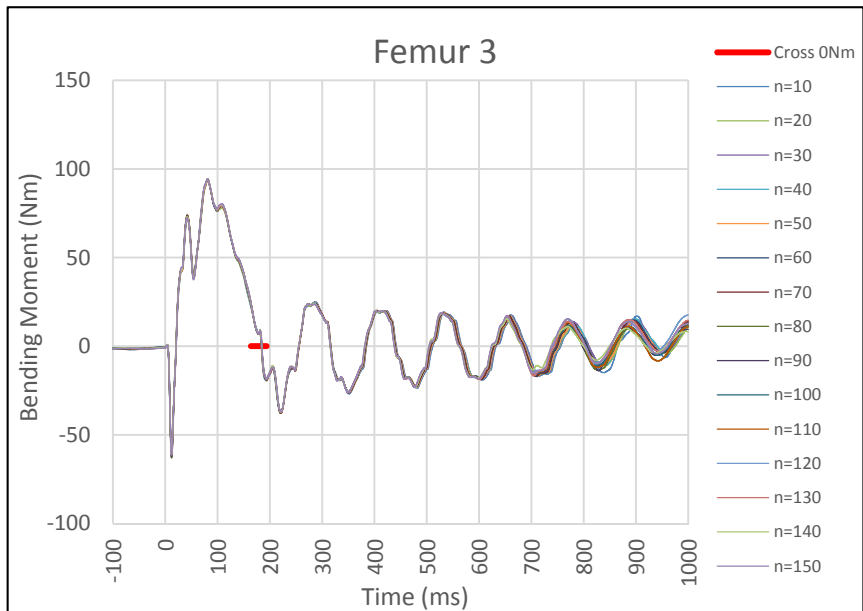
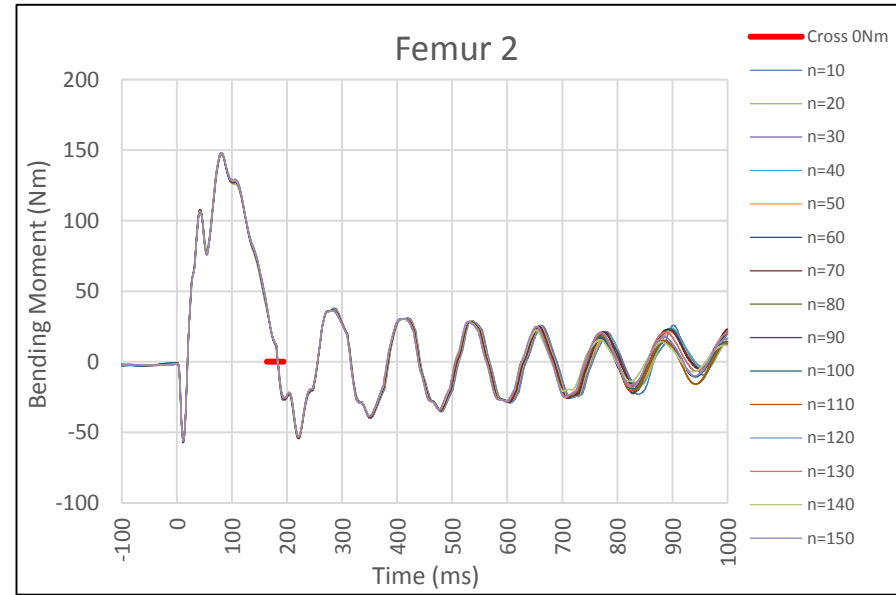
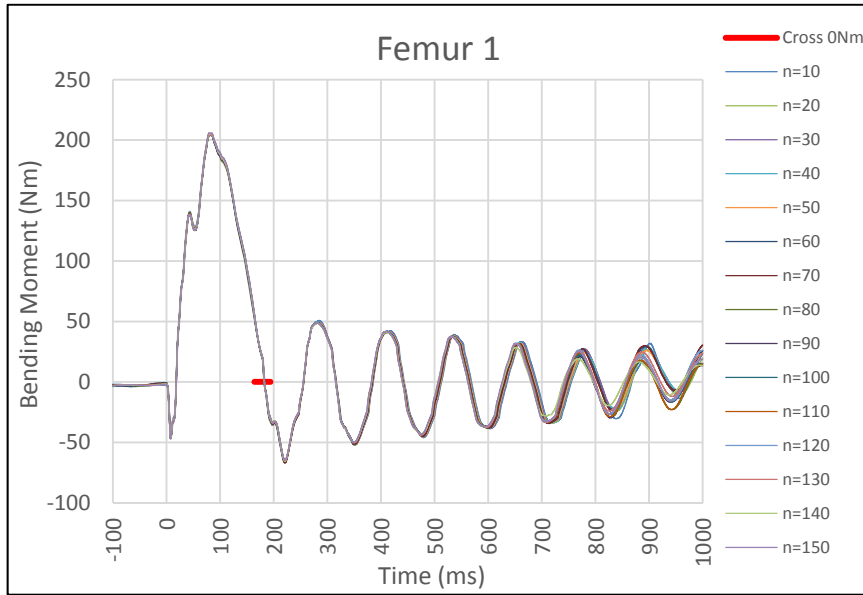
- 1、n=150 Pendulum Test result
- 2、Knee Bending Test improvement



