

FORMABILITY SIMULATION ANALYSIS

机种	PROJECT	: --
品番	PART NO	: 76316-A0001
品名	PART NAME	: --
设变号	DATA Version	: --
模拟次数	REVISION NO.	: 11
模拟软件	SIM Version	: AutoForm R11
日期	DATE	: 2024-09-21

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形状回弹分析

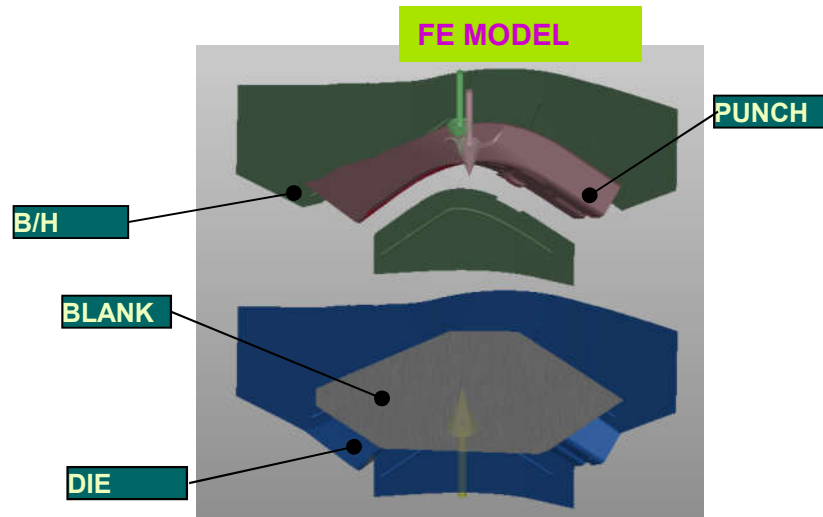
- 5. 回弹分析（未进行回弹补偿前）
- 6. 回弹分析（进行回弹补偿后）

1.综述/ Overview

SIMULATION PACKAGE

DYNAFORM () /PAMSTAMP ()

AF SHELL (☒) /AF MEMBRANCE ()



SIMULATION SET UP (模拟参数)

Geometry(模面等级): **bid/CAD/CAM**

Material(材料): **DC04-A-M**

Property of Material(材料性能)(Y、T、N、R):

Y=181.2 T=311 N=0.194 R=1.027

Thickness (料厚): **1.5mm**

Master Surf(基准面): **UPPER**

SHAPE OF THE BLANK坯料: **1.5T*520W*545P**

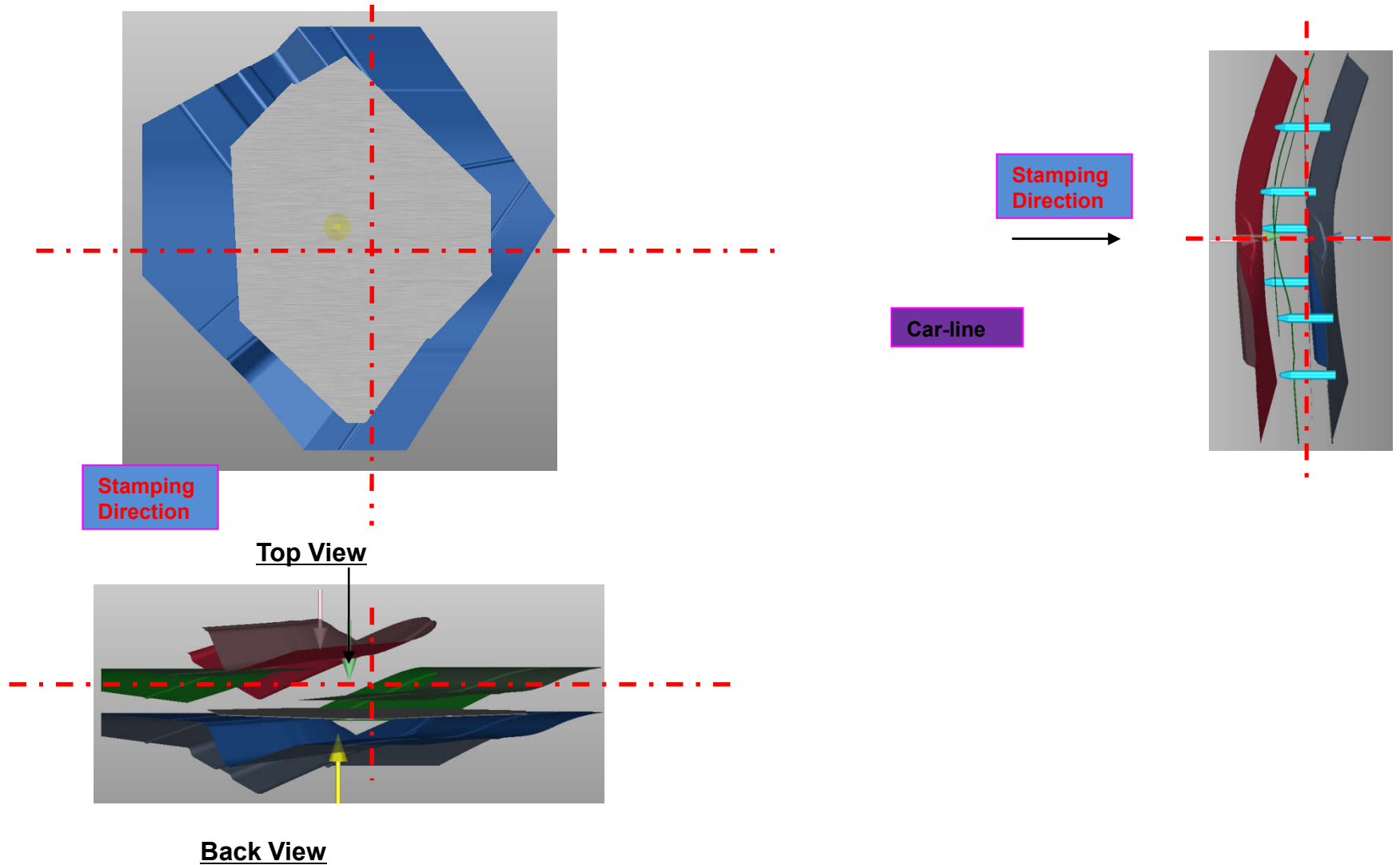
Material Utilization Ratio材料利用率: **56.13%**

Max Allowable Thinning最大允许减薄量: **40.9%**

分析结果 (Evaluation)	Pass(安全) 	Danger (危险) 	Failure(失效) 
Splits (破裂)	☒		
Wrinkles (起皱)	☒		
FLD	☒		
开模	☐ 是 ☐ 否		

2.工序规划 Flowing of Operation

Draw Set-up(拉延设置)



