



TA4003BE material calibration with MAT24

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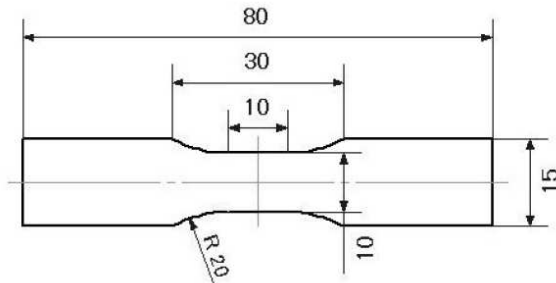
Uniaxial tension testing calibration (MAT24)

Uniaxial tension testing calibration

-Model description

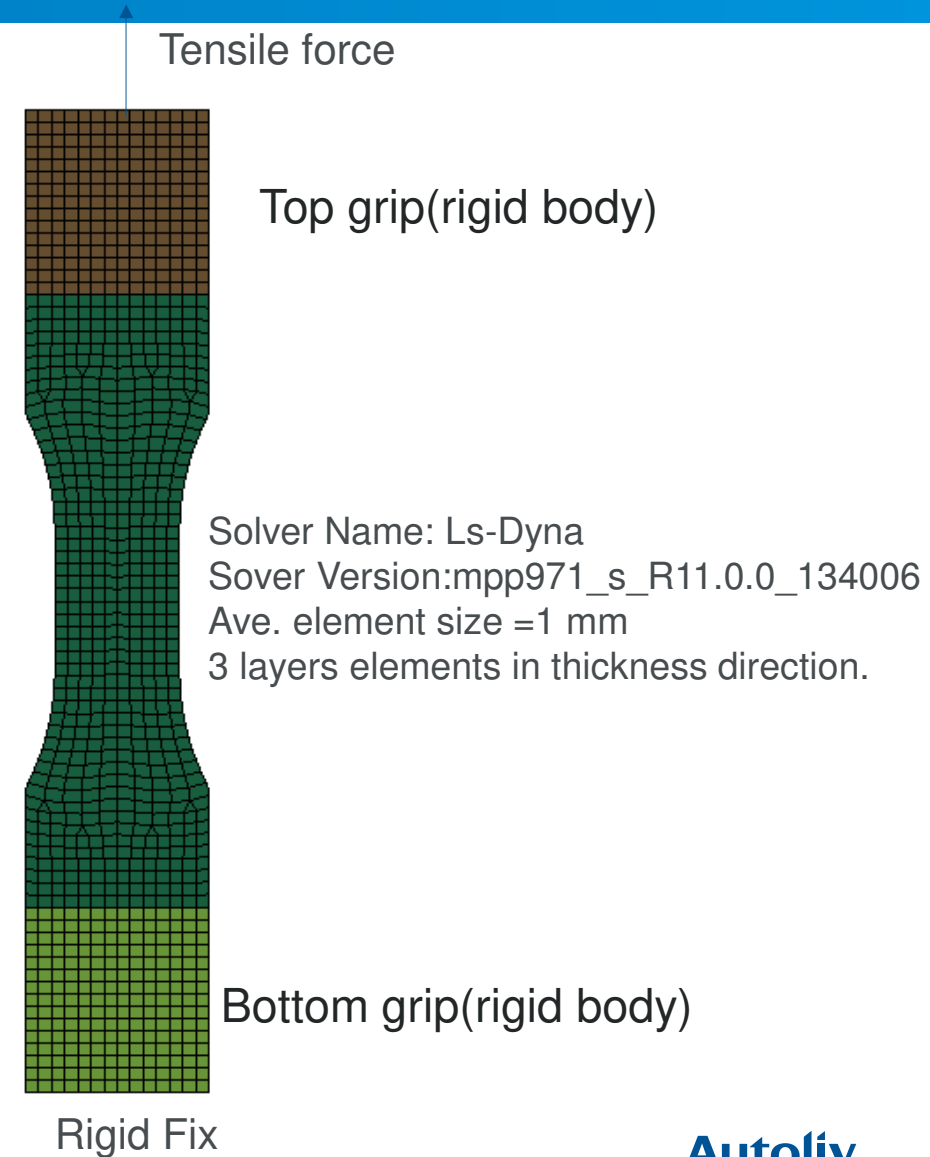
【Test Method】

Dumbbell : ISO8256 Type 3
Speed : 10, 100, 1000mm/s
Temperature : -30°C, rt, 85°C