Pendulum Certification Test n=150 shots (Tibia)



Pendulum Certification Test n=150 shots(Femur)



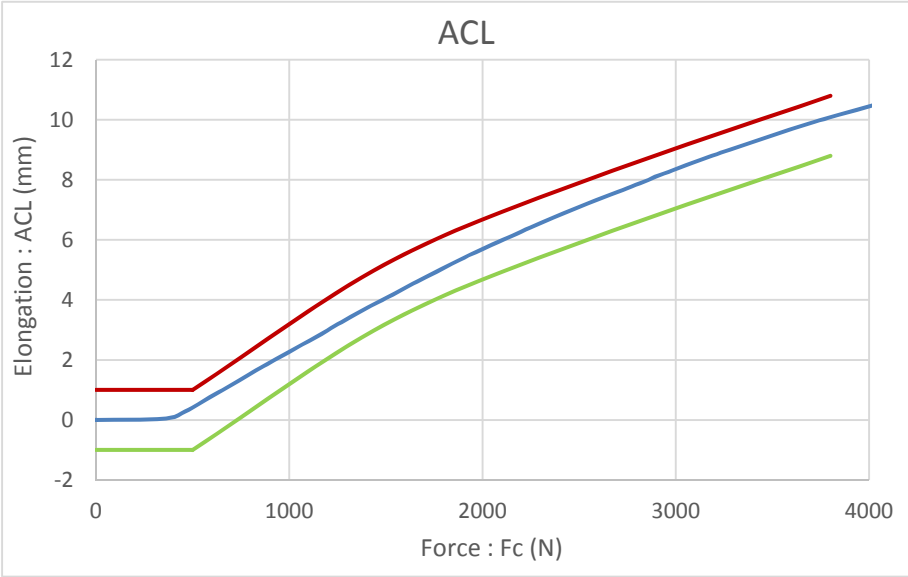
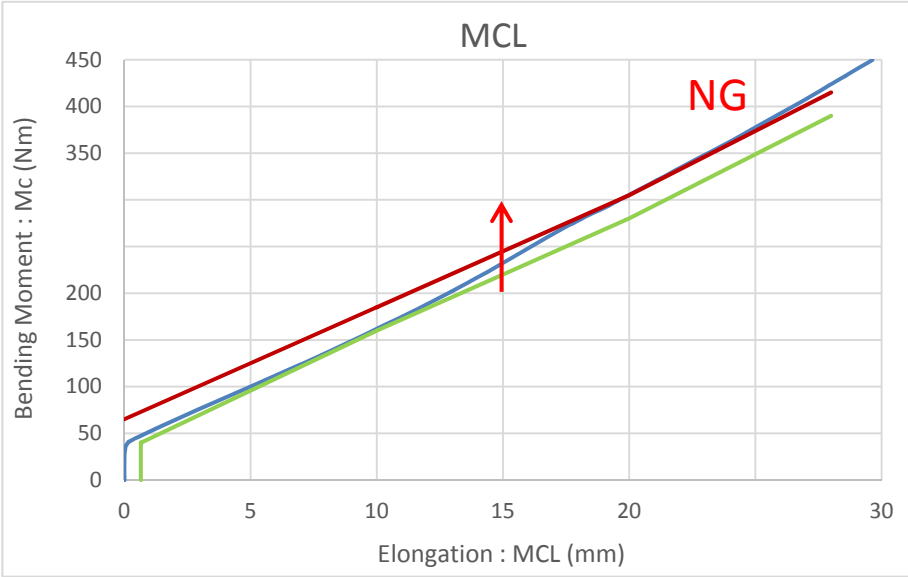
【Result】

