统帅1880副驾双人座椅CAE分析报告

目录 / Content

1. 客户标准和结论/ Customer Spec. and Conclusions

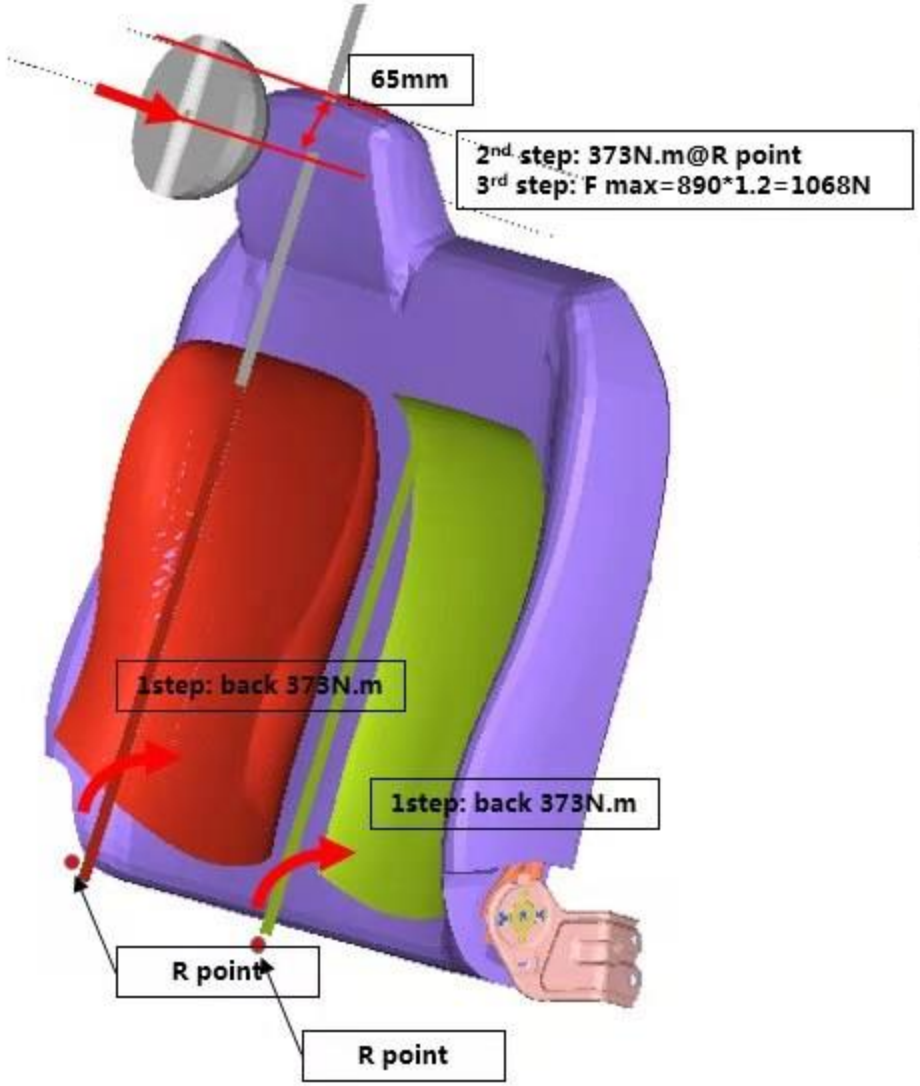
实验标准 Test customer specification	GB 15083-2019《汽车座椅、座椅固定装置及头枕强度要求和试验方法》 GB 15083-2019《 Strength requirement and test of automobile seats , their anchorages and any head restraints 》
实验要求 Test requirements	1. 座椅保持的加载力为 GB *120%； Seat can hold GB*120% load ; 2. 头型位移@373Nm<102mm; head form Dis. @373Nm < 102mm; 3. 试验后，零件无失效；连接无失效；滑轨、调角器核心件可以调节。 After test, No part failure, No linkage failure, track and recliner .. can be adjusted.
实验结论 Test Conclusion	**Pass**
优化建议 Design optimization Suggestions	---

