



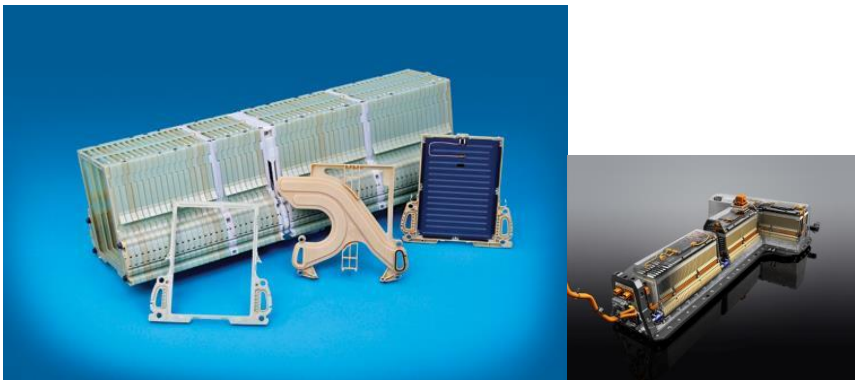
Moldex3D

# 欧美应用CAE协助汽车产品开发优势

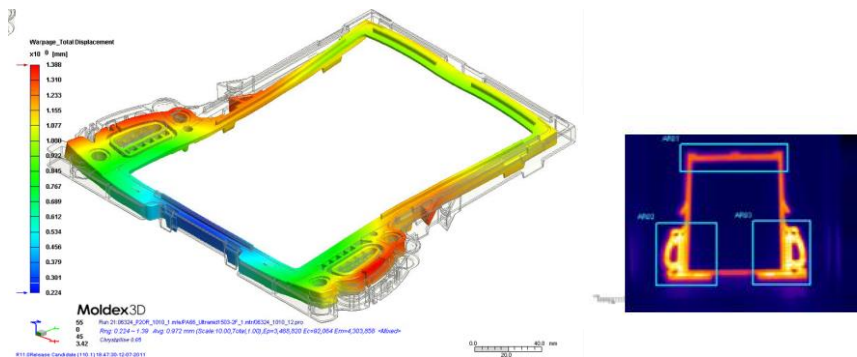
# Moldex3D与GM合作提升系统安全



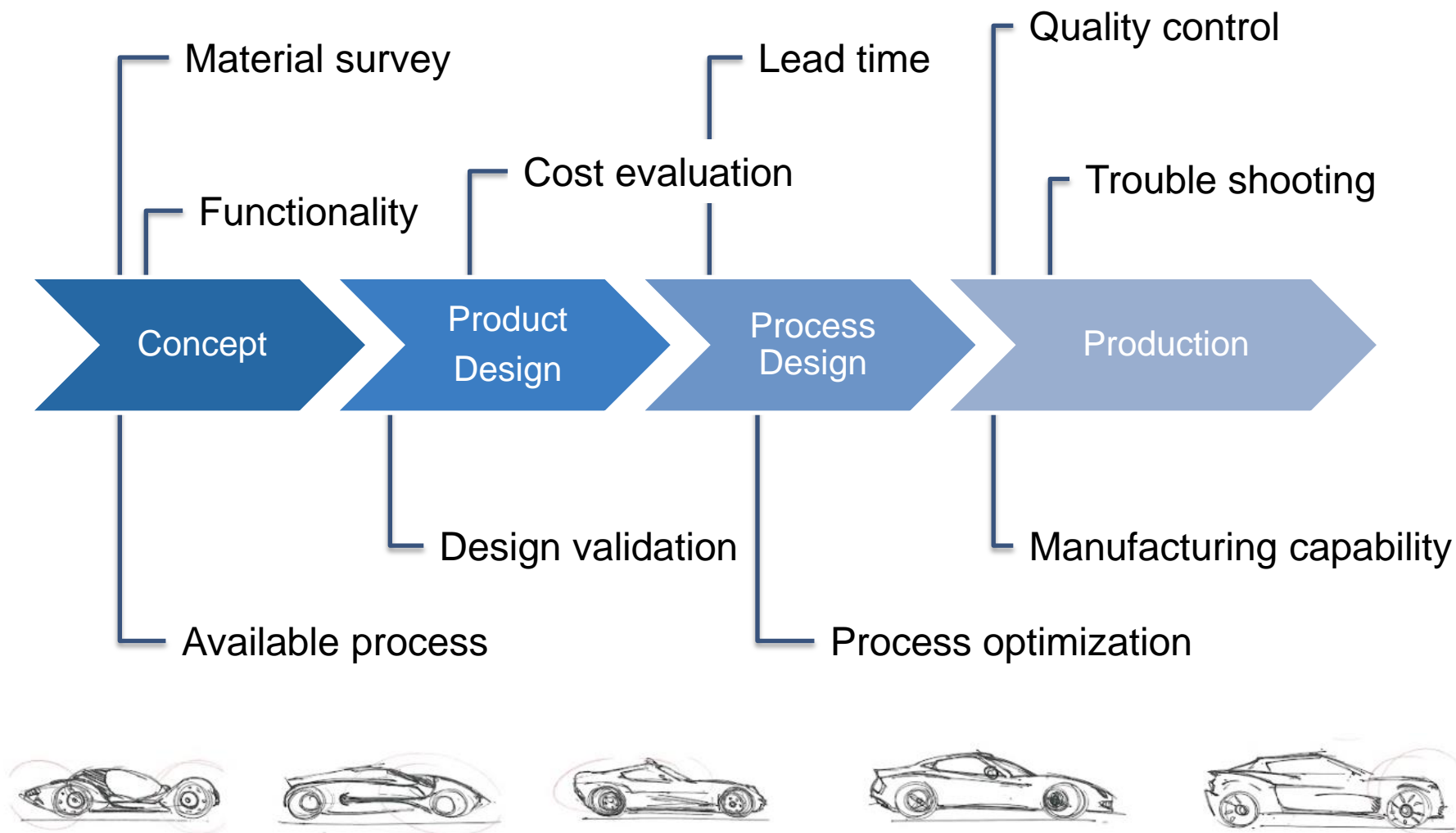
Chevy Volt



Partnered with GM,  
Moldex3D provides the  
frame dimensional stability  
for the battery design team.



# 仿真紧扣车辆开发环节



# 轻量化的多变制程

## Moldex3D

Short fiber

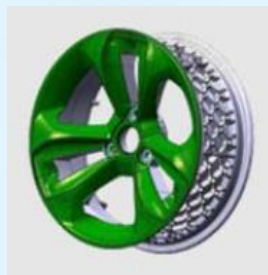
Long fiber

Fiber Mat compression

Molding Compound

Resin Transfer Molding

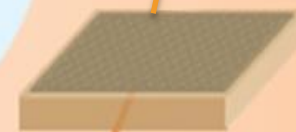
Multi-component molding



Hybrid



Fabric



Mat



Long fibre



Unreinforced

Short fibre

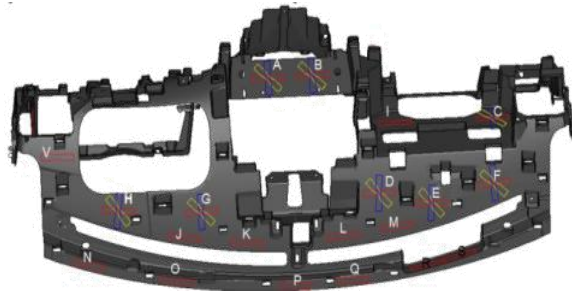


Source: BASF K  
& Kunststoffe

# 长碳纤维仪表板的研究



## “Fiber Orientation and Fiber Length Distribution Prediction for Injection Molded Long Carbon Fiber Composites”



LCFP Instrument Panel

### • Production



System specification  
Weight and cost saving analysis  
Technology implementation  
Demonstration to production

### • Modeling



Model development and integration  
Prediction and validation  
New model implementation

