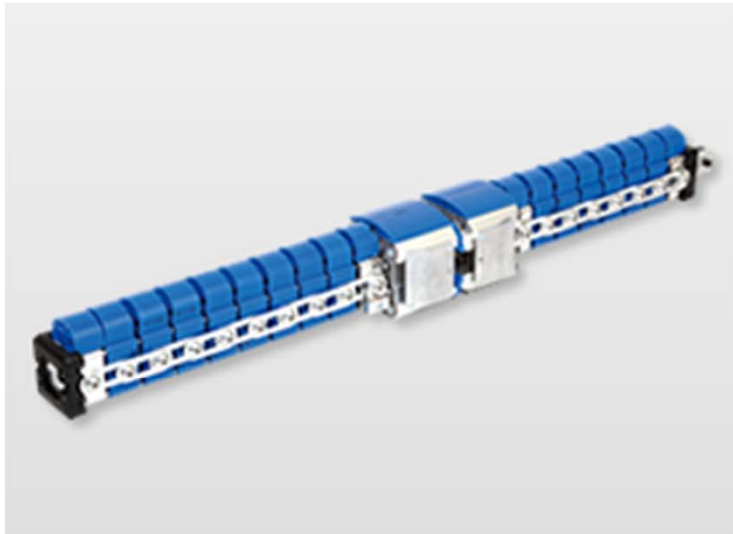




## FLEX-PLI Development Test



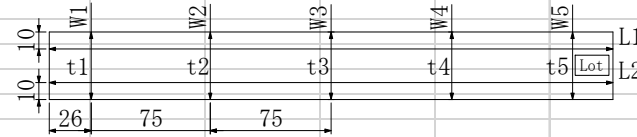
# Development report

- JASTI has been improved Flex-PLI GTR.
- Main target of renewed and improved points
  1. Tibia and Femur Bones production quality improvement  
Prepare a specialized injection gate and method.  
Result; Production can control Thickness, Bent, Surface.  
**No cut surface to make flat and straight beam as production.**
  2. Durability & Repeatability  
To use produced condition without cut result the original surface protect any crack, damage, and keep strength, as durability and repeatability.

# Flex-PLI GTR Beam production quality inspection sheet

Check items; Vf, Dimension, Bent, Surface

Femure Bone



Tibia Bone

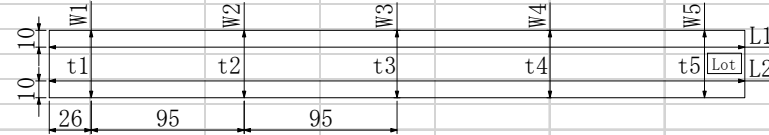


Fig.1 each measured points

## Femure Bone

		Widdth [mm]						Thickness [mm]						Length [mm]	
Target		40.00						10.75						352.00	
		w1	w2	w3	w4	w5	Average	t1	t2	t3	t4	t5	Average	L1	L2
Lot.No	1	39.82	39.77	39.75	39.78	39.73	39.77	10.63	10.64	10.64	10.64	10.67	10.64	352.05	351.92
	2	39.76	39.77	39.84	39.80	39.78	39.79	10.62	10.70	10.96	10.77	10.74	10.76	351.91	351.92
	3	39.79	39.78	39.81	39.72	39.72	39.76	10.70	10.79	10.73	10.69	10.69	10.72	351.98	351.89
	4	39.76	39.75	39.75	39.75	39.73	39.75	10.68	10.69	10.68	10.66	10.64	10.67	351.95	351.93
	5	39.76	39.76	39.75	39.77	39.75	39.76	10.74	10.73	10.72	10.73	10.72	10.73	352.01	351.95
	6	39.77	39.73	39.72	39.72	39.73	39.73	10.72	10.72	10.68	10.76	10.70	10.72	351.96	351.80
	7	39.77	39.77	39.77	39.81	39.81	39.79	10.66	10.62	10.65	10.60	10.65	10.64	351.94	351.88
	8	39.76	39.75	39.77	39.78	39.79	39.77	10.65	10.75	10.72	10.75	10.75	10.72	351.91	351.93
	9	39.78	39.75	39.76	39.78	39.75	39.76	10.69	10.72	10.75	10.72	10.71	10.72	351.95	351.94
	10	39.77	39.78	39.89	39.74	39.76	39.79	10.72	10.71	10.72	10.69	10.66	10.70	352.00	351.89