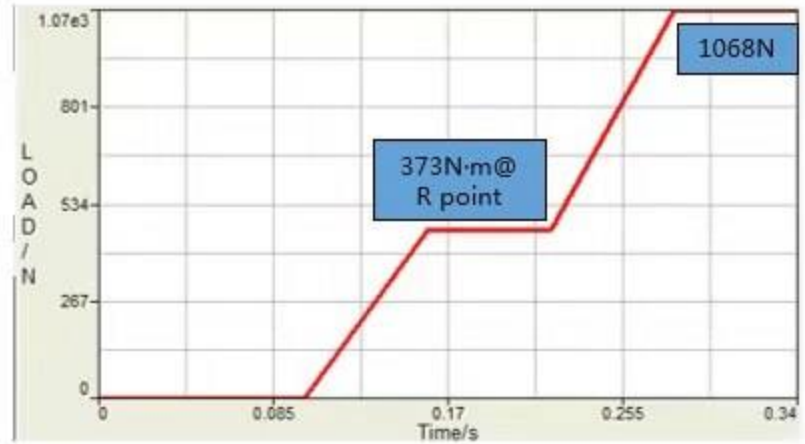
1. 客户标准和结论/ Customer Spec. and Conclusions

Conclusion
Pass

判断项/items	标准/Spec	结果/Result	结论/Conclusion
零件失效 Part Failure	无失效 No failure	最大有效塑性应变20.1%	Pass
头型位移@373N·m Head form Dis.@373N·m	<102mm	23.6mm @373N·m	Pass
调角器失效 Recliner failure	——	单侧：457Nm	---

