



Sun Smile  
Corporation



SIMPLE  
SPEED  
SMART



Presentation 

**Rubber Seal**



## Company Introduction – Factory

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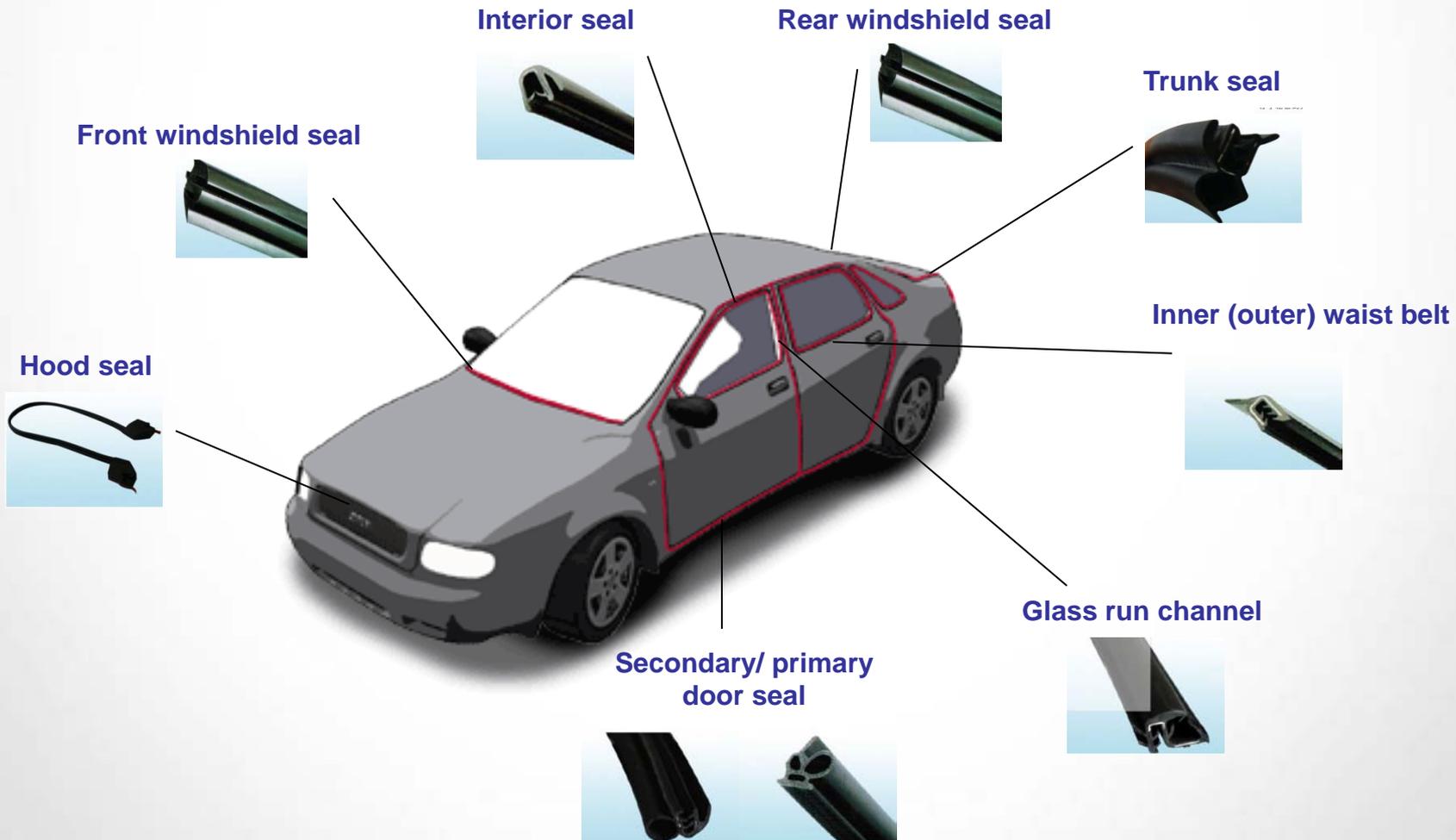
- ◆ **Location: China**
- ◆ **Associates: 580**
- ◆ **Date of establishment: 1983**
- ◆ **Main business: develop and produce automotive sealing product**
- ◆ **Customers: SAIC GMW, FAW, Dongfeng Motor Co., Dongfeng Yueda Kia Motors Co., Ltd., BAIC, Dongfeng Liuzhou Motor Co., Ltd., SAIC, etc.**