- No damage beams and all strain gauges
- All Tibia and Femure test passed

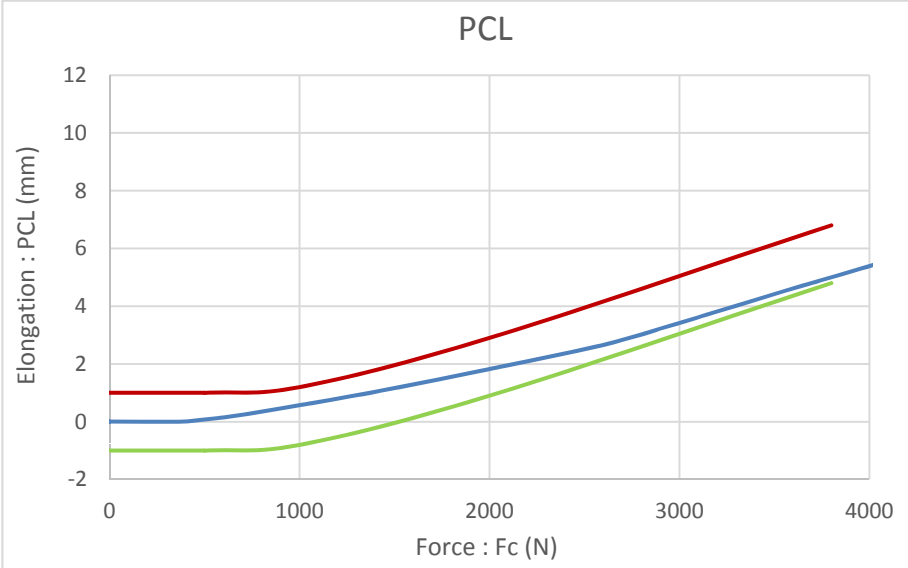
【Evaluation coments】

These proto specification Flex PLI GTR are very high Repeatability and Durability.