### • Experiments



Carbon fiber orientation distribution  
Carbon fiber length distribution  
Material preparation  
Molding



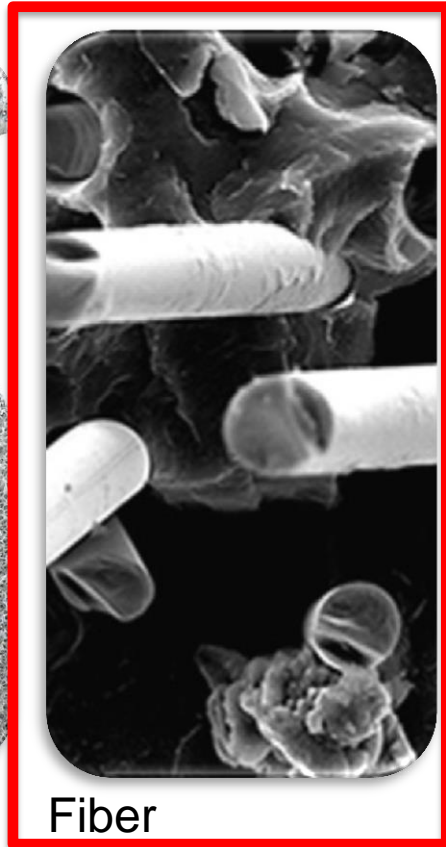
# 轻量化的技术



# Injection molding lightweight techniques



Foaming



Fiber



Co-injection



Gas-assisted

# 轻量化的多变制程

## Moldex3D

Short fiber

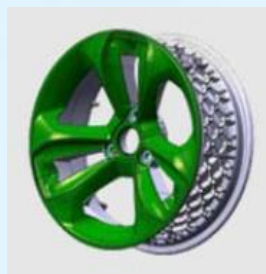