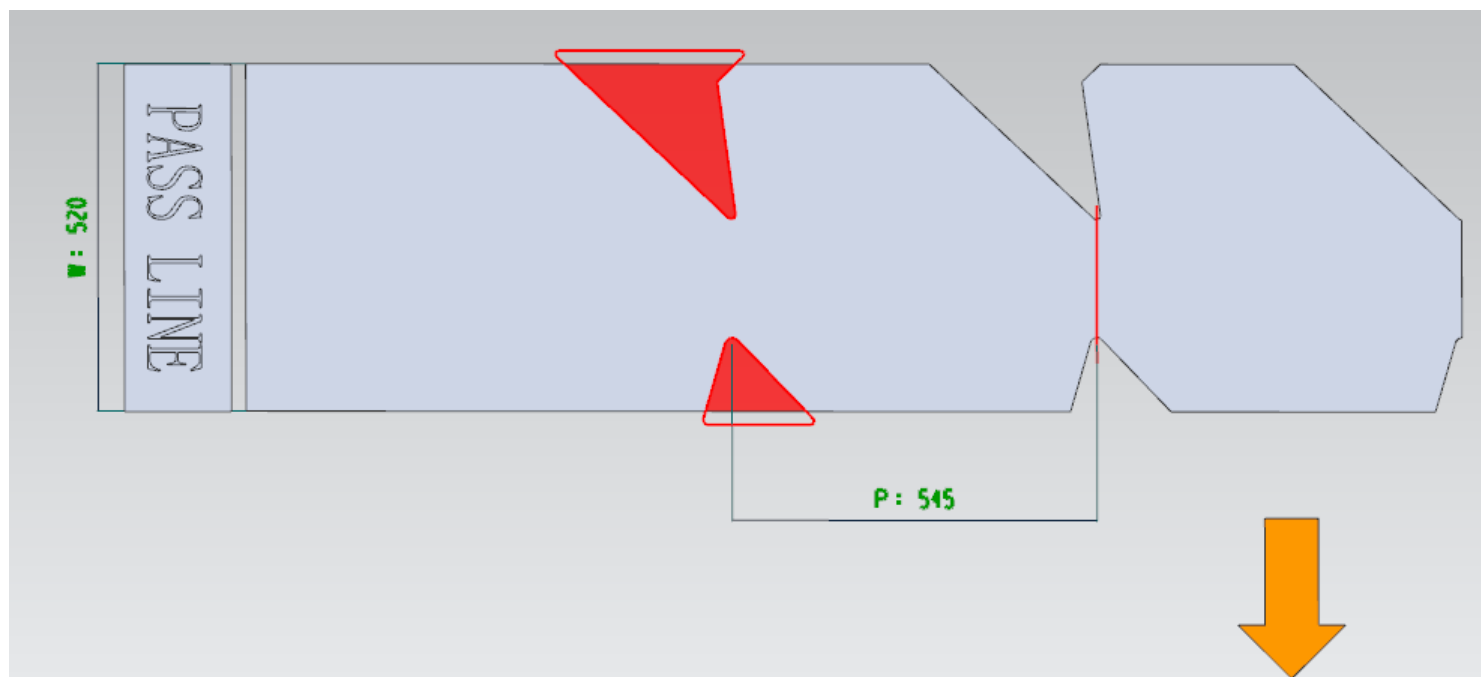
2. 坯料/ Shape of the Blank

SHAPE OF THE BLANK(坯料)

卷料Rectangle✓

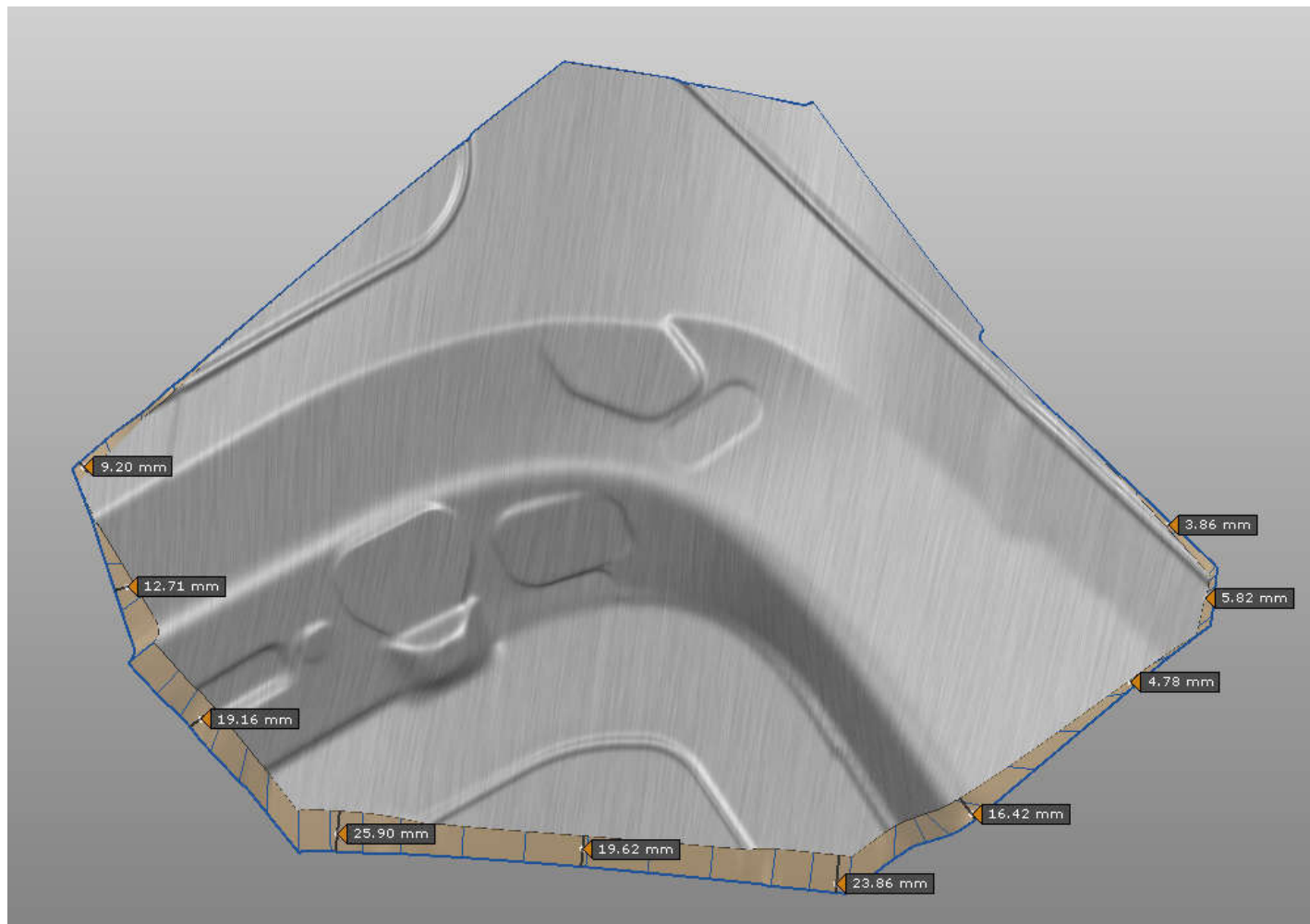
梯形料Trapezium

形状料Shape



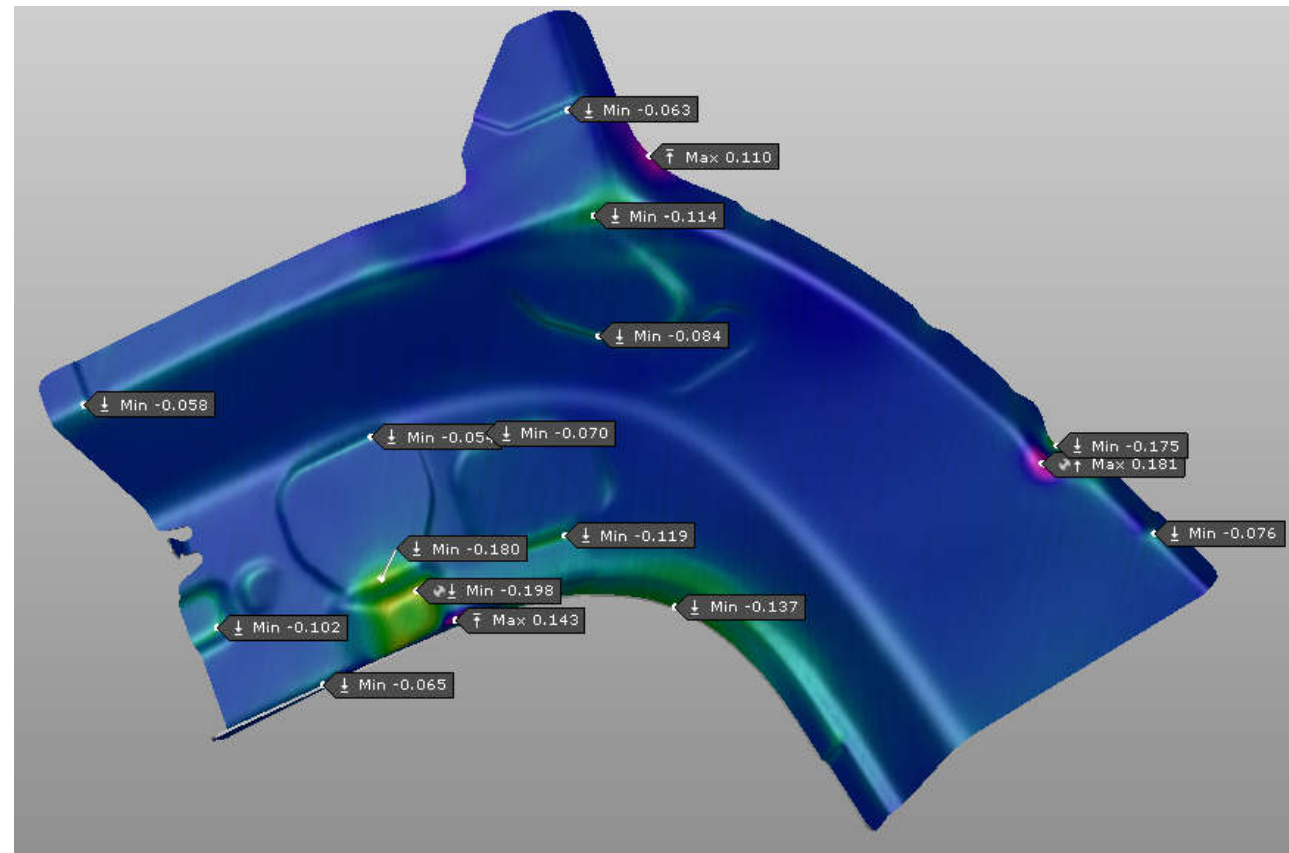
4.流入量分布图/ Inflow

INFLOW(流入量分布图)