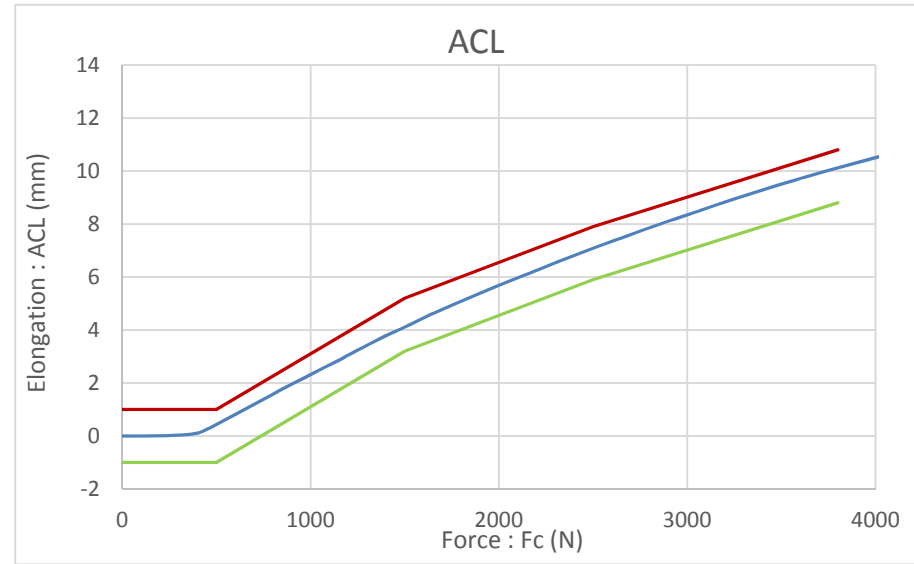
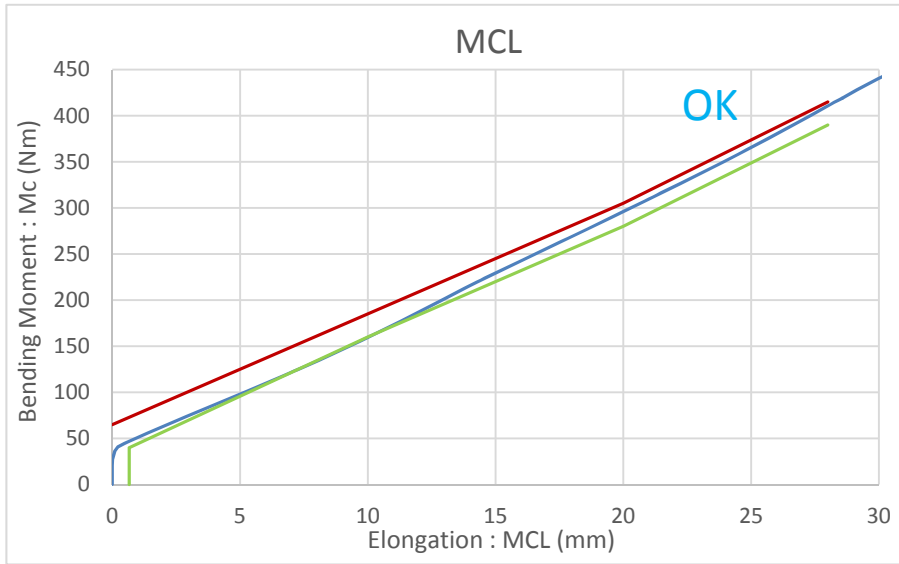
Knee Joint Static Certification Test



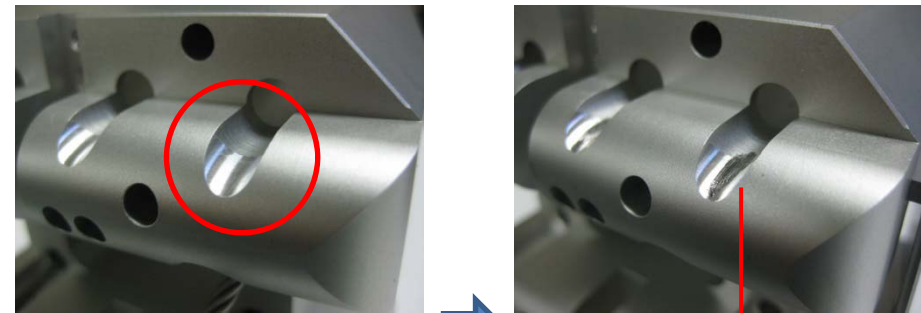
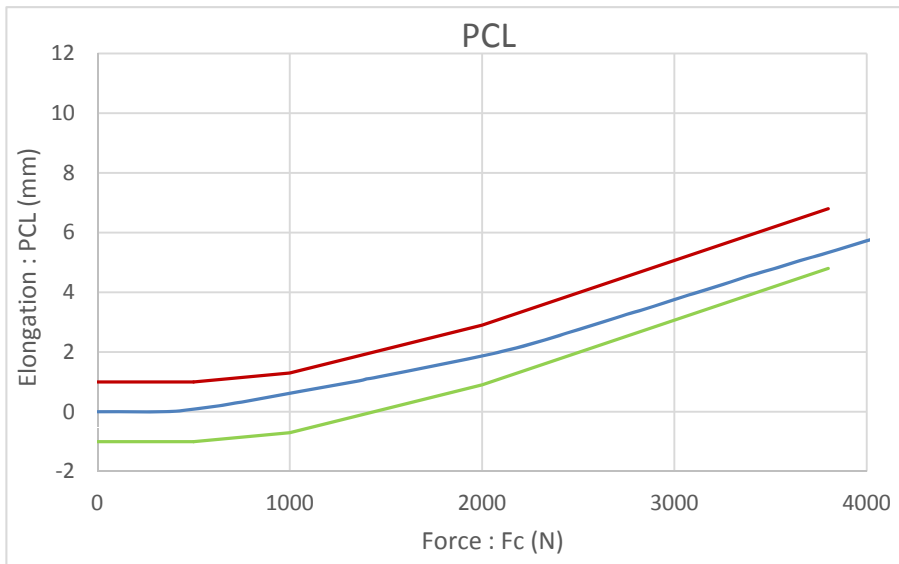
As shown in below pictures, wires contact at the edges. It create MCL output higher and cause NG.