Long fiber

Fiber Mat compression

Molding Compound

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Long fibre

Unreinforced

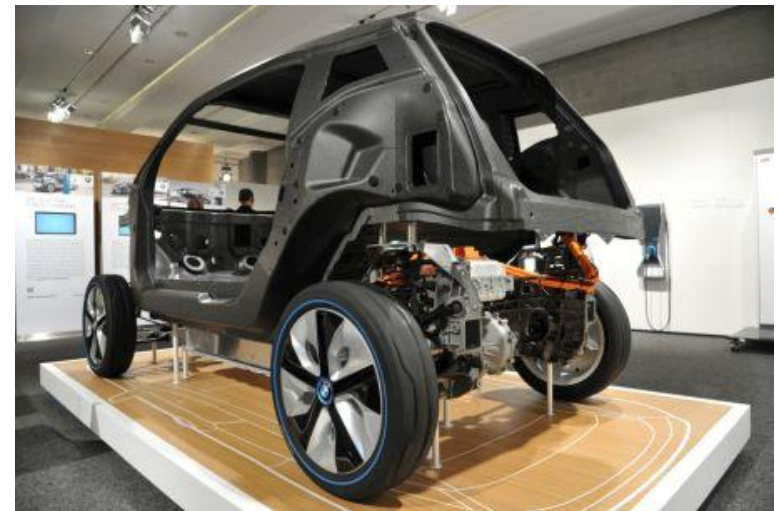
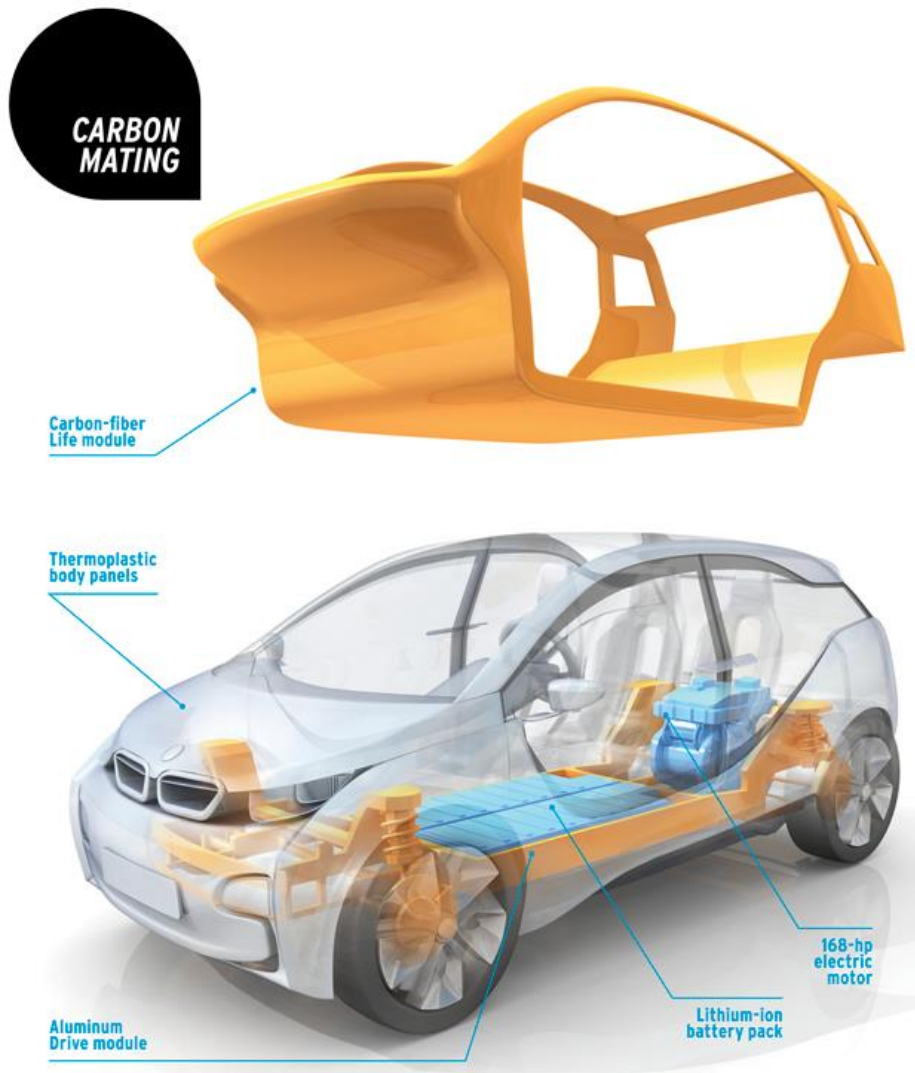
Short fibre



Source: BASF K  
& Kunststoffe

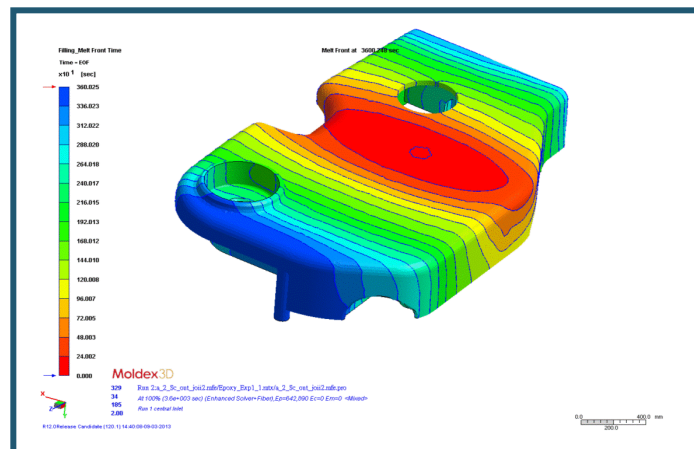
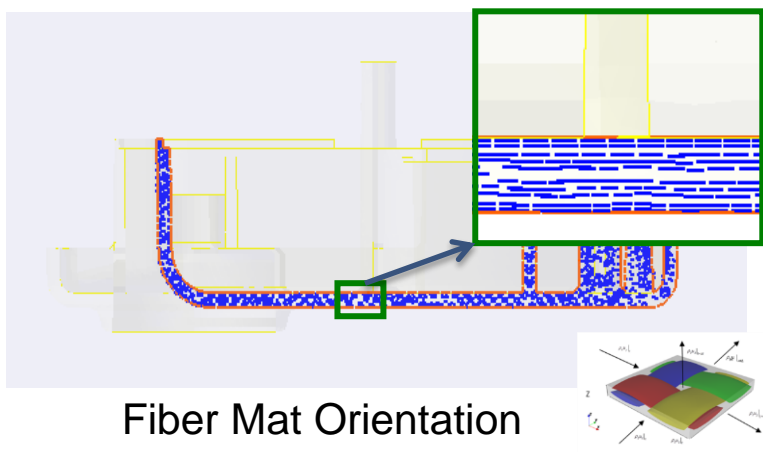