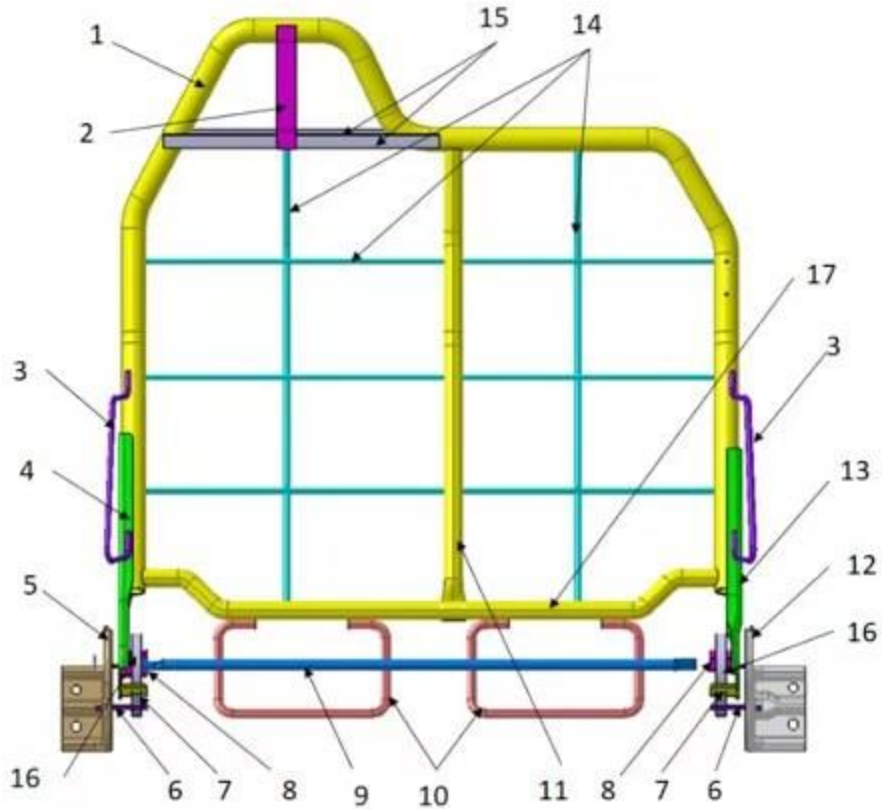
2. 模型设置/FEA model setup





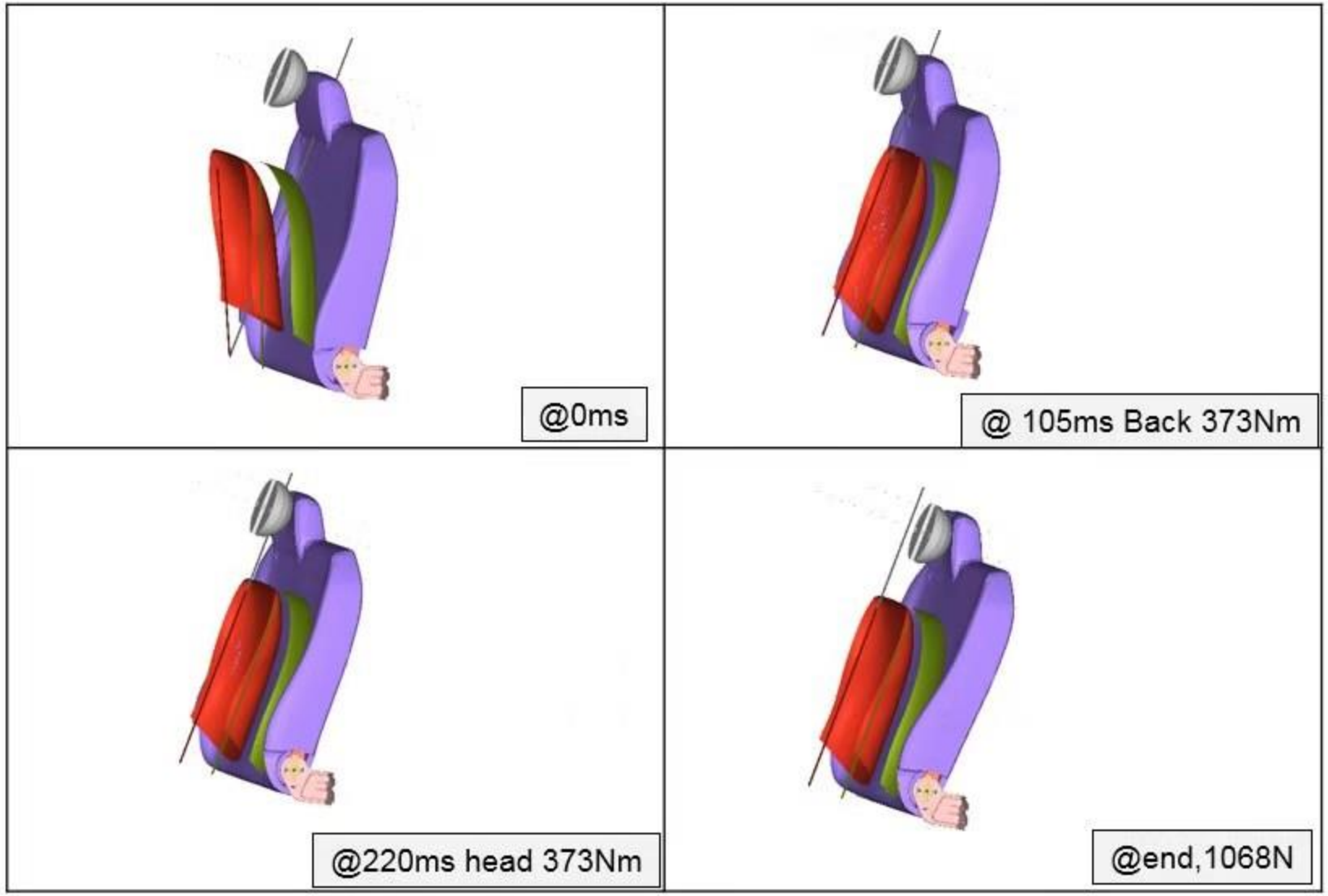
3. 模型描述/ Model Description

- 座椅为全新设计

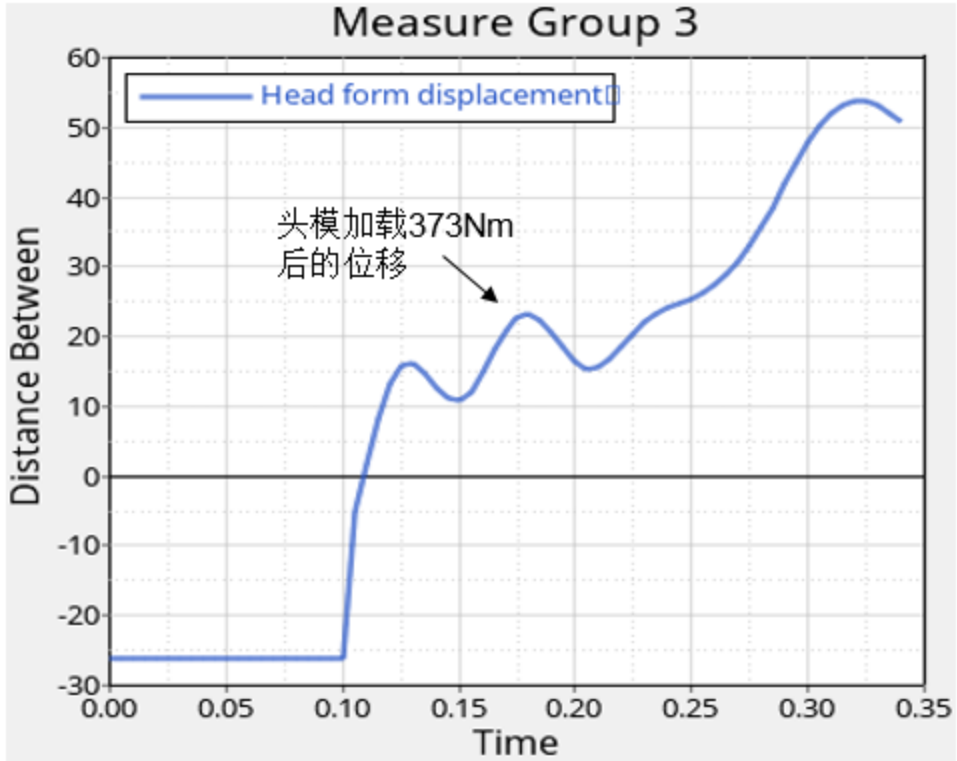


序号	名称	材料规格
1	靠背主管	B340LA Φ25x2.0
2	头枕泡沫支撑板1	Q235 2.0
3	副驾靠背侧翼支撑钢丝	Q235 φ6
4	调角器上连接板	QStE500TM 2.5
5	调角器下连接板	QStE500TM 2.5
6	前排靠背复位卷簧安装支架	SAPH440 4.0
7	复位卷簧下限位支架	SPFH590 3.0
8	前排靠背复位卷簧限位支架	SPFH590 3.0