Note:

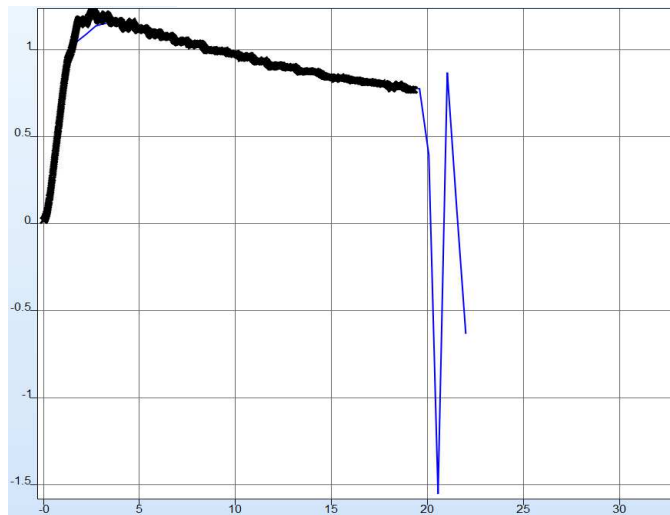
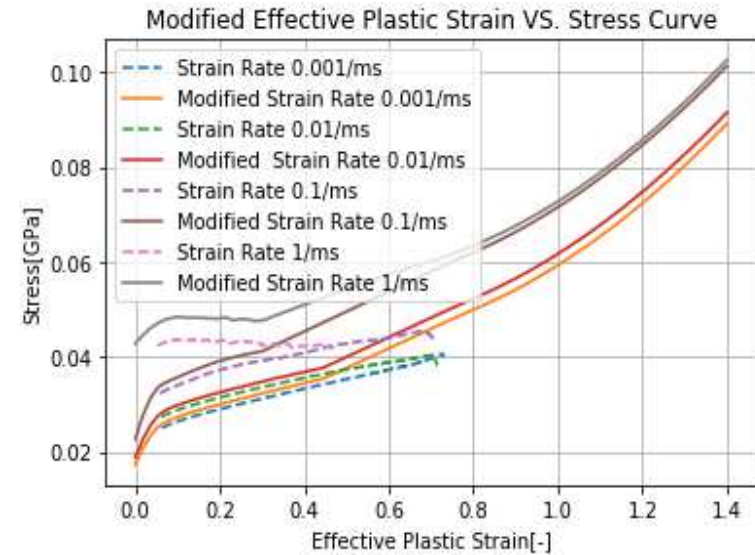
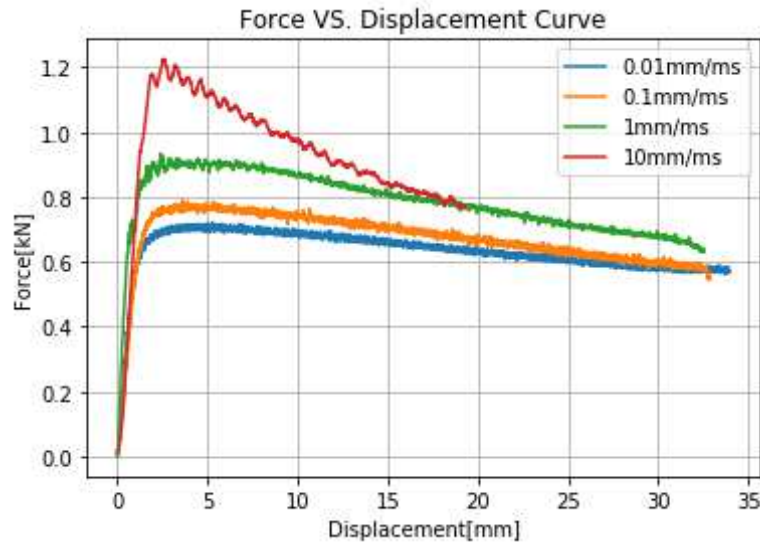
1. End effect is not considered in FEA.
2. The displacement is the grip separation distance(ISO).