5.减薄率分布图/ Thinning Ratio

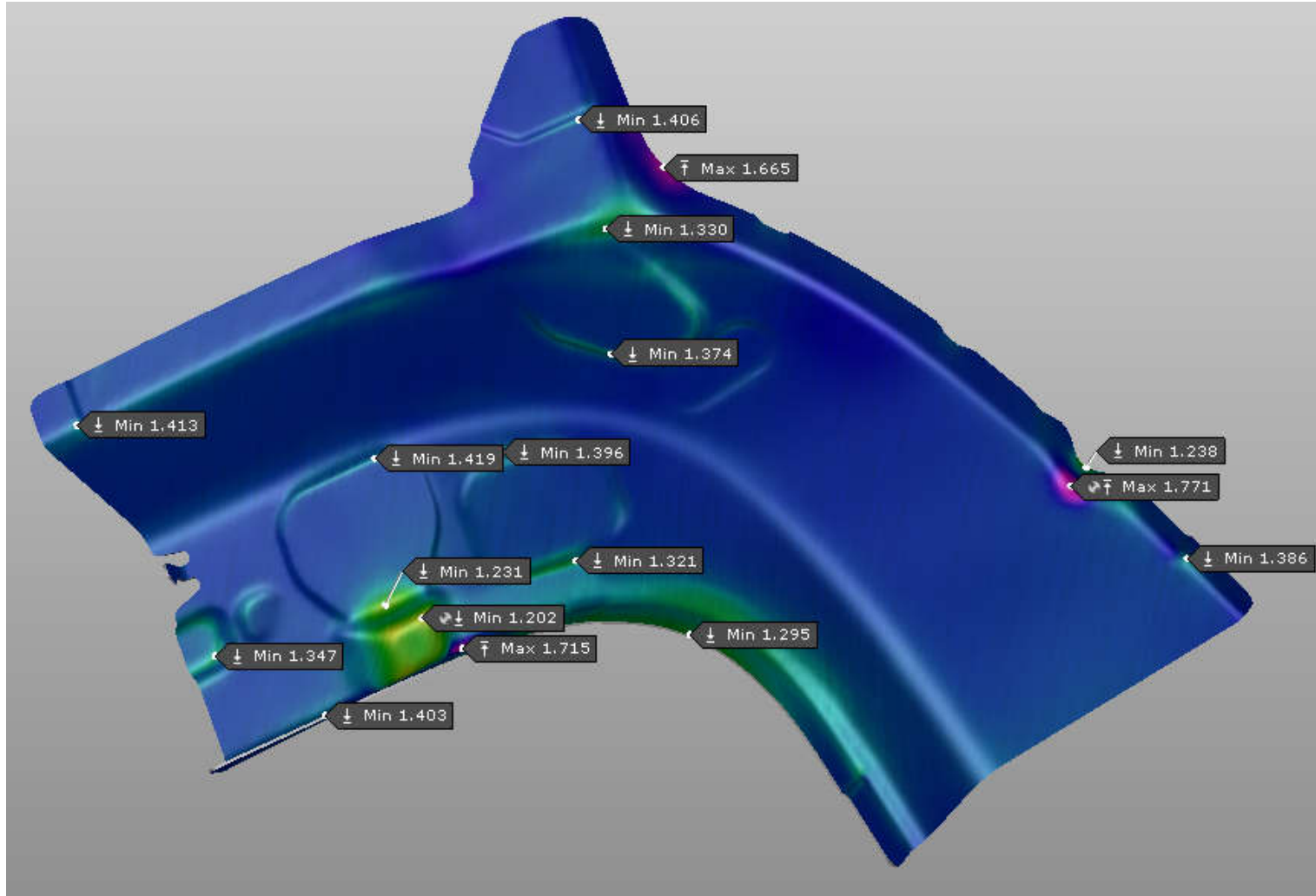
Thinning Ratio Analysis (坯料减薄率分布图)



			Max Value
			19.8%

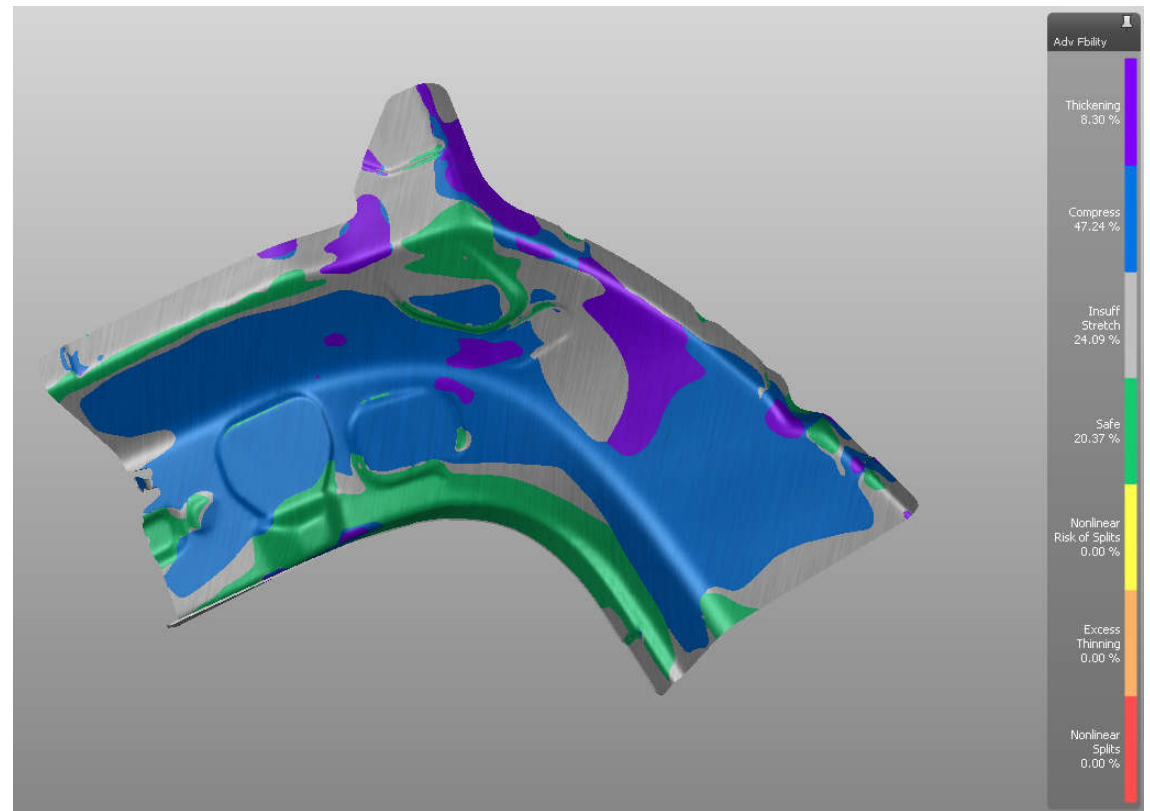
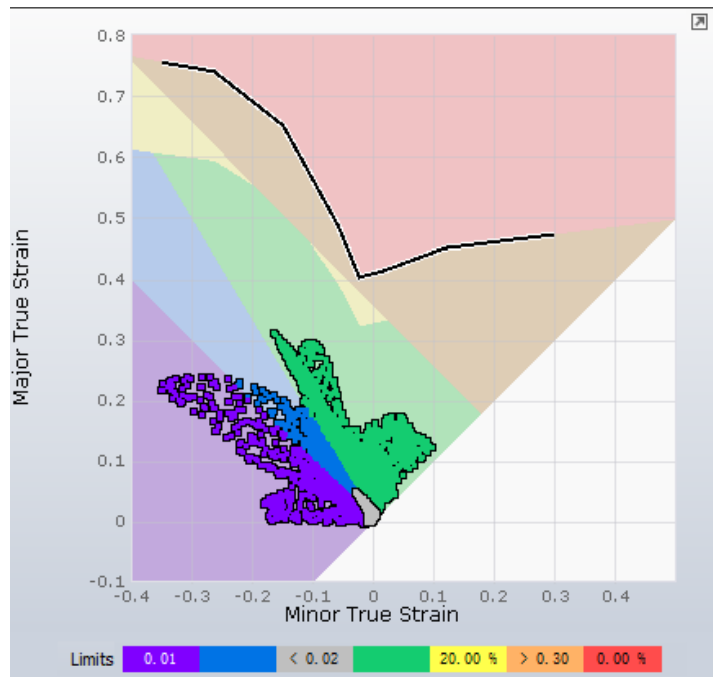
6.材料起皱判断/Wrinkle Analysis