9	芯盘联动杆	——
10	靠背固定管	Q195 Φ10x1.5
11	靠背中间竖管	Q235 Φ20x2.0
12	调角器下连接板	QStE500TM 2.5
13	调角器上连接板	QStE500TM 2.5
14	靠背钢丝	Q235 φ6
15	头枕泡沫支撑板2	Q235 2.0
16	靠背调角器涡簧	65Mn
17	靠背下横管	Q235 Φ20x2.0

4. 变形图和标准结果/Animation and Spec. Results



4. 变形图和标准结果/Animation and Spec. Results



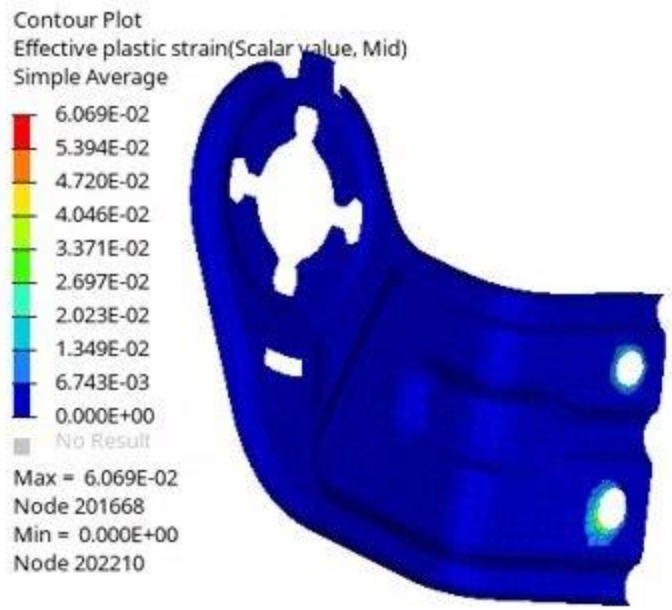
头模加载到373Nm后，头模到新躯干线的距离为23.6mm，小于102mm，继续加载到1068N，能够保持住，符合要求。