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Uniaxial tension testing calibration (ELEFORM=1)

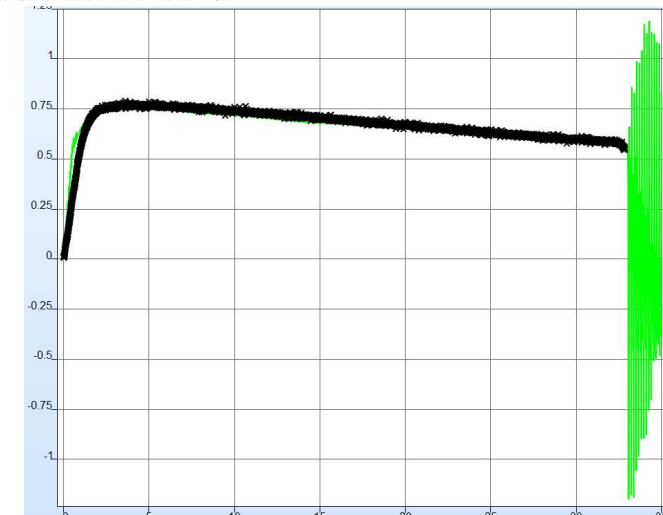
- -30°C



10mm/ms



1mm/ms

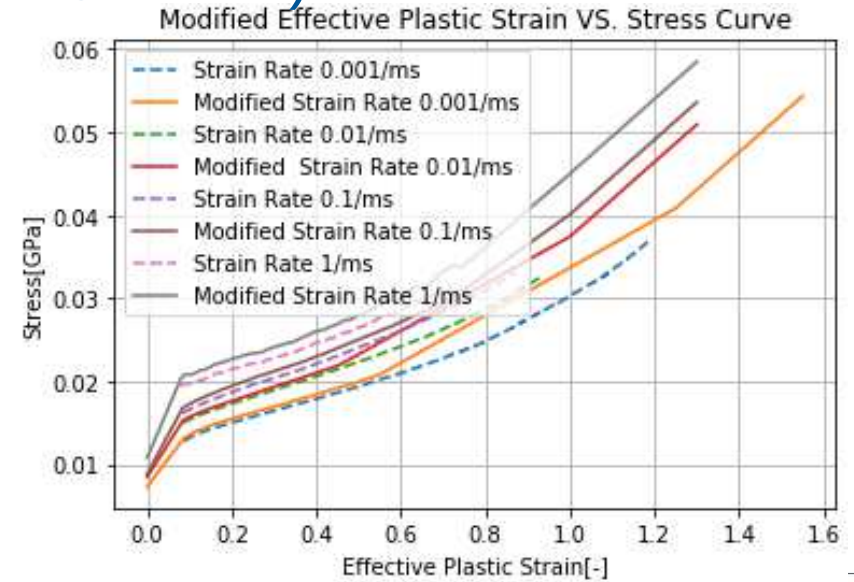
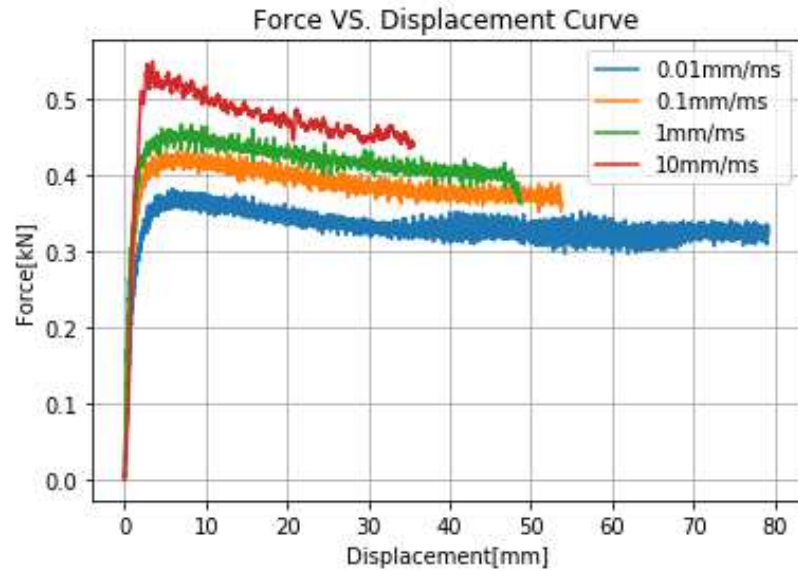