## Company Introduction – Product Type

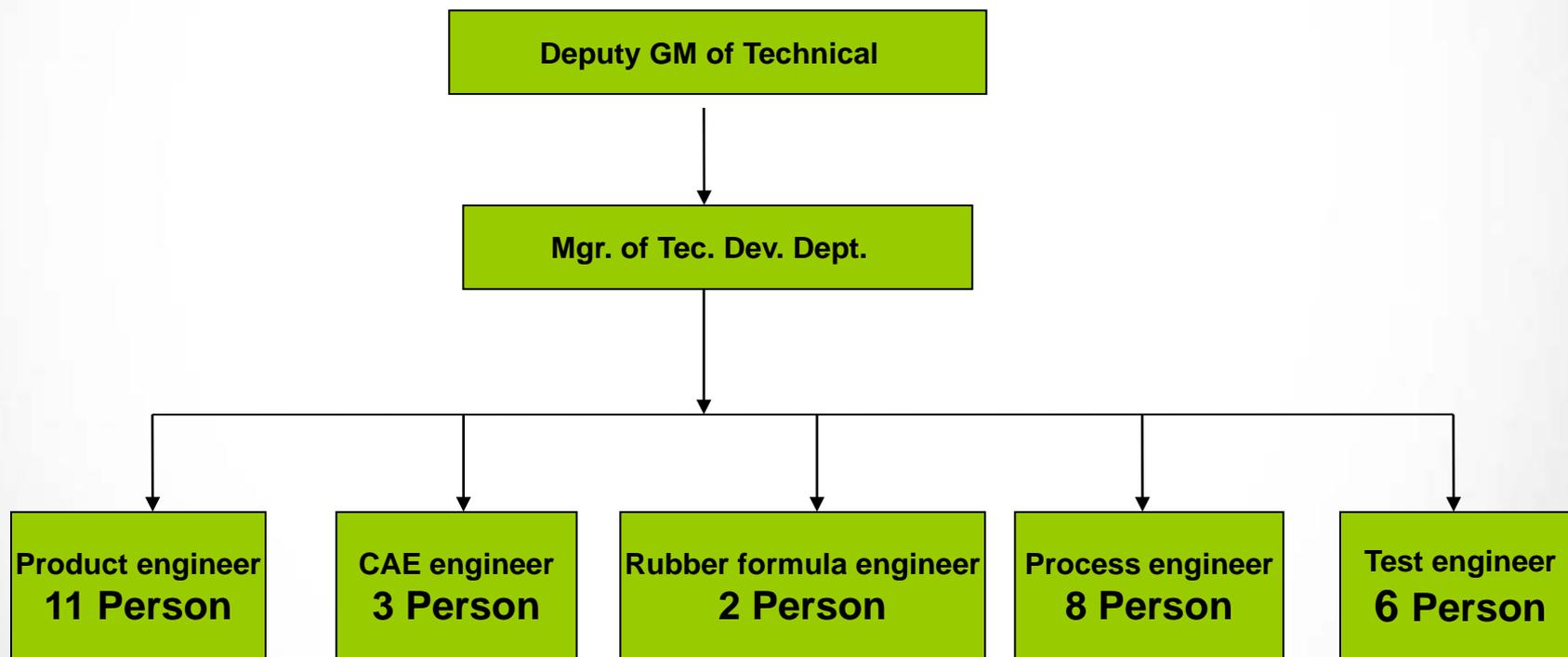
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## Technical – Organization Chart of Technical Dept.