## Tibia Bone

		Widdth [mm]						Thickness [mm]						Length [mm]	
Target		40.00						10.75						432.00	
		w1	w2	w3	w4	w5	Average	t1	t2	t3	t4	t5	Average	L1	L2
Lot.No	1	39.75	39.87	39.78	39.77	39.77	39.79	10.70	10.74	10.73	10.73	10.71	10.72	432.29	432.24
	2	39.75	39.73	39.69	39.64	39.79	39.72	10.64	10.70	10.71	10.70	10.76	10.70	432.29	432.26
	3	39.73	39.72	39.77	39.75	39.77	39.75	10.68	10.68	10.70	10.70	10.74	10.70	432.00	432.26
	4	39.77	39.79	39.78	39.77	39.75	39.77	10.74	10.71	10.70	10.70	10.80	10.73	432.26	432.36
	5	39.76	39.78	39.75	39.75	39.72	39.75	10.75	10.71	10.62	10.63	10.65	10.67	432.37	432.33
	6	39.76	39.73	39.76	39.75	39.74	39.75	10.67	10.68	10.88	10.63	10.70	10.71	432.33	432.25
	7	39.70	39.75	39.75	39.70	39.72	39.72	10.69	10.68	10.70	10.60	10.68	10.67	432.01	432.12
	8	39.72	39.77	39.75	39.76	39.79	39.76	10.68	10.73	10.72	10.75	10.73	10.72	432.30	432.33
	9	39.82	39.76	39.79	39.76	39.75	39.78	10.69	10.71	10.71	10.63	10.66	10.68	432.20	432.28
	10	39.73	39.76	39.77	39.75	39.76	39.75	10.66	10.71	10.67	10.67	10.66	10.67	432.39	432.33

# Static Test result

## 1. Bone core bending test

This test is only reference test while we develop Tibia and Femur bones.

Test sample; Vf51%,52%,53%,55%

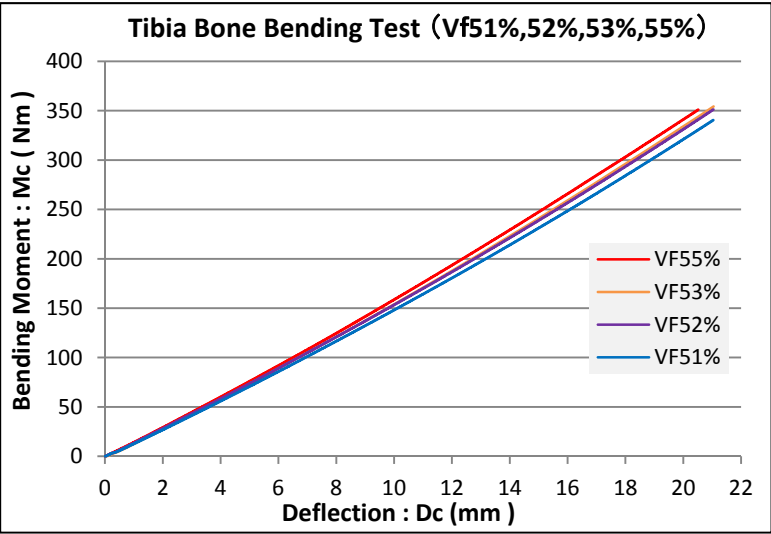
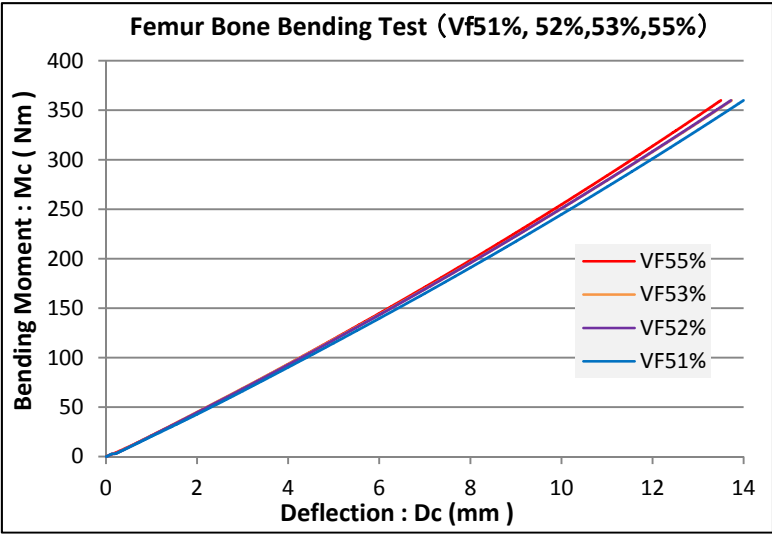
## 2. Assembly Bending Test Result