5. 重要零件的应力应变云图/ Stress and Strain of the Main Parts

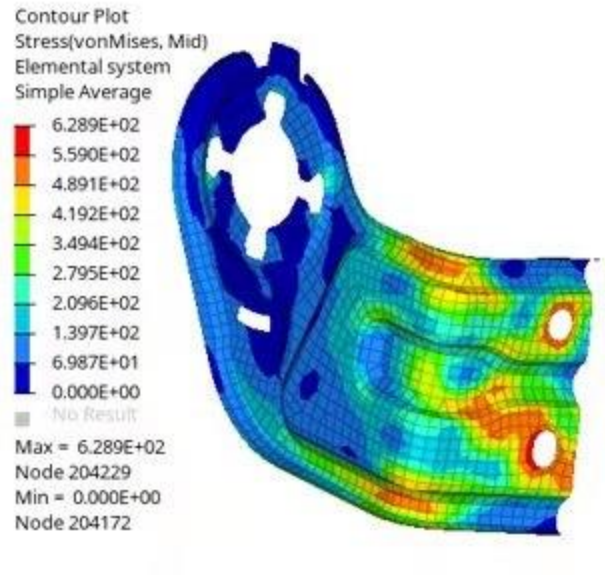
零件名称： 调角器下连接板

Conclusion
Pass

零件厚度/Thickness	2.5mm
零件材料/Material	QSTE500TM
结果应力应变值/ Results	
零件极限应变/A% =21.5%	6.06%
零件极限应力/ UTS =757Mpa	629Mpa



有效塑性应变 EPS < A%



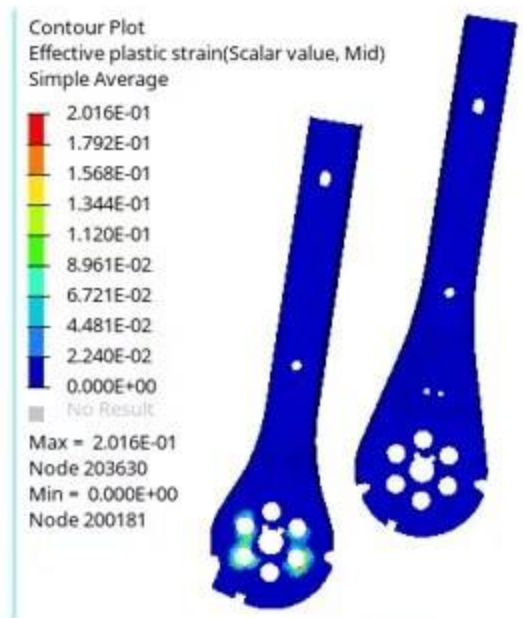
应力 Max. stress

5. 重要零件的应力应变云图/ Stress and Strain of the Main Parts

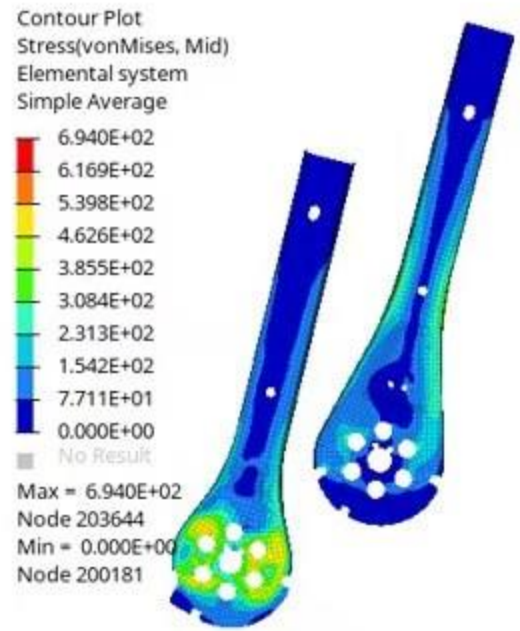
零件名称： 调角器上连接板

Conclusion
Pass

零件厚度/Thickness	2.5mm
零件材料/Material	QSTE500TM
结果应力应变值/ Results	
零件极限应变/A% =21.5%	20.1%
零件极限应力/ UTS =757Mpa	694Mpa