Wrinkle Analysis: Thicking (增厚 :起皱判断)



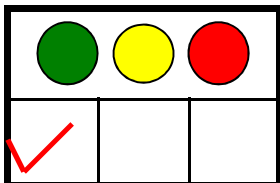
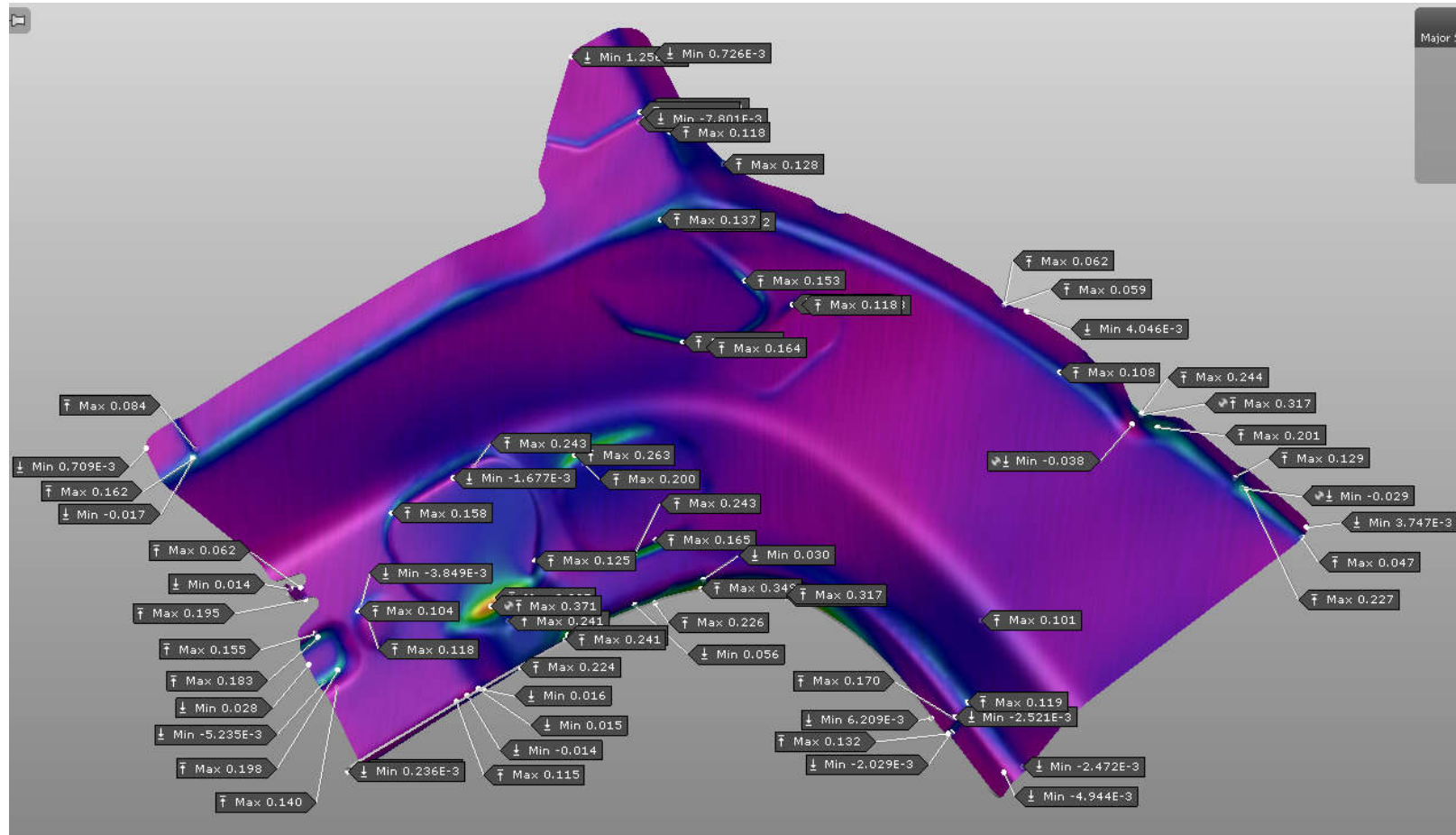
7.成型极限图/Forming Limit Diagram

Forming Limit Diagram (成型极限图)



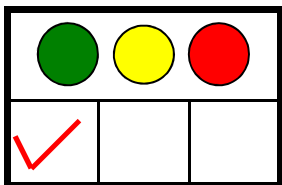
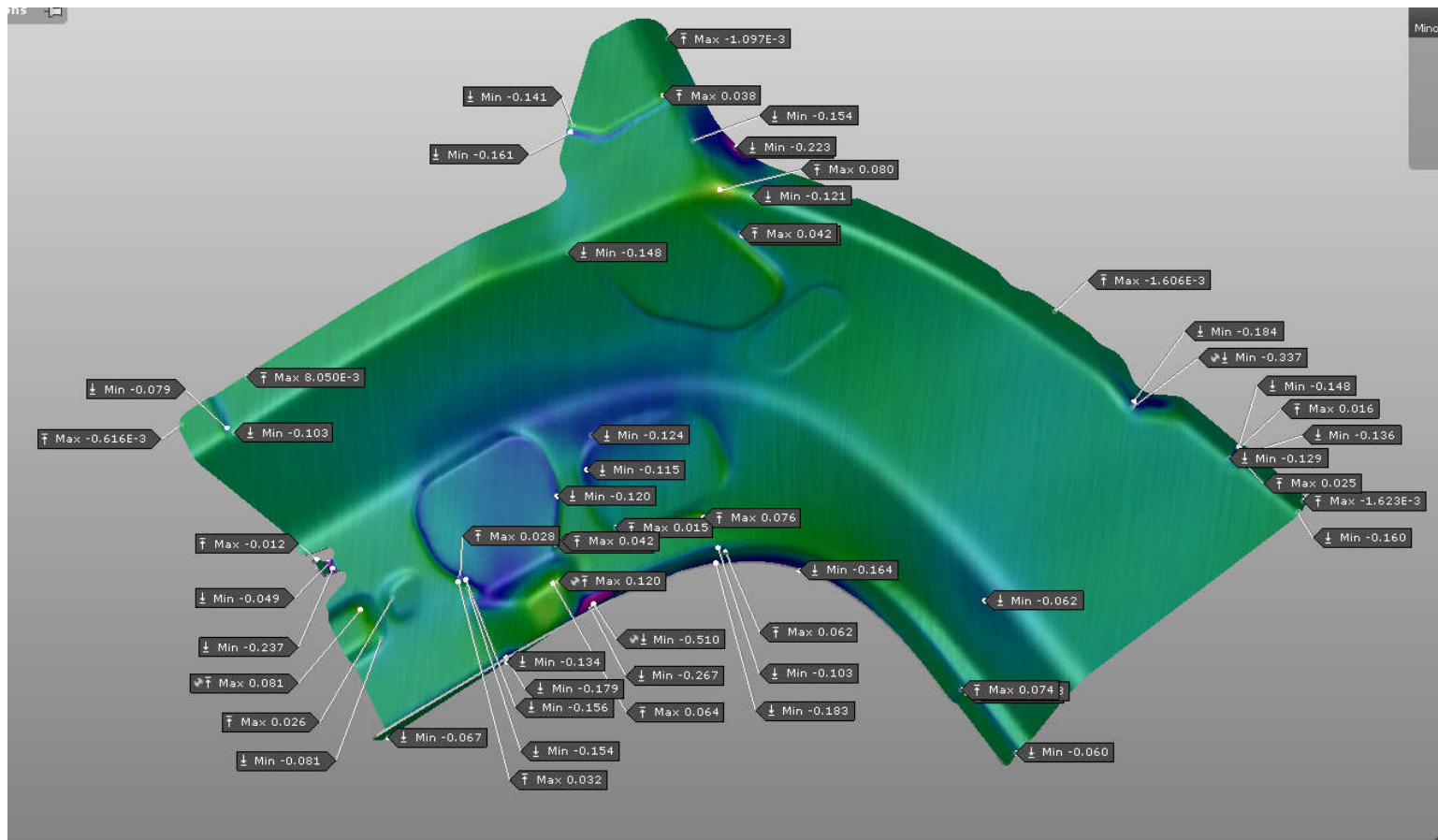
8.主应变/Major Strain