0.1mm/ms

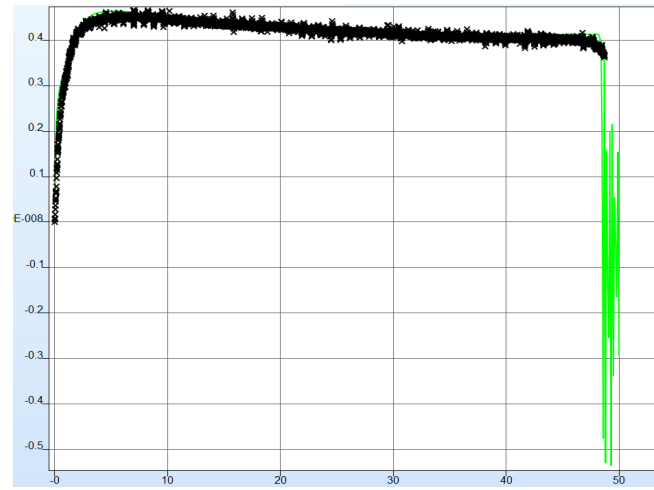
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Uniaxial tension testing calibration (ELEFORM=1)

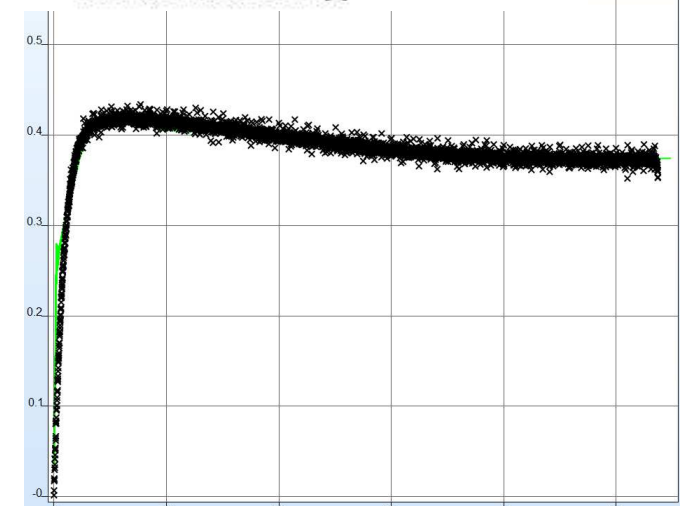
- 23°C



10mm/ms