# 宝马i3应用碳纤维技术

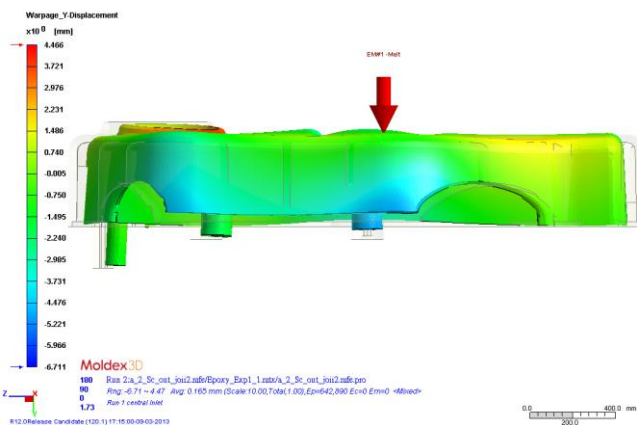


<http://blog.caranddriver.com/>

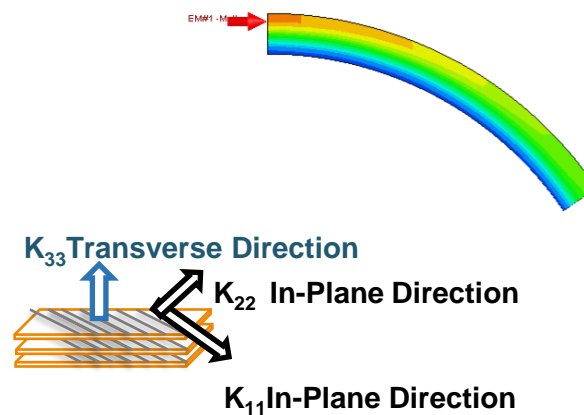
# 树脂转注成形



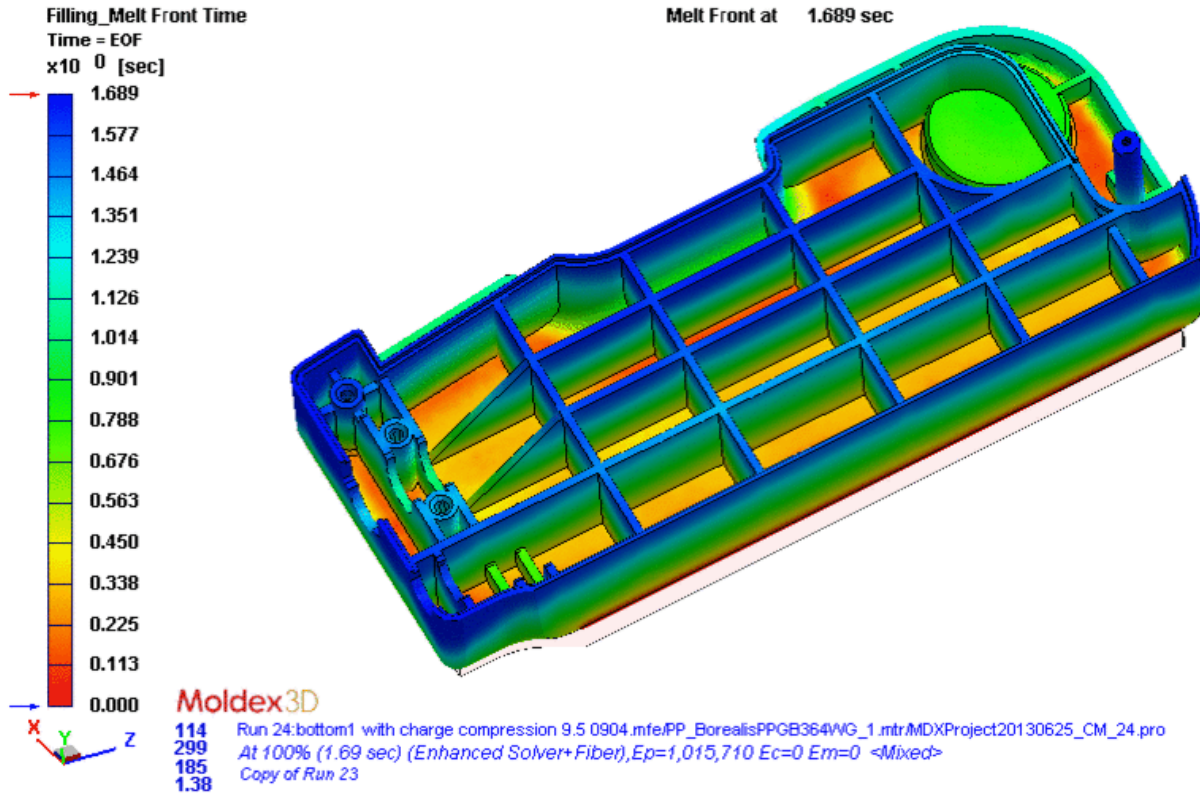
Melt Front time



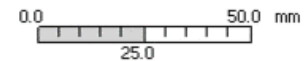
Warpage



# 热塑含纤毡板热压

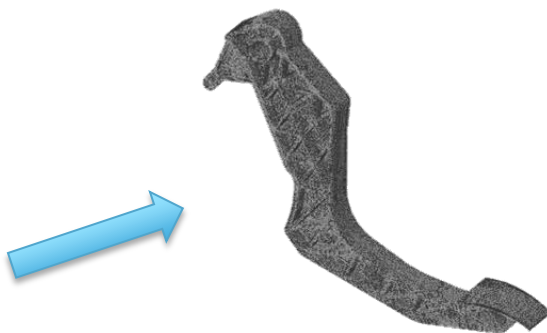