Major Strain (主应变)



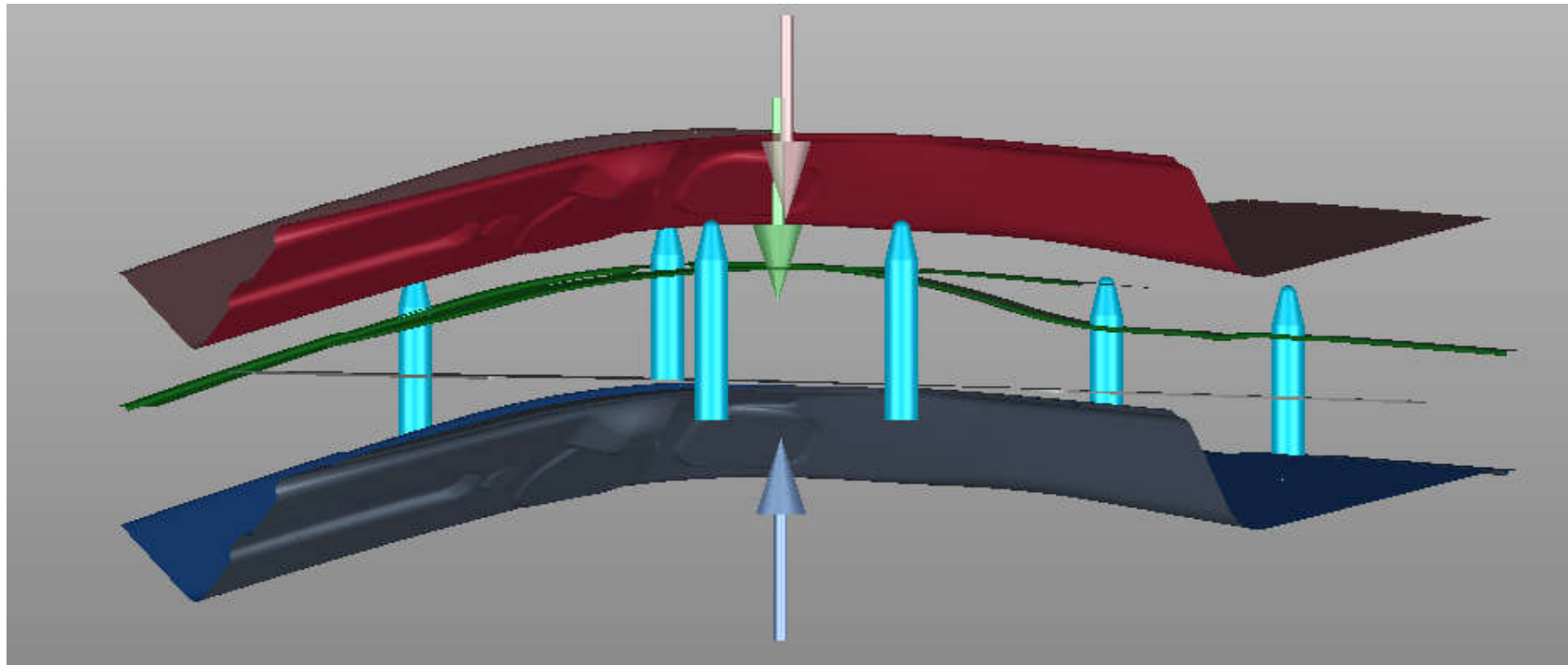
9.副应变/Minor Strain

Minor Strain (副应变)



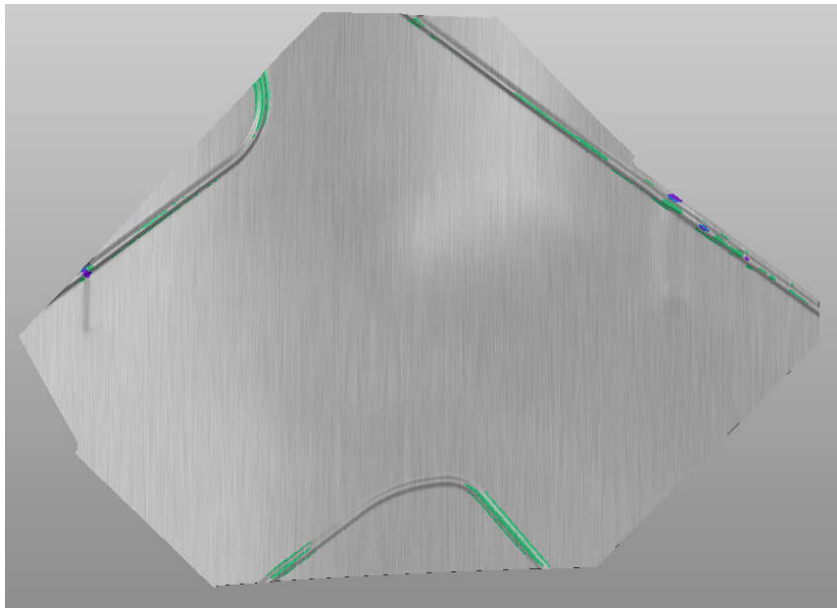
10.拉延过程/Draw Process

The blank gravity (重力状态)