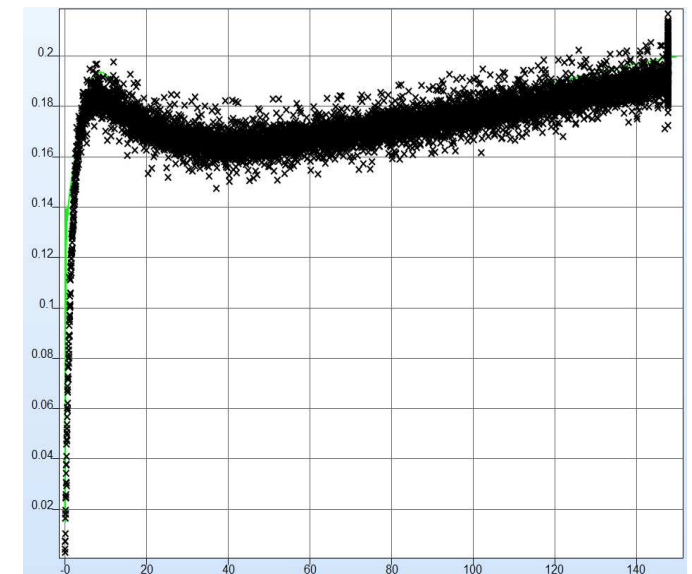
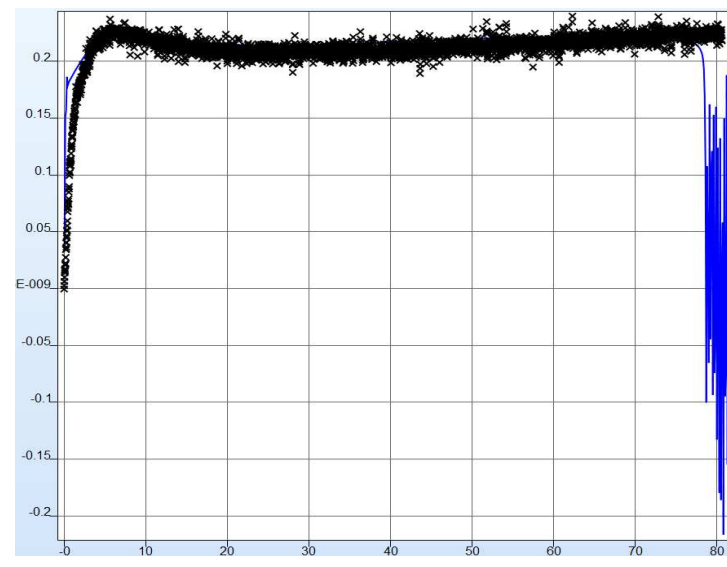
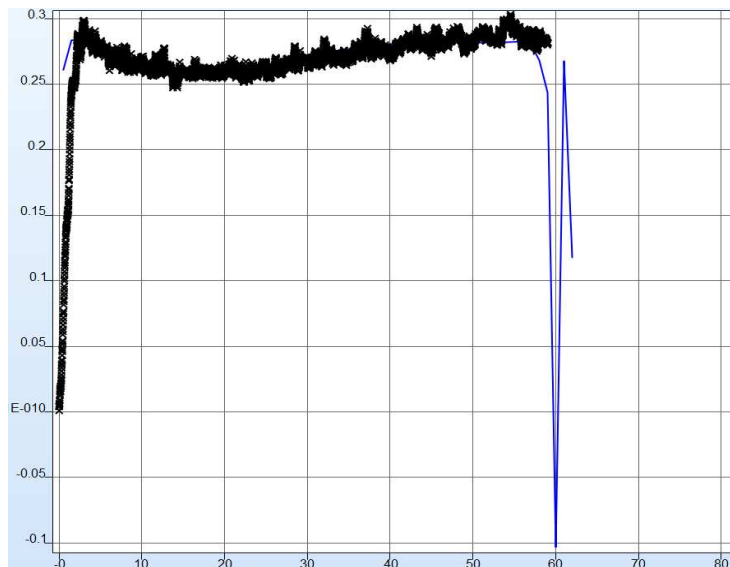
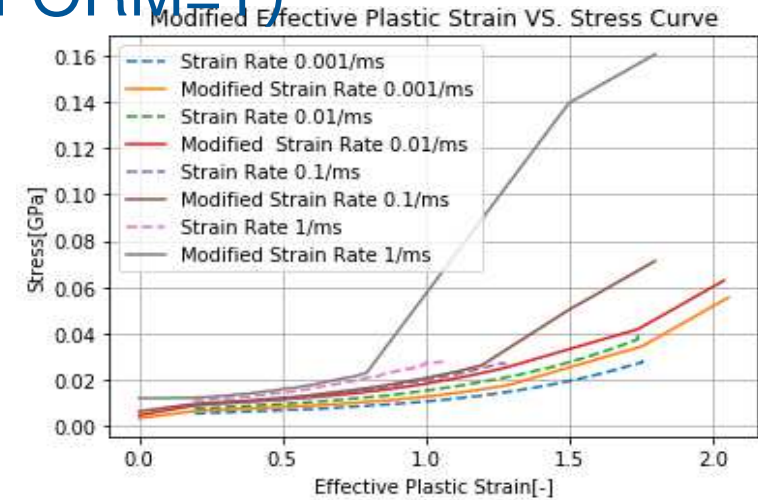
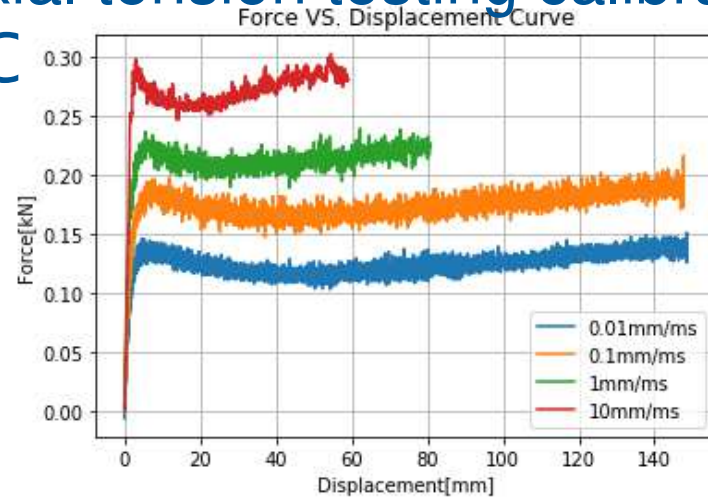
1mm/ms