Knee Block, Femur (Improvement 1)



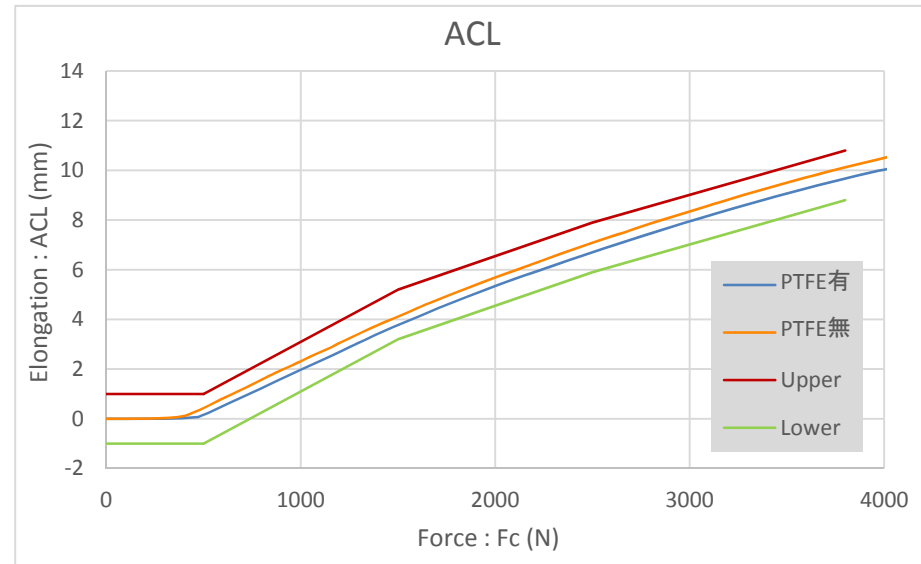
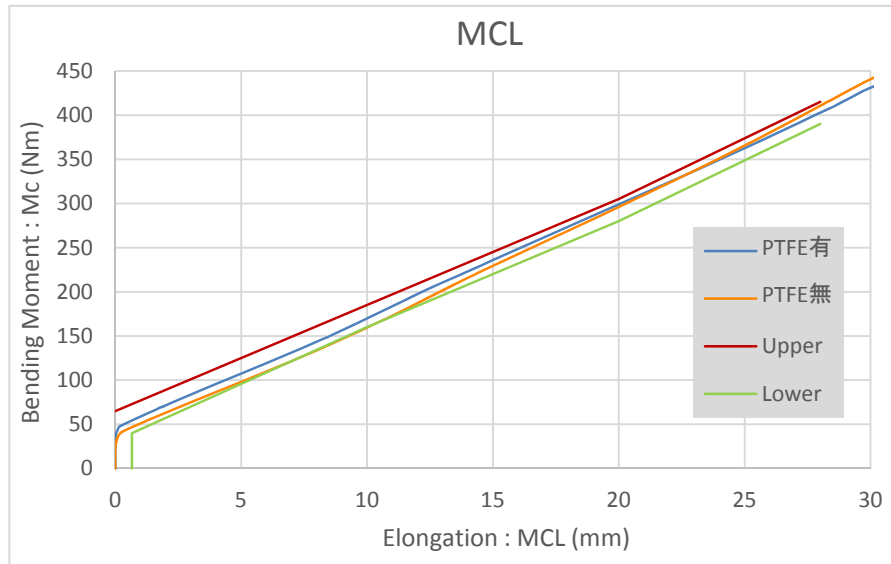
The modification 1 reduce the friction force . And, the MCL test result is OK. But, the output is just within the corridors.