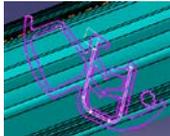
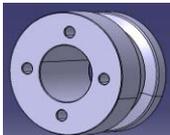
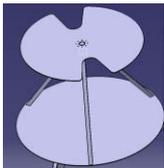
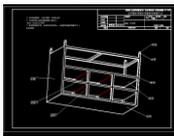
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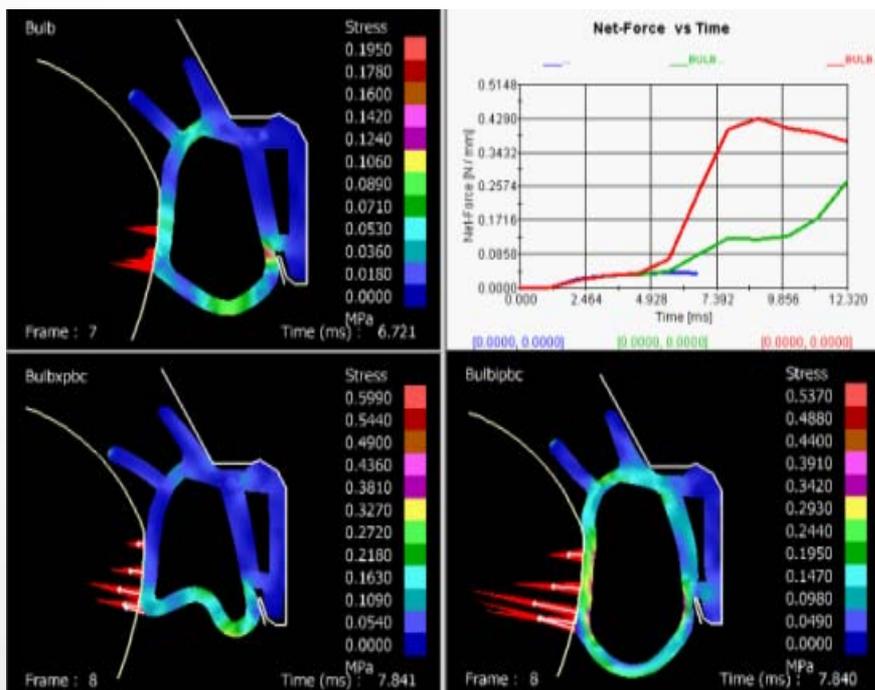
## Technical – CAD/CATIA capability

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No.	Items	Software	Dept.	Remark
1	Product structure	CATIA V5 R21	Technical Dept.	
2	Product map transformation	CATIA V5 R21	Technical Dept.	 
3	Extrusion die design	CATIA V5 R21、 AutoCAD2010	Technical Dept.	 
4	Auxiliary tooling design	CATIA V5 R21、 AutoCAD2010	Technical Dept.	 



## Technical – CAE capability



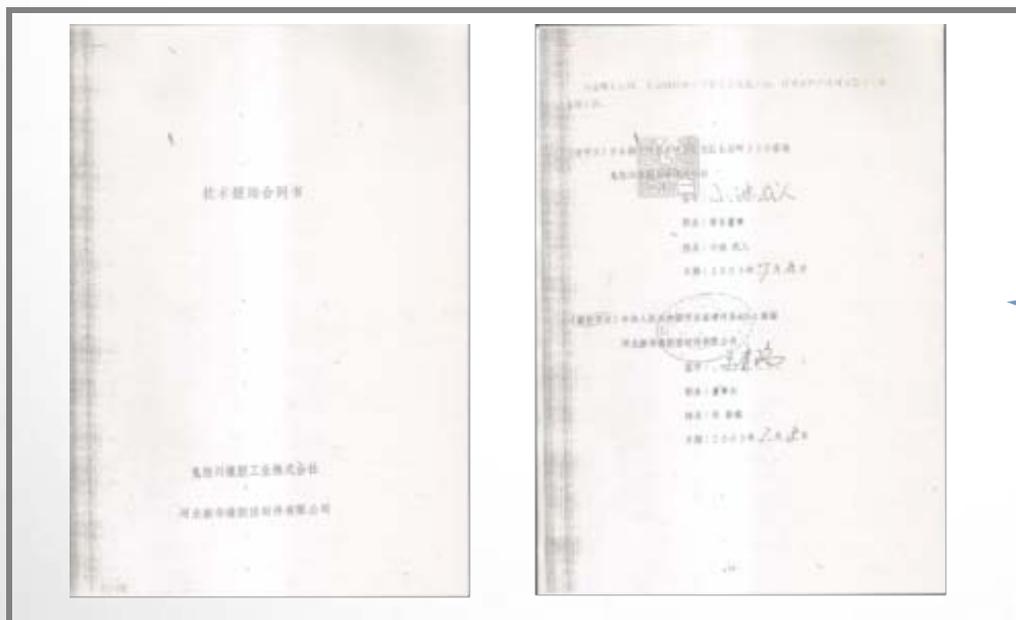
Analyze the CLD of  
profile's cross section  
by CAE software