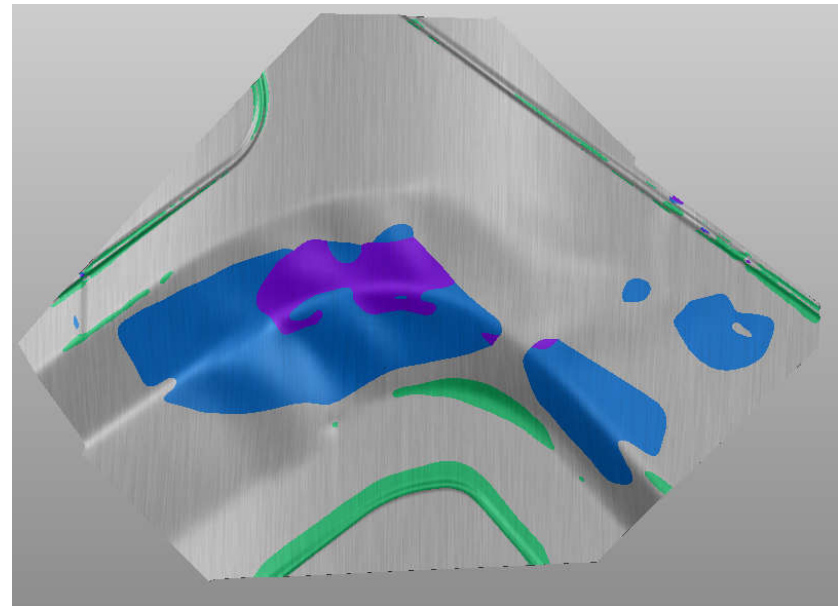


10.1-DR成型过程/Draw Process

80Zmm to the form home

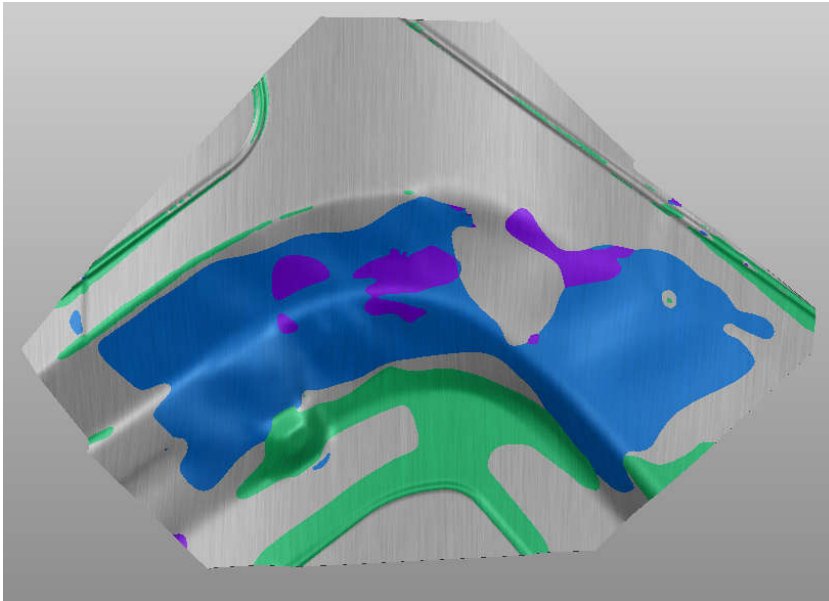


21.4Zmm to the form home

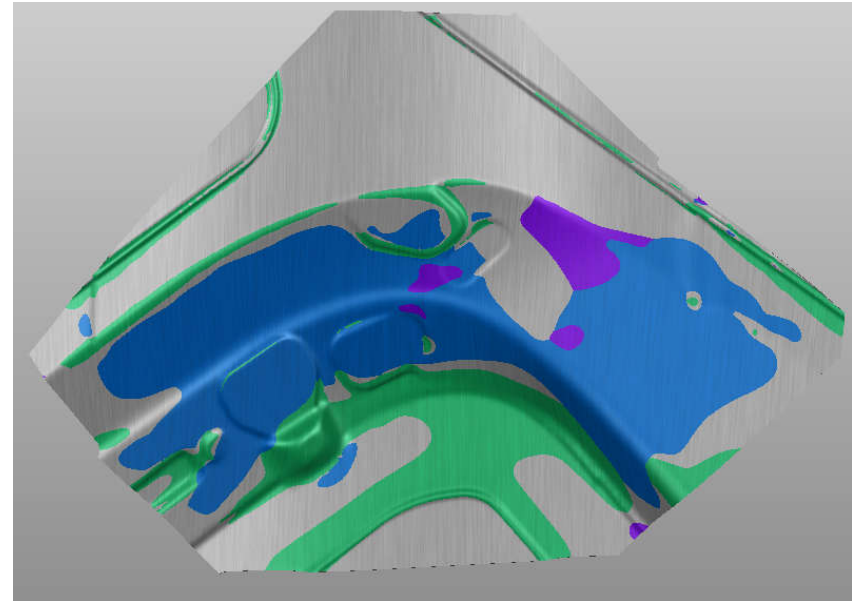


10.1-DR成型过程/Draw Process

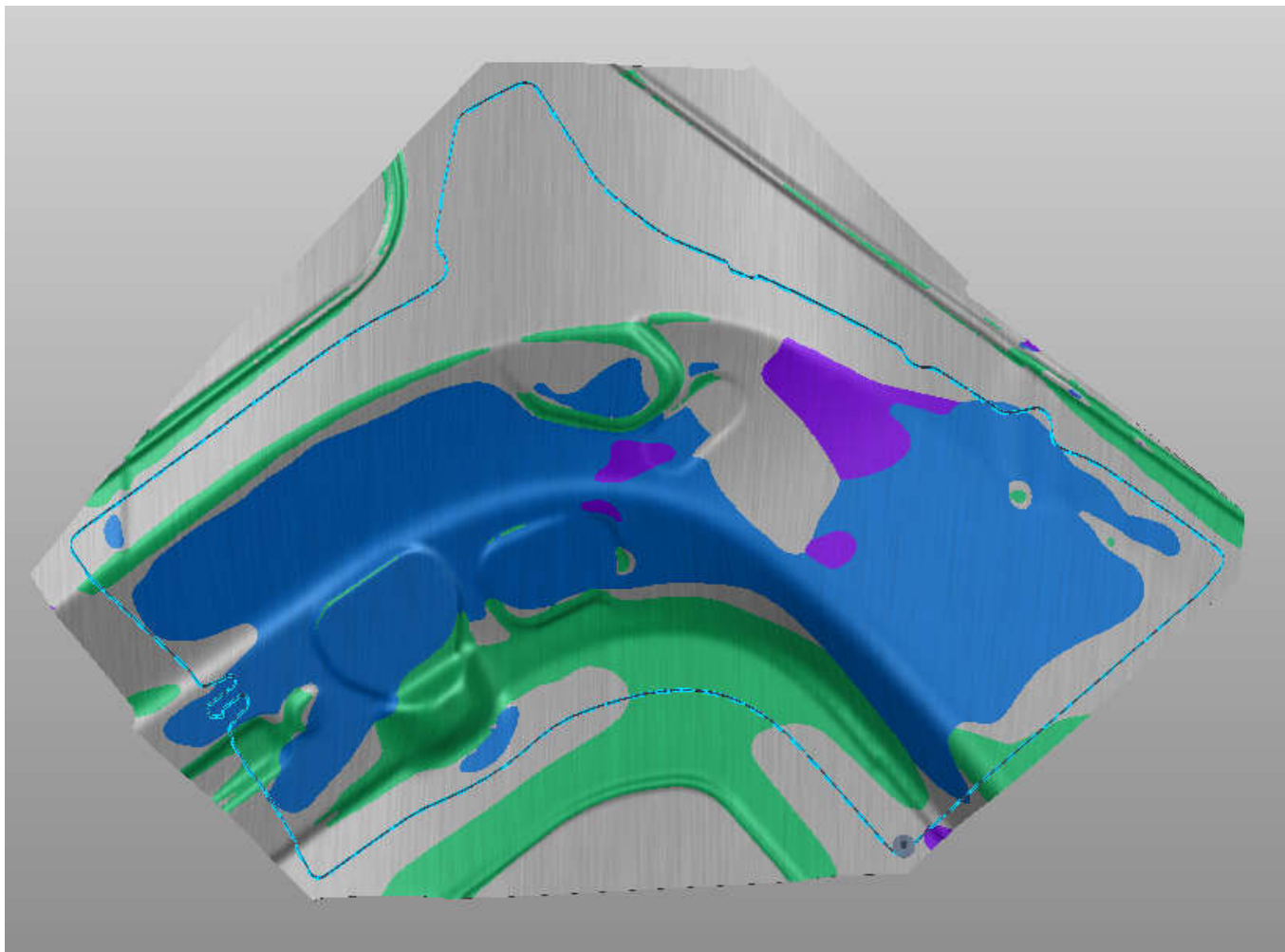
5.4Zmm to the form home



0.0mm to the form home

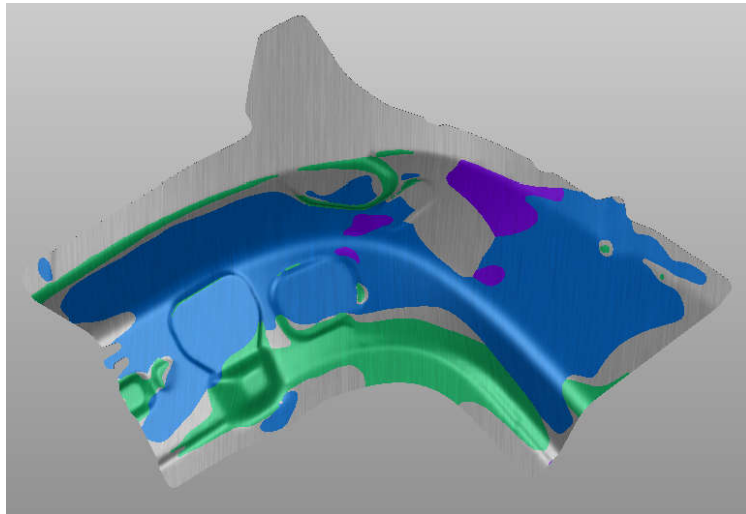


11.1-TR切边过程/TR Process

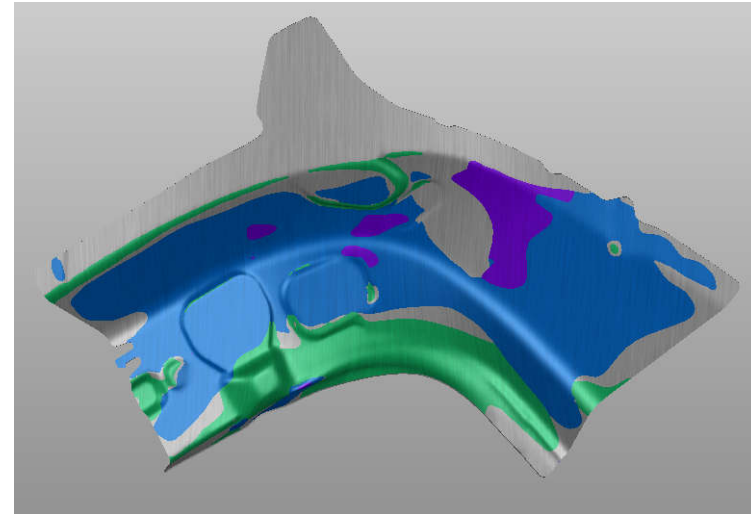