R12.0Release Candidate (120.1) 23:43:37-09-09-2013

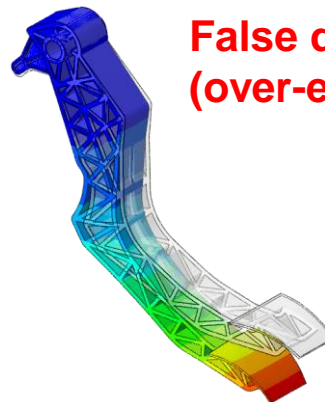


# 验证以塑代钢，纤维加强特性

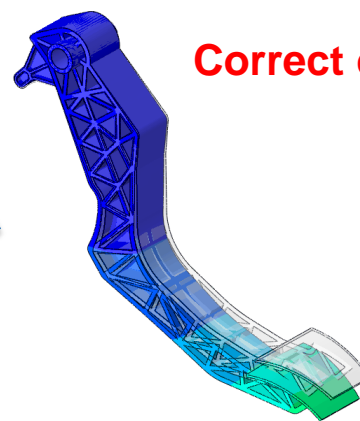
Single material isotropic model



False deformation (over-estimated)



Correct deformation



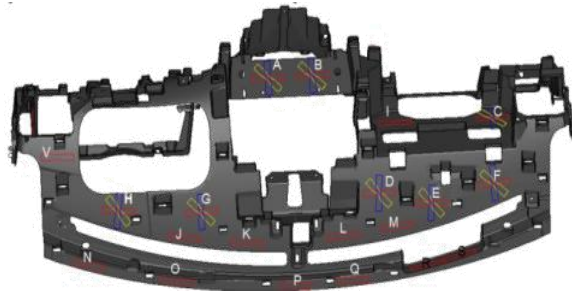
Anisotropic model considering fiber microstructure