Femur Assembly; Vf52%

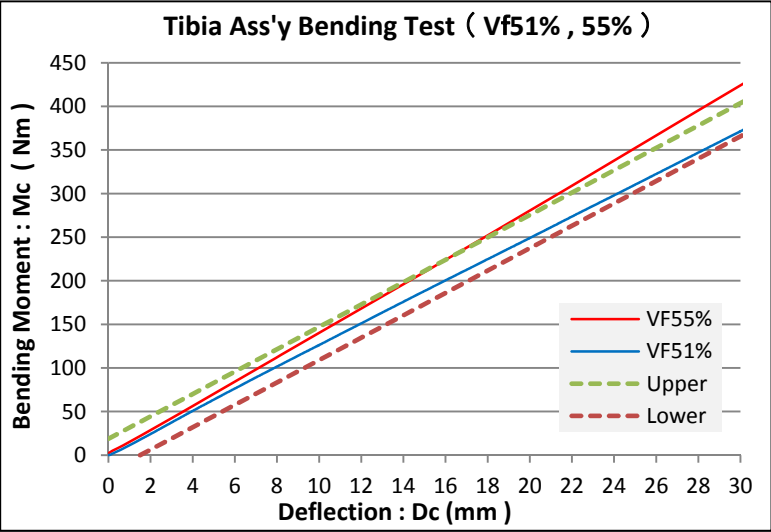
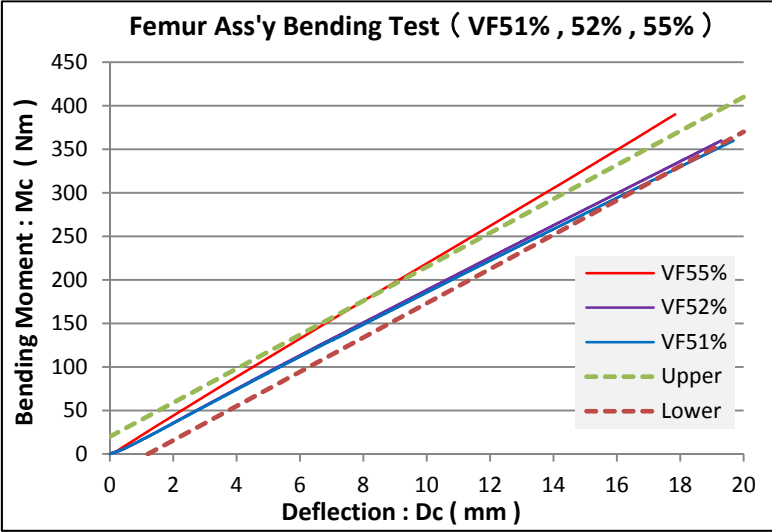
Tibia Assembly; Vf51%