12.1-BE翻边过程/Bend Process

100Zmm to the bend home

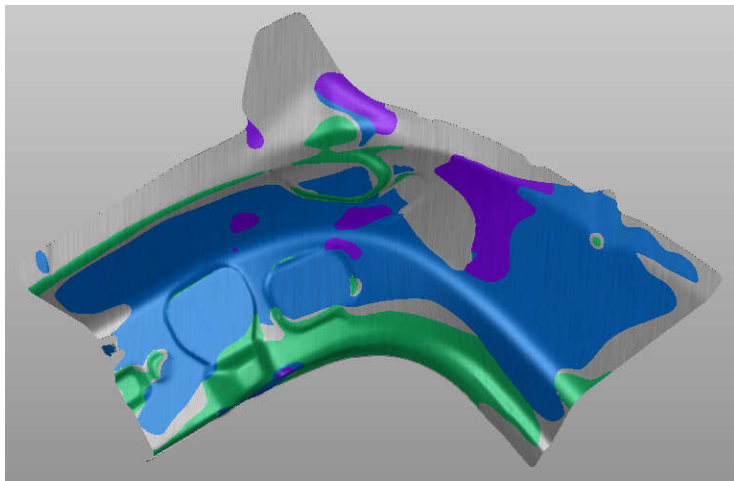


25.9Zmm to the bend home

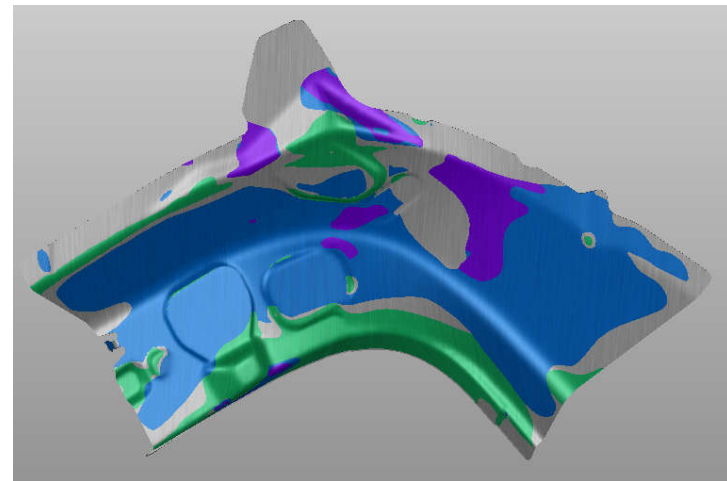


12.1-BE翻边过程/Bend Process

7.4Zmm to the bend home

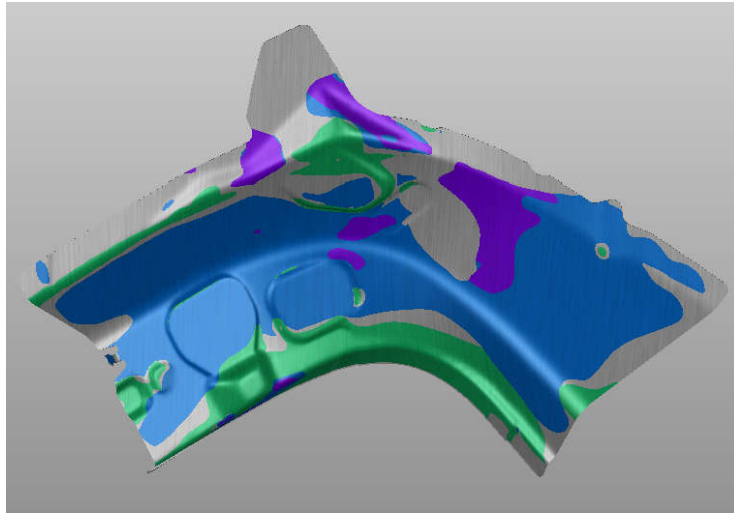


0.0Zmm to the bend home

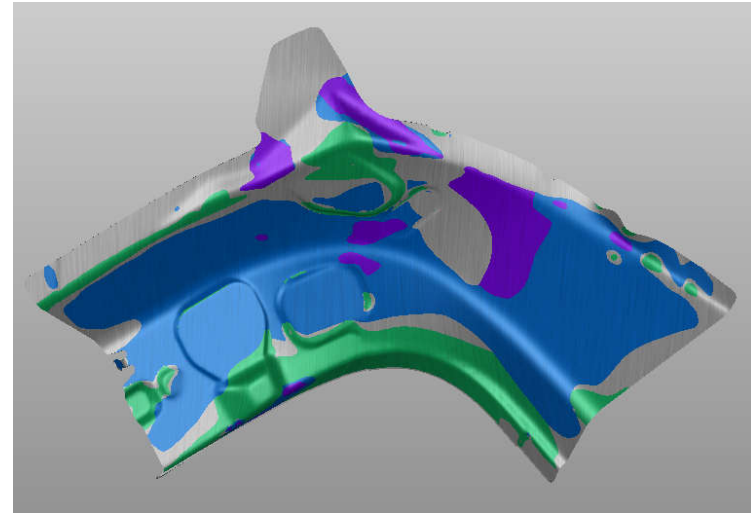


13.1-BE整形过程/Bend Process

61.5Zmm to the bend home

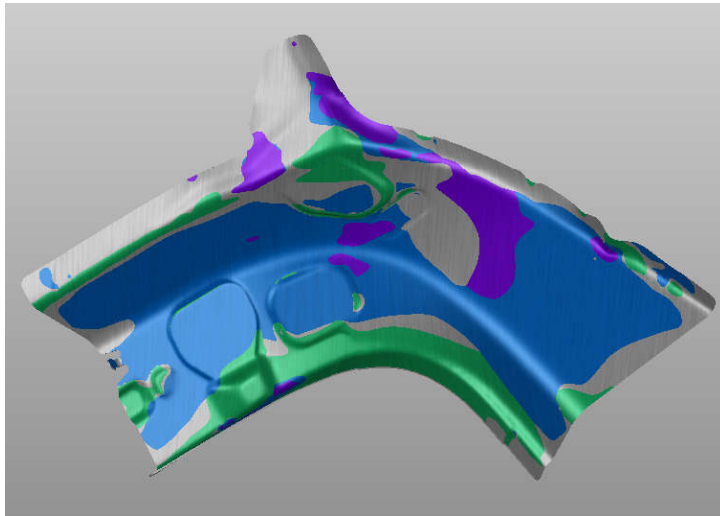