0.1mm/ms

Uniaxial tension testing calibration (ELEFORM=1)

- 85°C

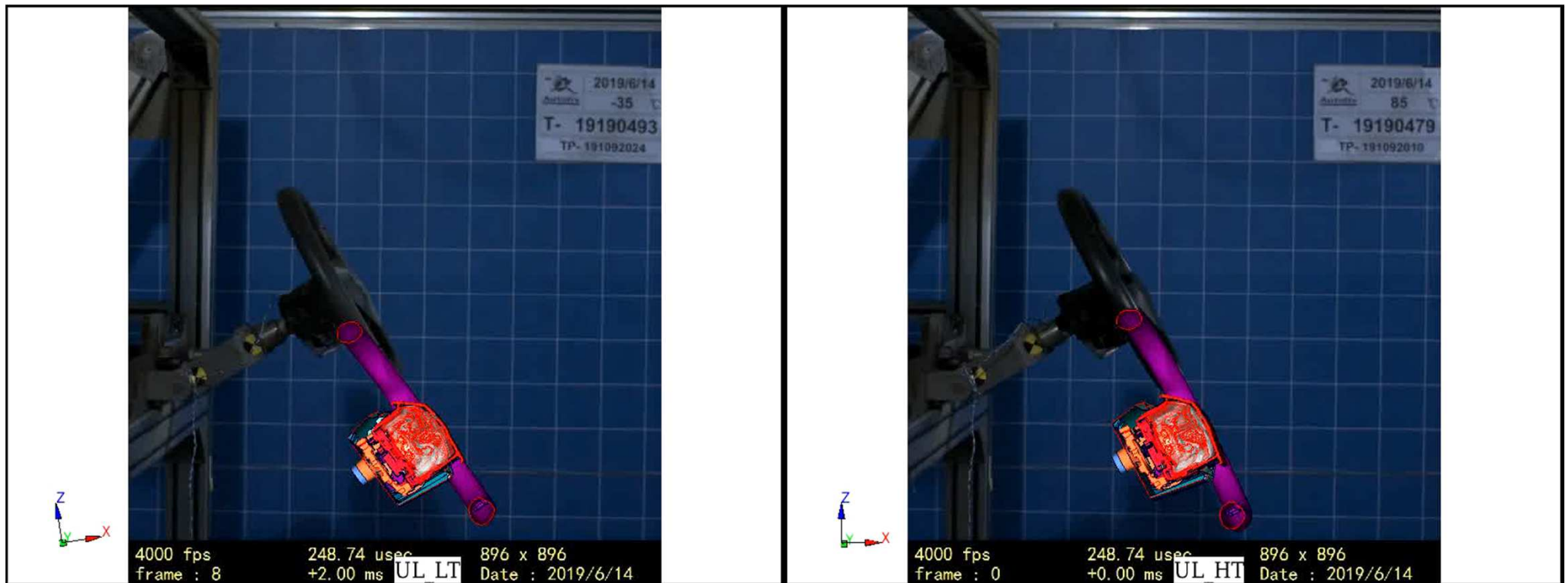


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DAB deployment simulation comparison (CN202)