# 1) Femur & Tibia Static Certification Test

## ① Bone Core Bending Test (Reference Test)

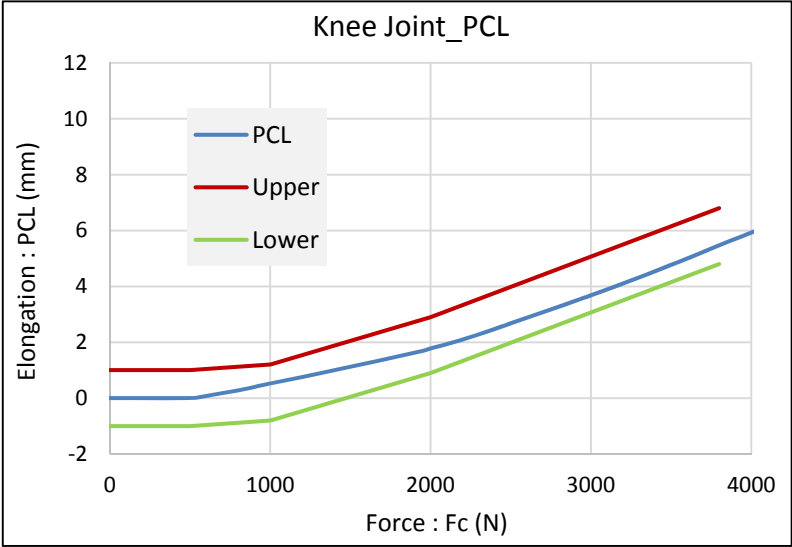
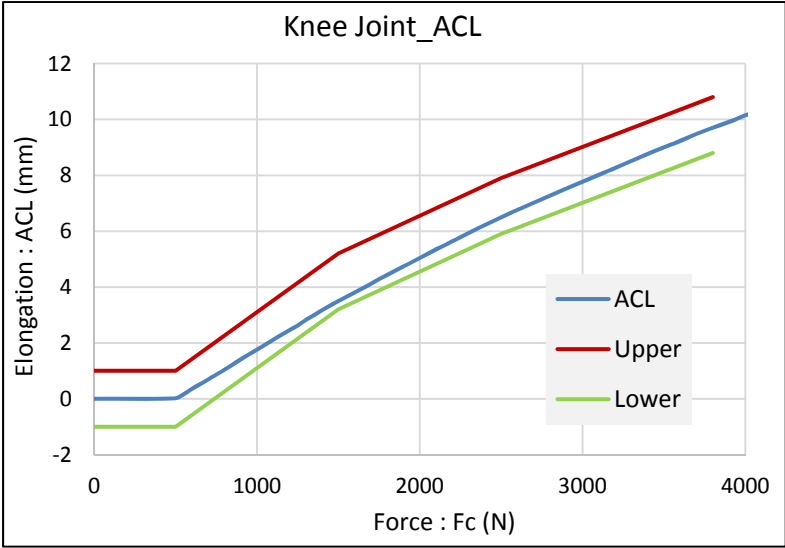
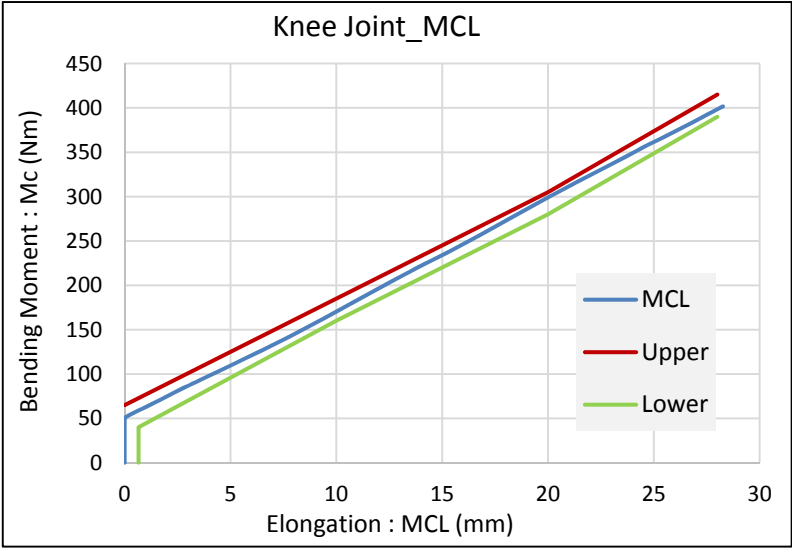