有效塑性应变 EPS < A%



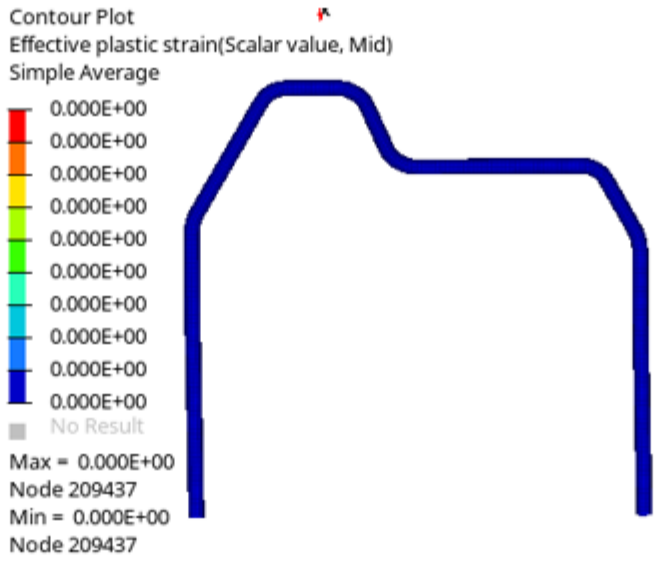
应力 Max. stress

5. 重要零件的应力应变云图/ Stress and Strain of the Main Parts

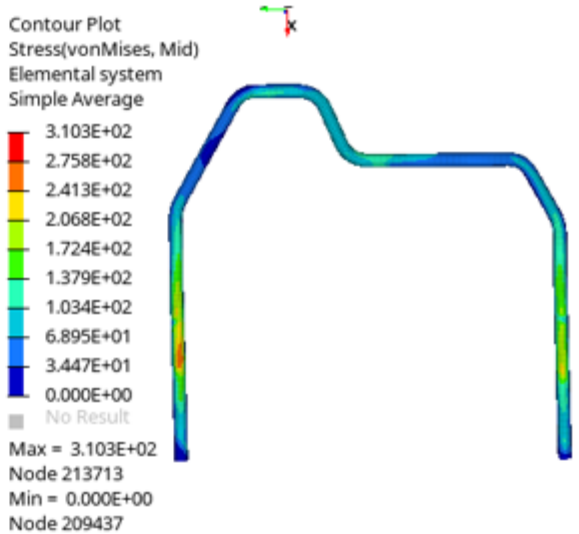
零件名称： 靠背管

Conclusion
Pass

零件厚度/Thickness	2.0mm
零件材料/Material	B340LA
结果应力应变值/ Results	
零件极限应变/A% =30%	0%
零件极限应力/ UTS =590Mpa	310Mpa



有效塑性应变 EPS < A%



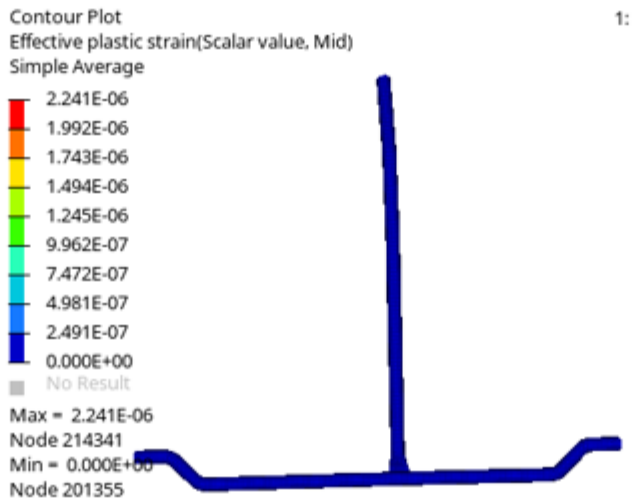
应力 Max. stress

5. 重要零件的应力应变云图/ Stress and Strain of the Main Parts

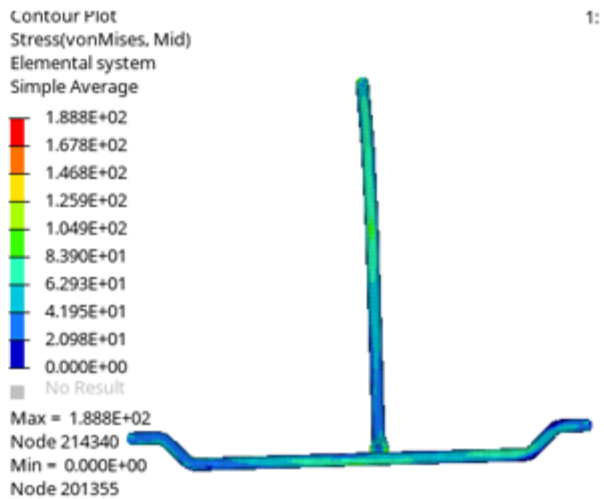
零件名称： 靠背管

Conclusion
Pass

零件厚度/Thickness	2.0mm
零件材料/Material	B340LA
结果应力应变值/ Results	
零件极限应变/A% =26%	0.00002%
零件极限应力/ UTS =400Mpa	188Mpa



有效塑性应变 EPS < A%



应力 Max. stress