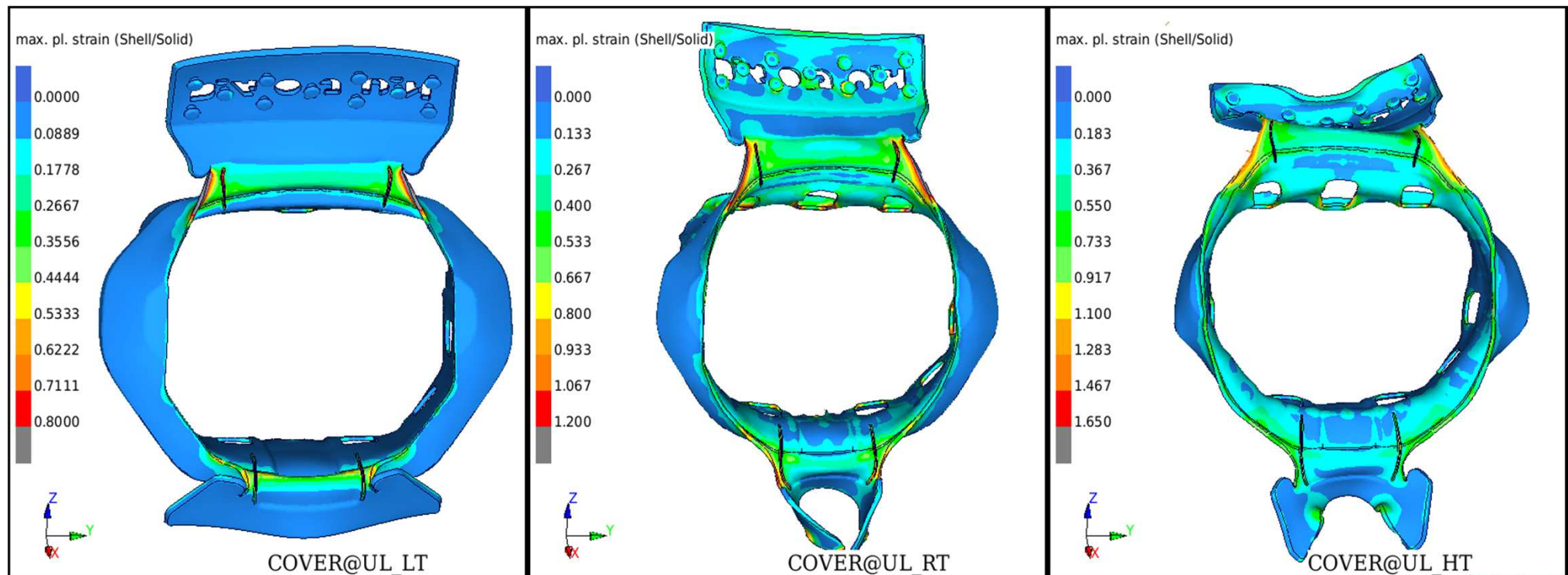
FEA results ELEFORM=-1

-Side view.