## ② Ass'y Bending Certification Test



Test Result Femur→Vf52% Tibia→Vf5% are selected for further Pendulum test

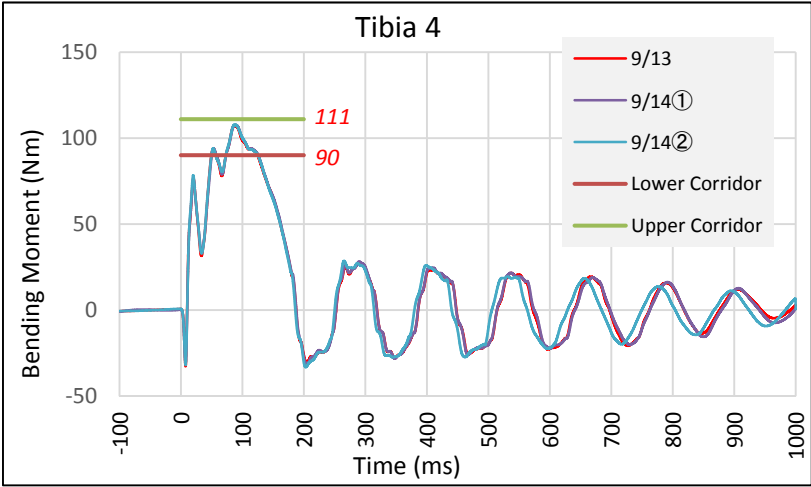
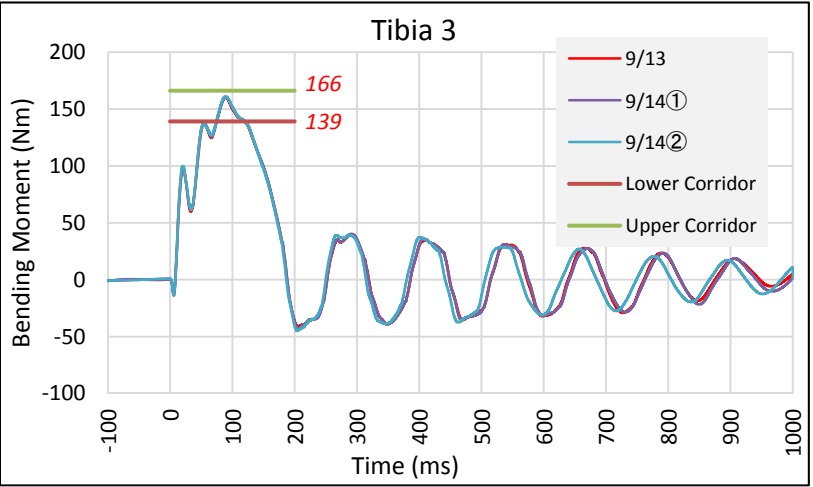
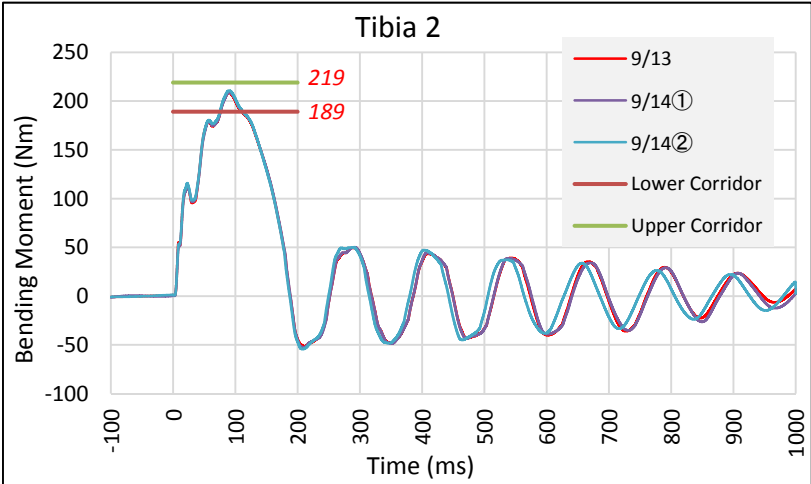
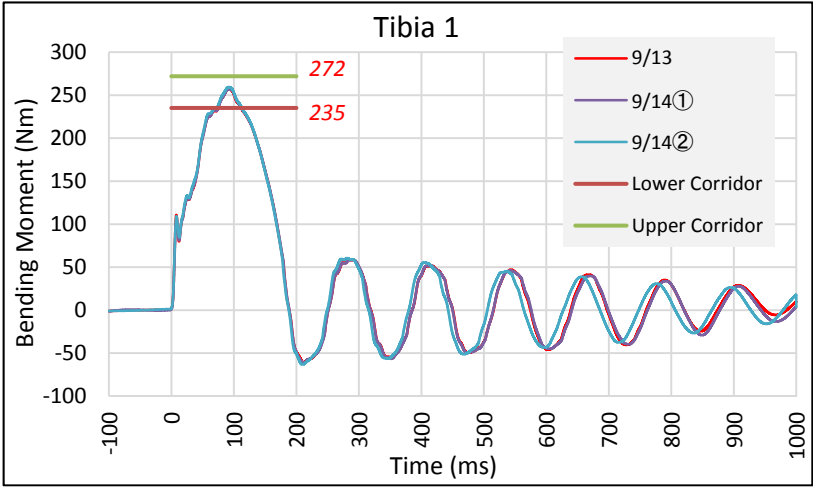
## 2) Knee Joint Static Certification Test