## Technical – Technical support

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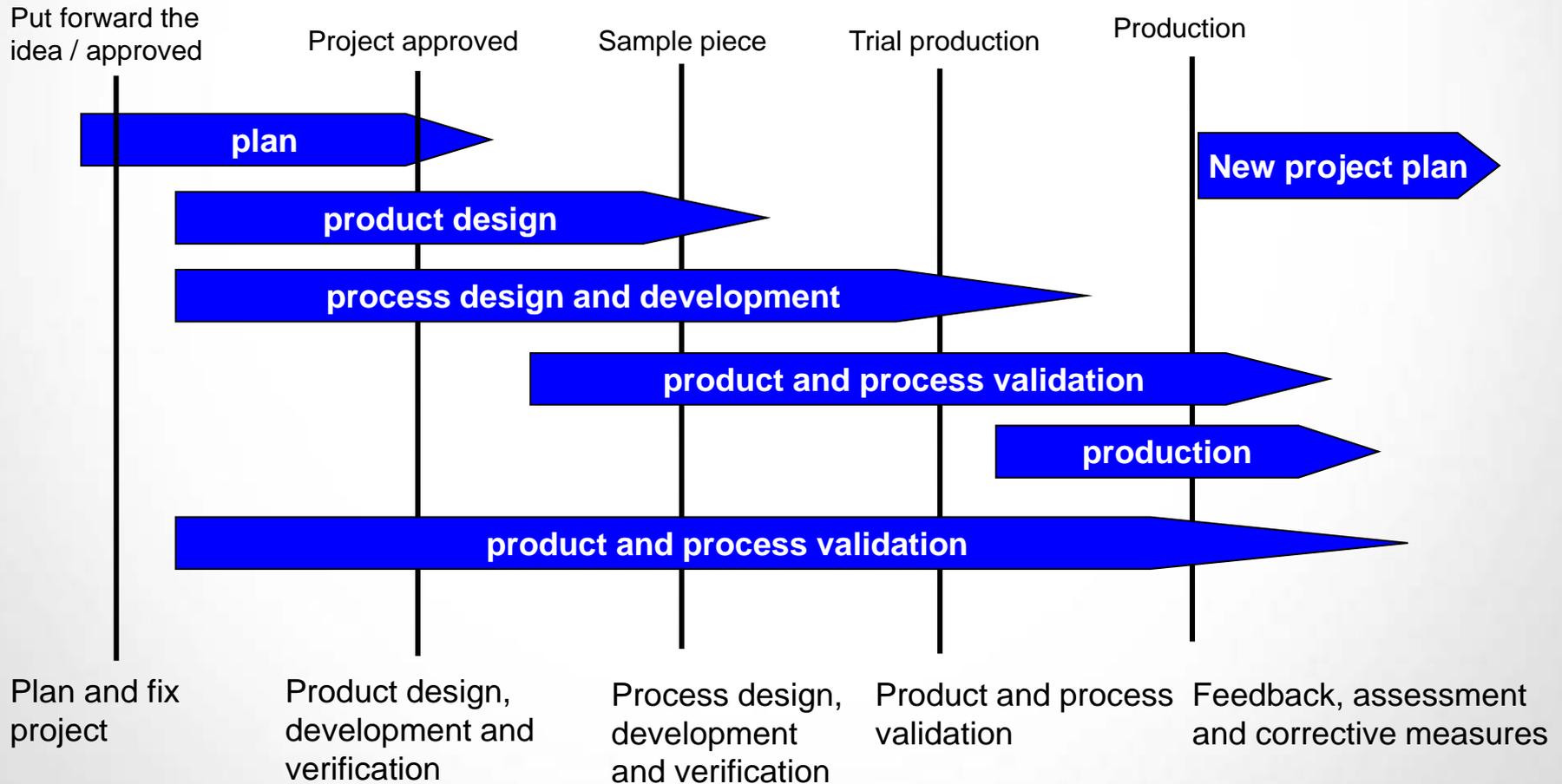
A long-term technical cooperation agreement has been signed with the largest sealing product manufacturer in Japan - KINUGAWA RUBBER to establish the product development system, including the development of rubber formula, establishment of standard, product design, FEA analysis, type test of finished product as well as the simultaneous development of sealing system for the entire car, etc.