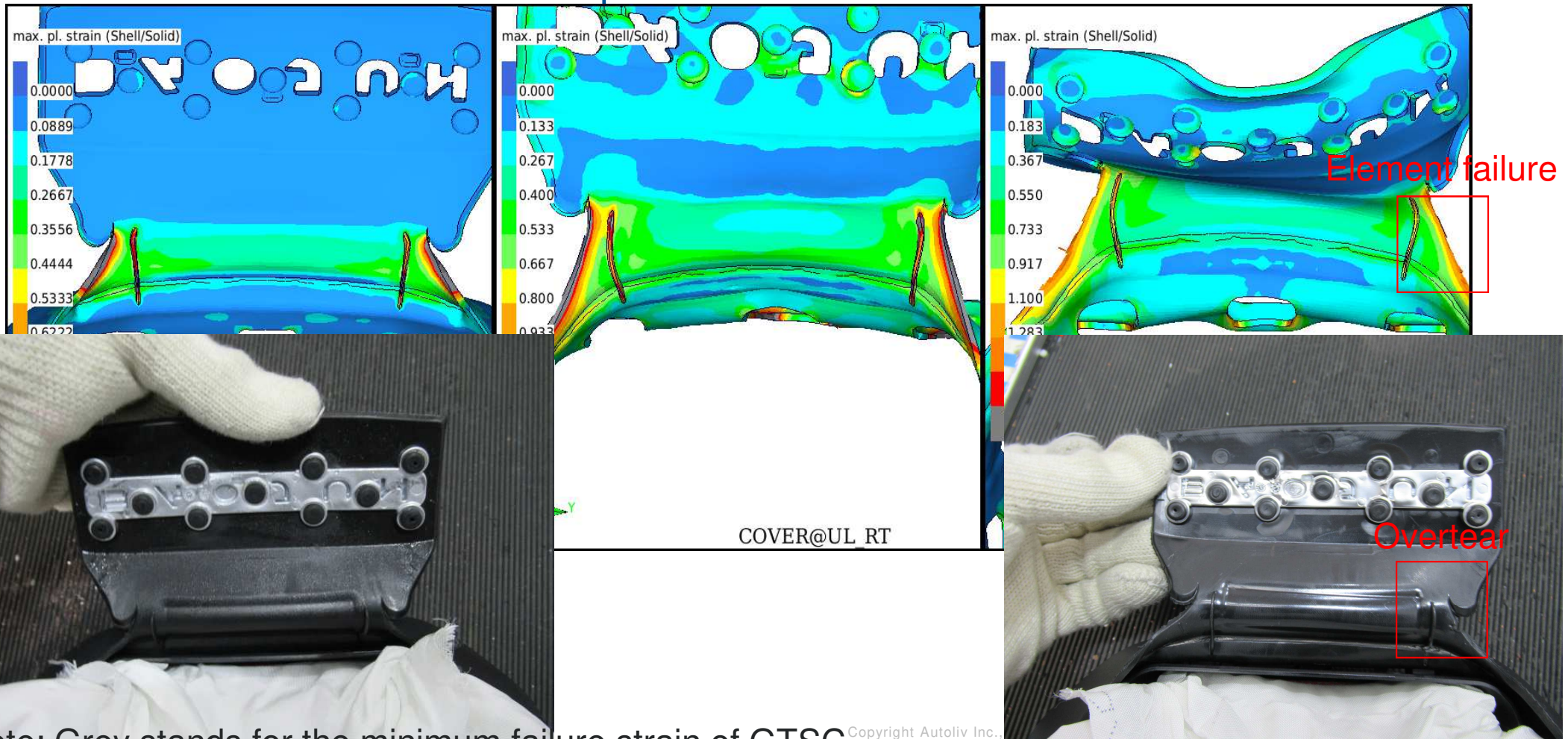
FEA results ELEFORM=-1

-The distribution of the effective plastic strain on cover.



FEA results ELEFORM=-1

-The distribution of the effective plastic strain on cover.



Note: Grey stands for the minimum failure strain of GTSC.

DAB deployment simulation comparison

-Difference comparison

	UL_LT	UL_HT
Testing	OK	<ul style="list-style-type: none">• Overtear risk@Hinge• Cover scraps on SW
GTSC	Overtear risk@Hinge	<ul style="list-style-type: none">• Breakge risk@Window• Emblem hits on the SW
ELEFORM=1	OK	<ul style="list-style-type: none">• Elements failure@Hinge• Cover scraps on SW
ELEFORM=-1	OK	<ul style="list-style-type: none">• Elements failure@Hinge• Cover scraps on SW



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