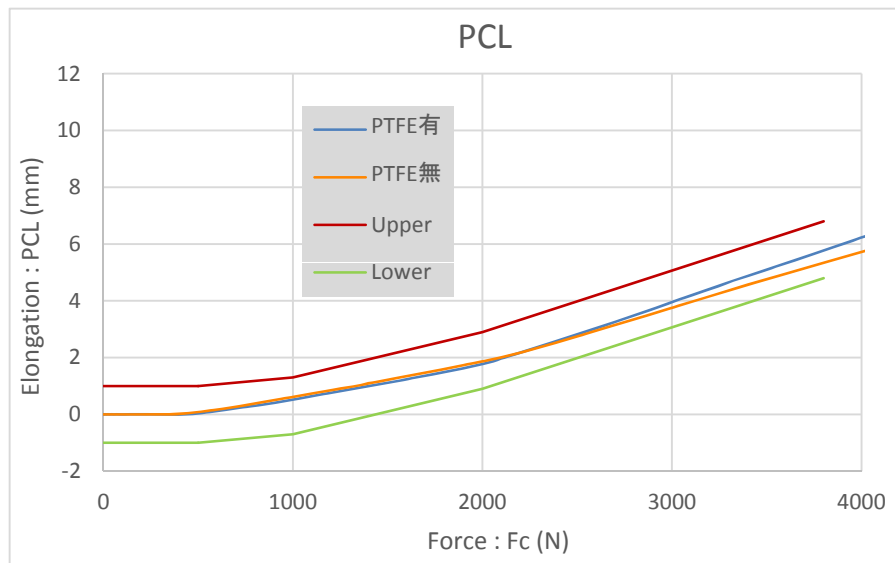
The corner modification reduce the friction. But, there are still friction between cable and block. This friction may cause the later performance by durability.



CABLE ASSEMBLY, KNEE ML (Improvement 2)