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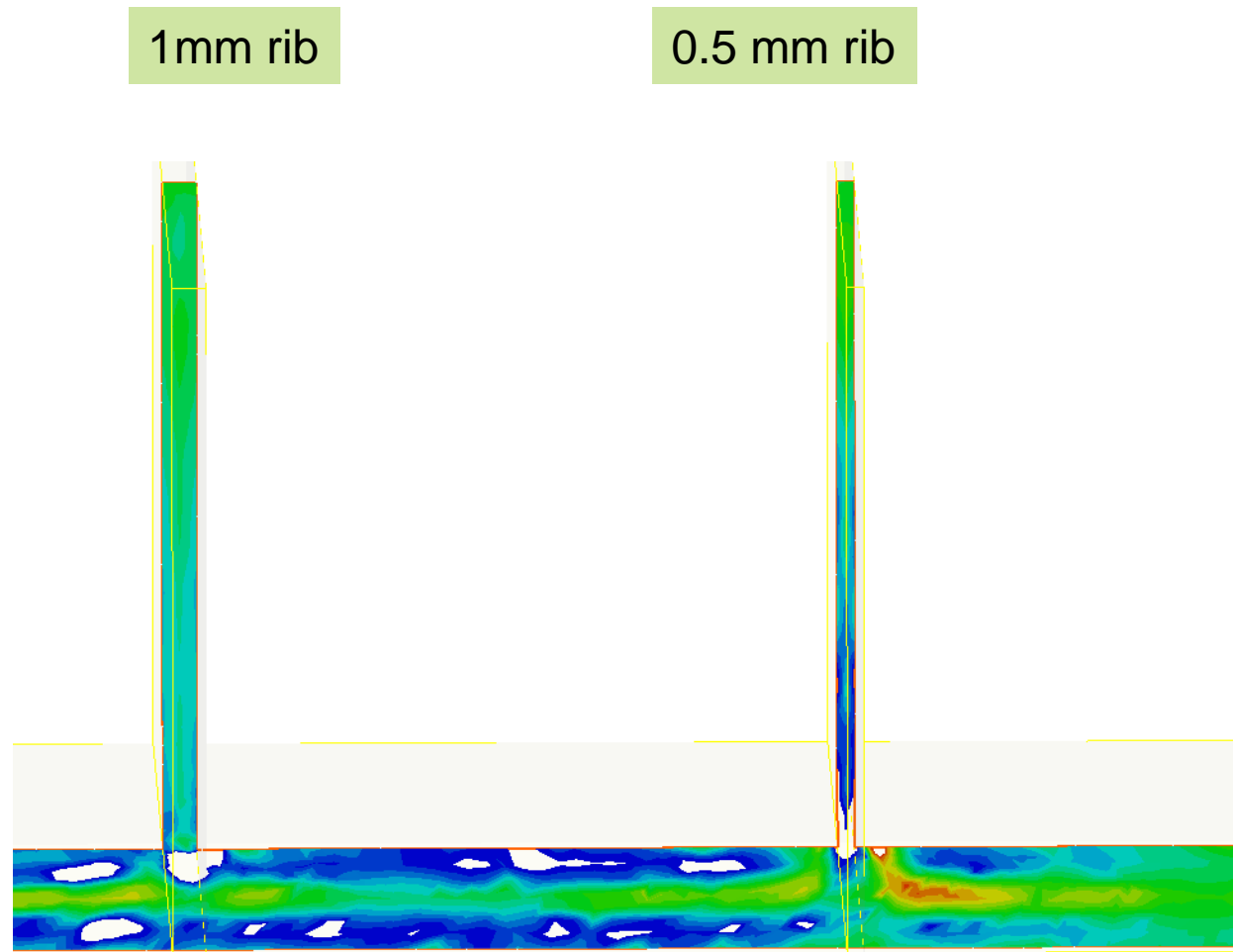
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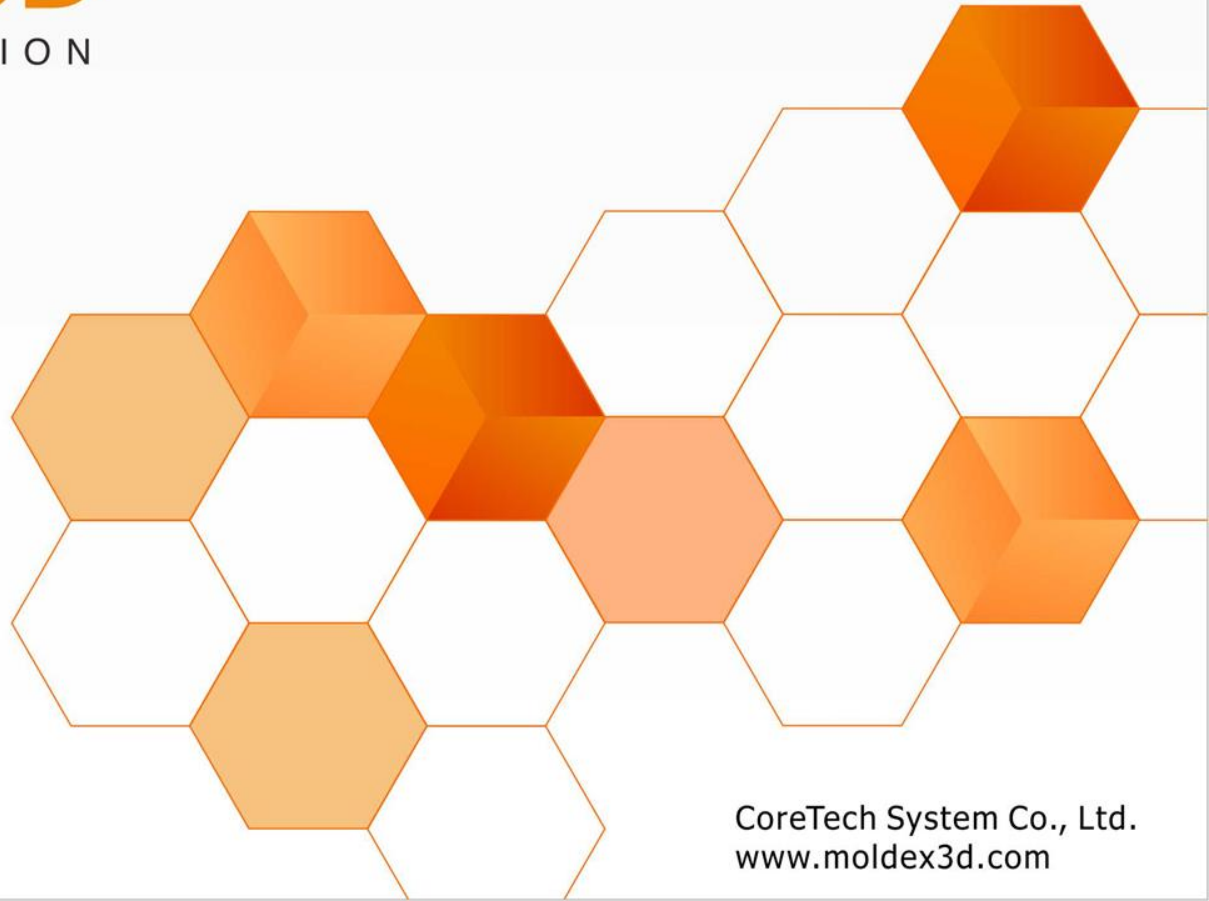
Carbon fiber orientation distribution  
Carbon fiber length distribution  
Material preparation  
Molding

# 產品幾何對纖維流動的影響



# Moldex3D

MOLDING INNOVATION



CoreTech System Co., Ltd.  
[www.moldex3d.com](http://www.moldex3d.com)