Technical agreement signed with  
KINUGAWA RUBBER

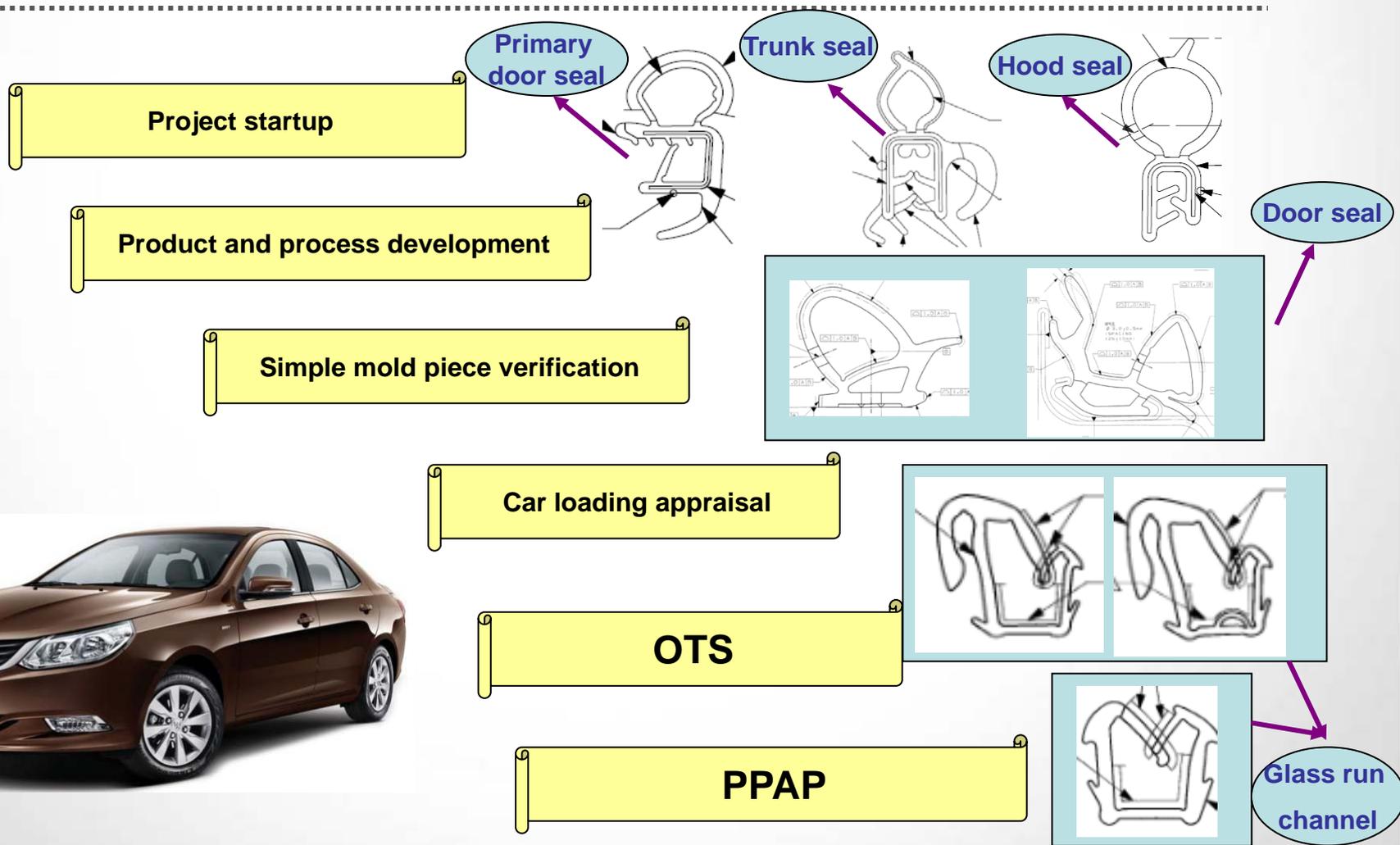


## Technical – New project development



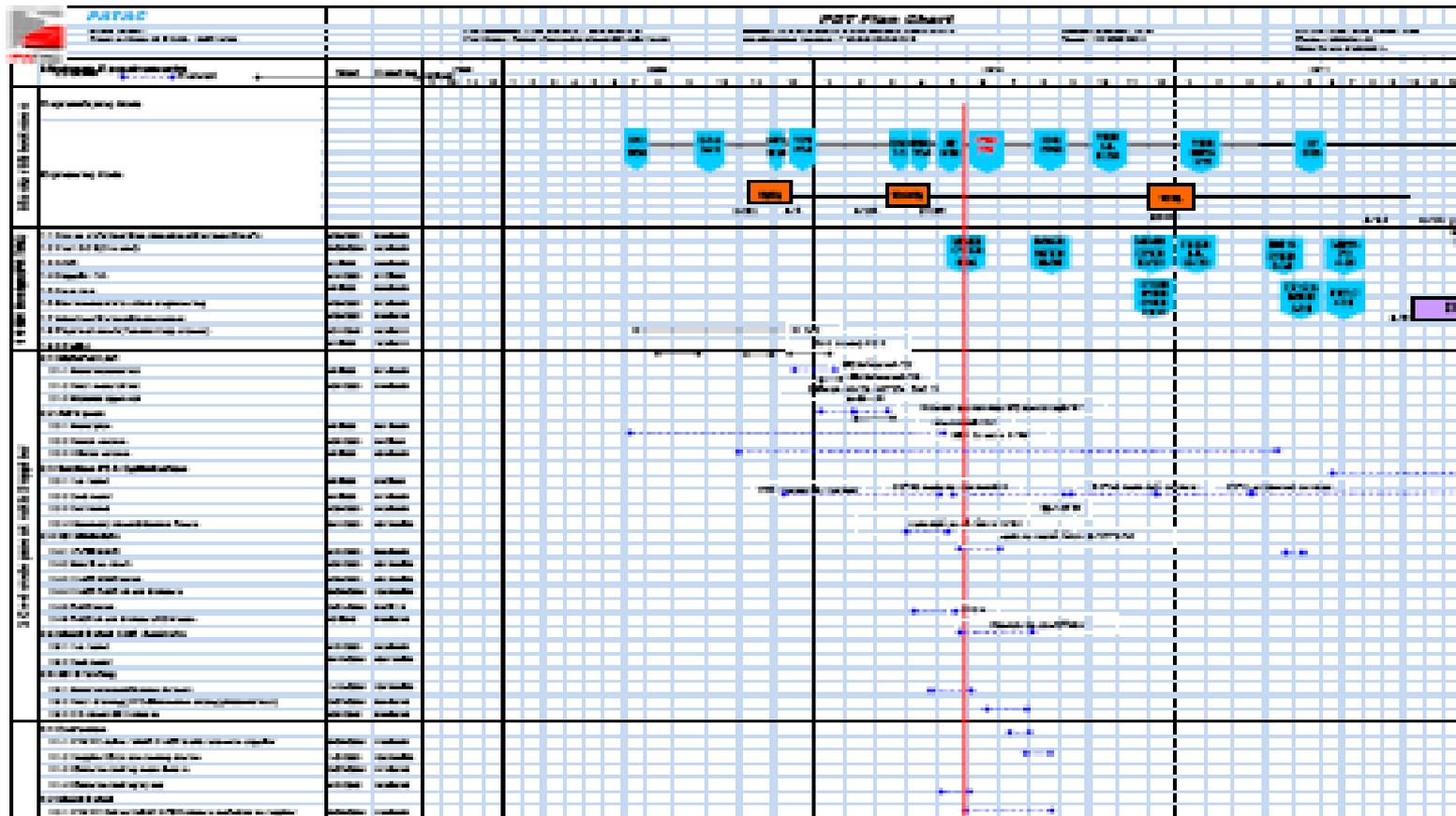


# Technical – Development process (case)





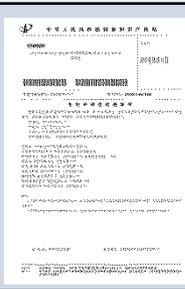
# Technical - Progress (Gantt chart)





# Technical – patents

We got over 10 patents from 2013 to 2015, take six as examples:

No.	Patent names	Patent No.	Patent acceptance notices
1	Improved structure of profile for door seal	201520401054.9	
2	Improved structure of mold for producing car sealing product	201520399121.8	
3	Improved spray coating device for car sealing product	201520399571.7	



# Technical – patents

No.	Patent names	Patent No.	Patent acceptance notices
4	Improved profile cutting device	201520397935.8	
5	Improved profile coiling machine	201520399565.1	
6	Universal self-clinching glass seal	201520401053.4	