17.7Zmm to the bend home

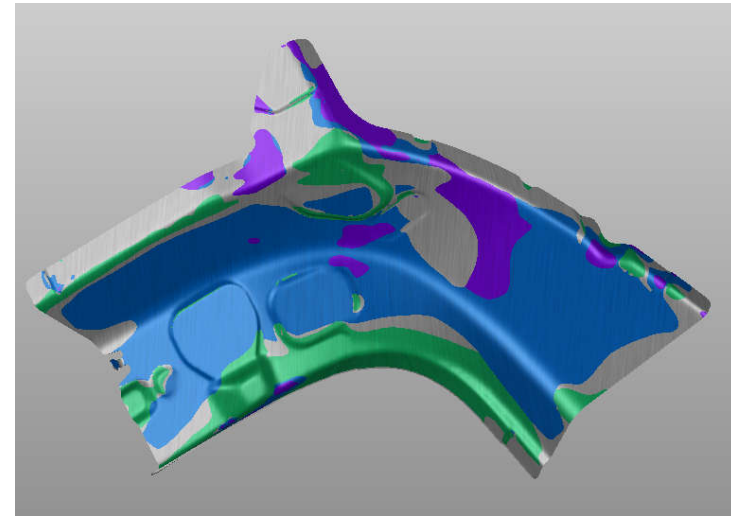


13.1-BE整形过程/Bend Process

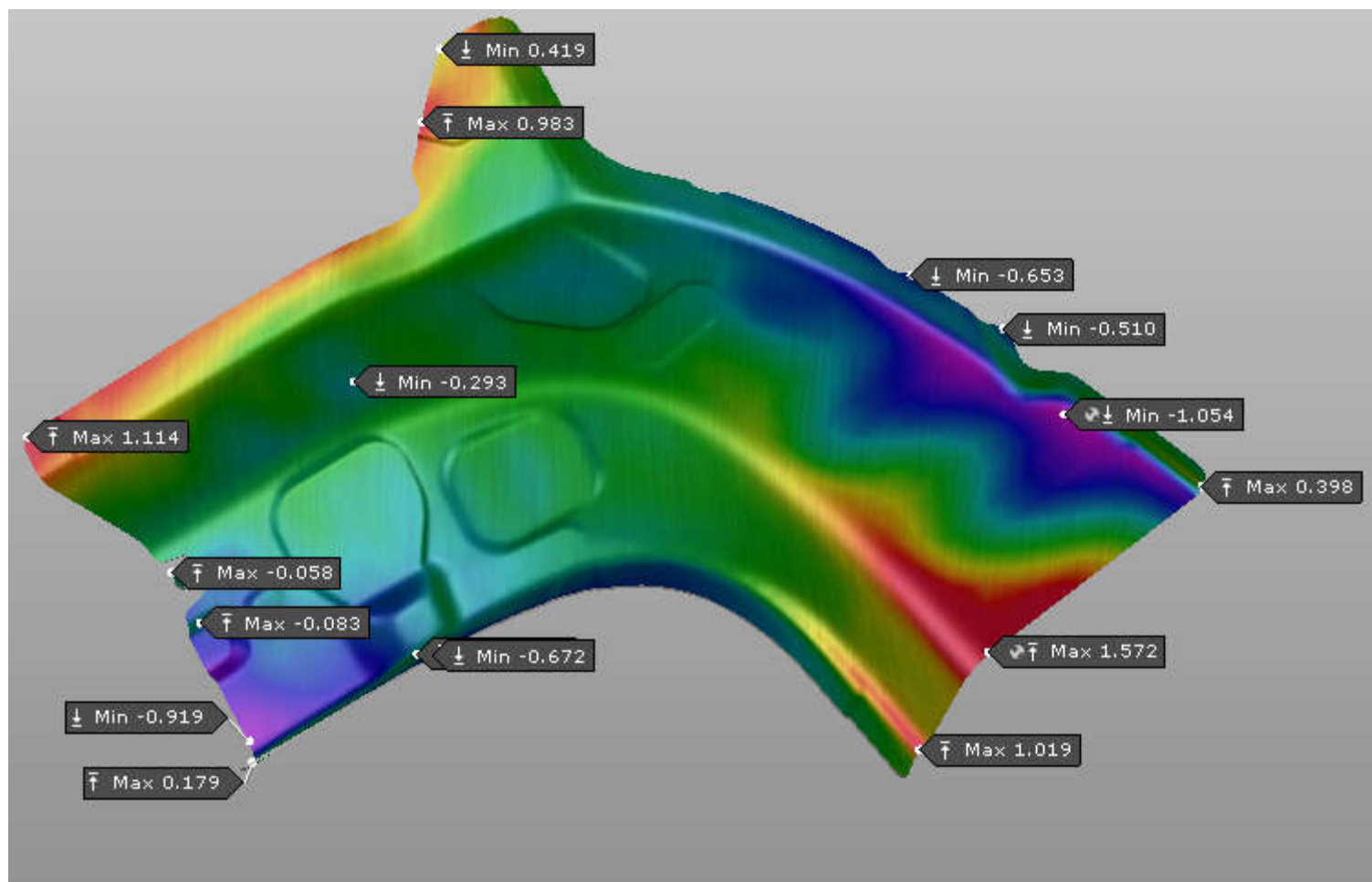
3.8Zmm to the bend home



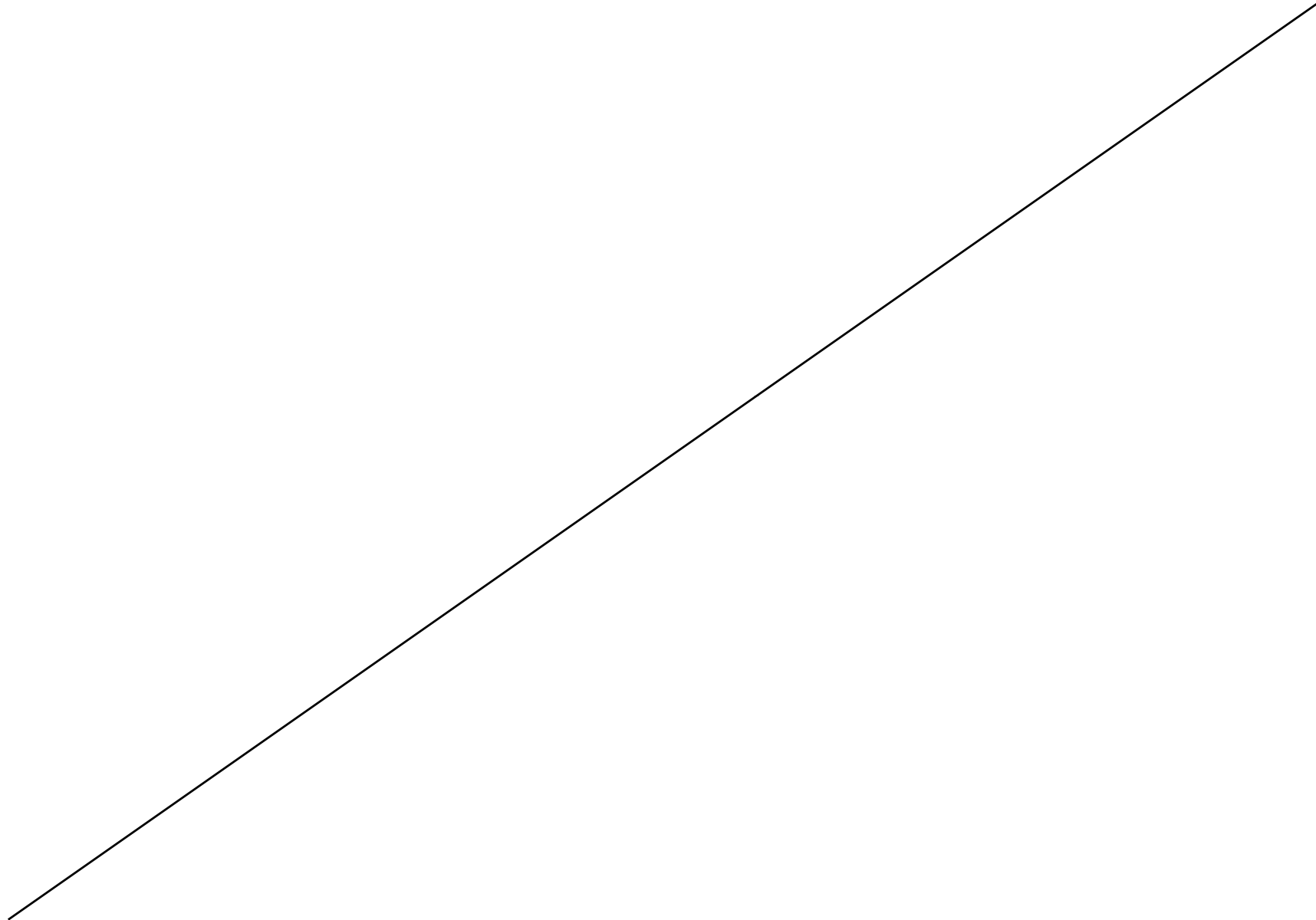
0.0Zmm to the bend home



14.回弾分析/Free Springback



15.1成型问题点/Forming Expected Problems



16. 产品更改请求/Requests of Part Change

(The shape of the existing product can completely match, so there is no need for a product change request)