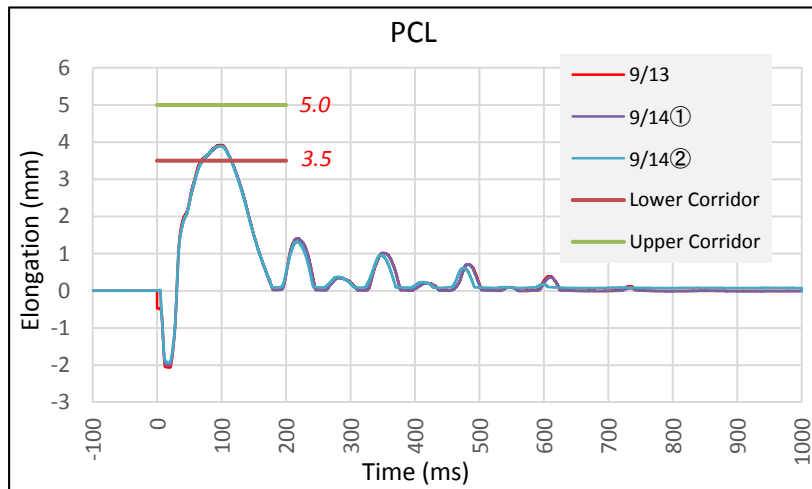
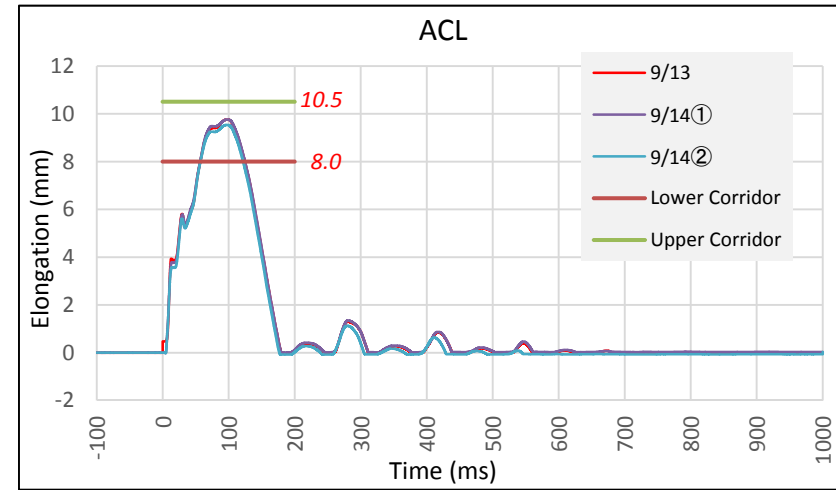
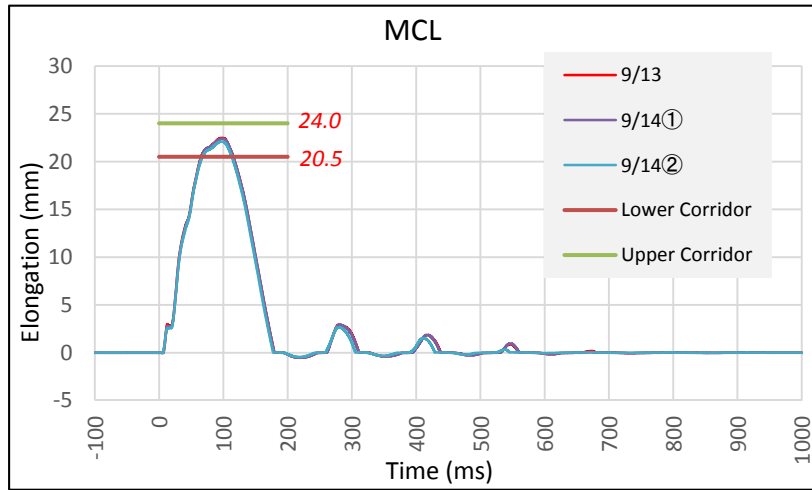
★ Knee Joint tests are **all passed**

### 3) Dynamic Lower Leg form Impactor Certification Test (n=3)

#### ① Pendulum Certification Test (Maximum Bending Moment)



## ② Pendulum Certification Test (Maximum Elongation)



All beams, assembly are **passed** up to final Pendulum Test