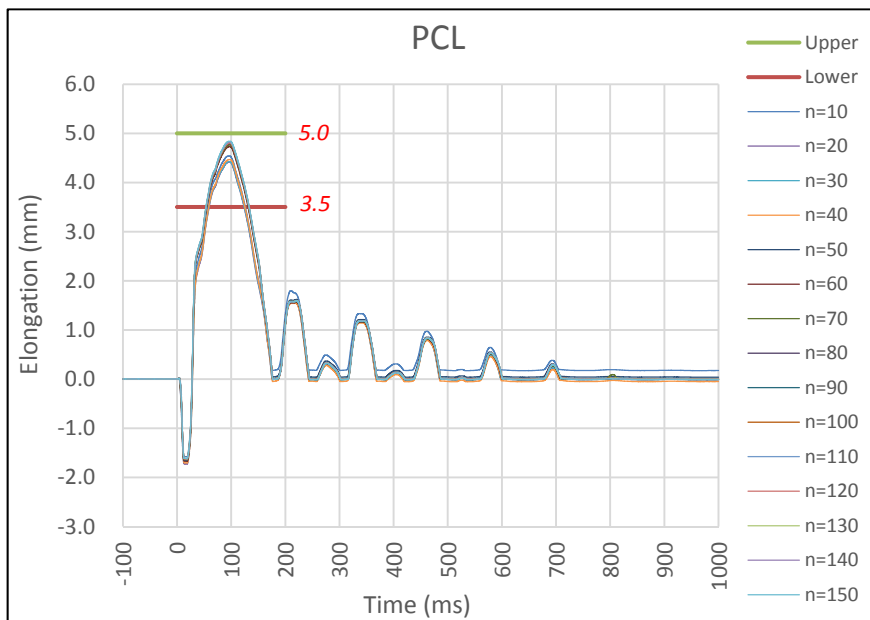
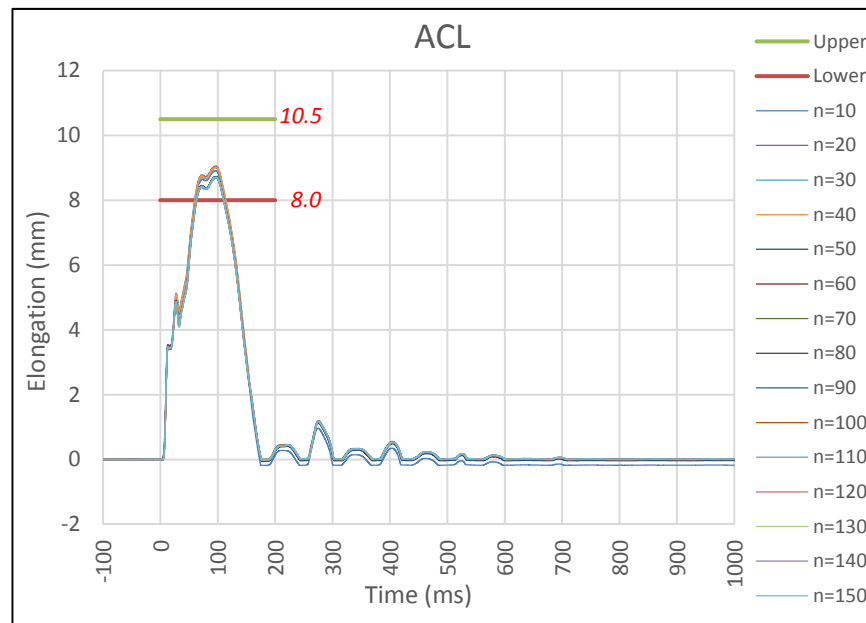
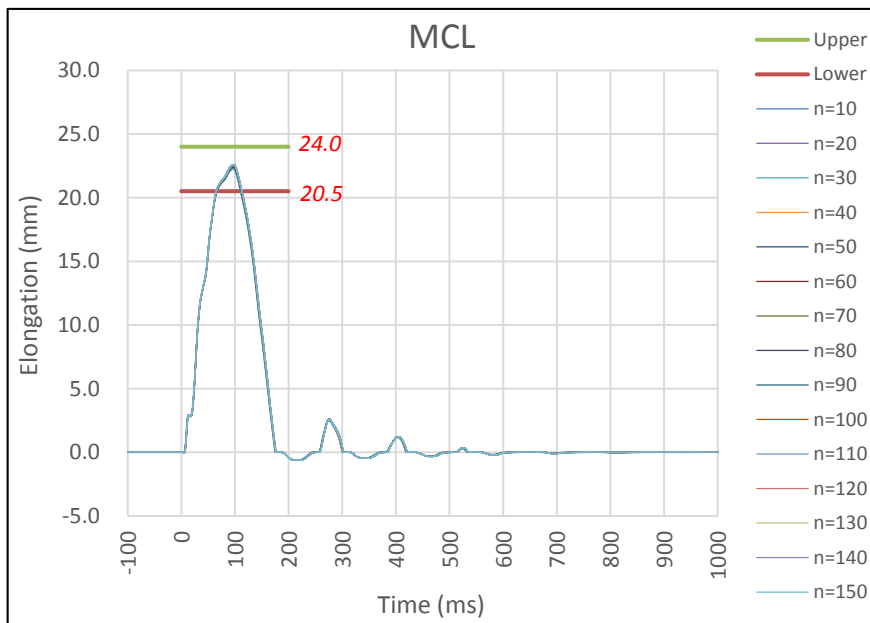


Low friction durable cover on the wires. can reduce the friction and improve the output as shown in next page. (Red=Improve 1, Blue=Improve 1+2)



The improvement 1 and 2 works very stable as bending tests as shown in the graphs. Repeatability and durability after Pendulum tests n=150 shots in next page. (The low friction cover can be replaced)

Pendulum Certification Test n=150 (Knee)



The 150 times of pendulum test results become very stable.

Repeatability and durability by Pendulum tests n=150 shots, every 10th result in this page.

(The low friction cover can be replaced)