## Quality – Quality management system

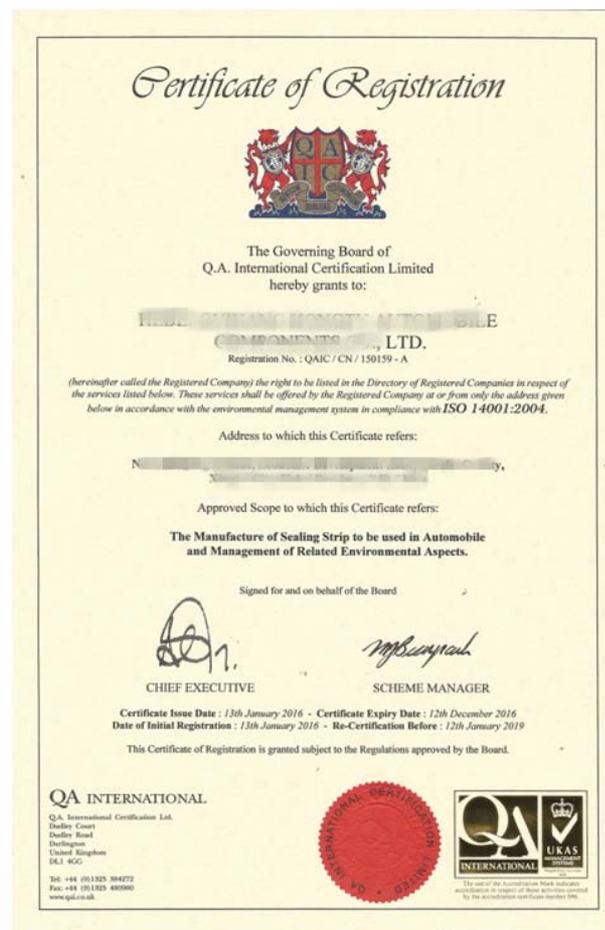
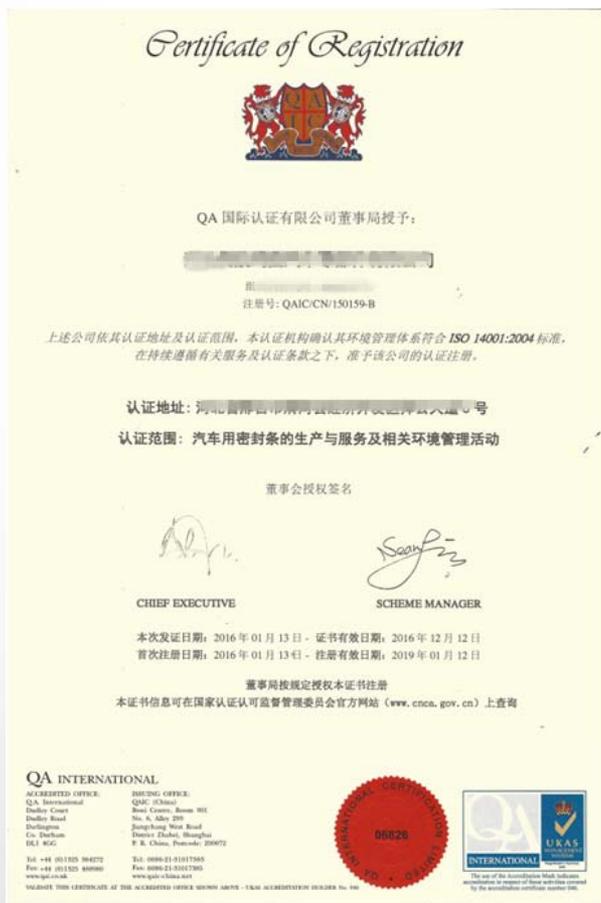
We passed the ISO/TS 16949:2002 certificate of quality system and passed the annual recheck of quality system ISO/TS 16949:2009 in March 2015





# Quality – EHS management system

## in December 2015 passed the ISO14001:2004 management system







# Quality – to realize Formel Q7 and QSB on site



快速反应会跟踪看板  
Fast Response Tracking Board

2015年6月15日

序号	问题描述	发生日期	发生部门	责任人	短期措施	负责人	完成日期	长期措施	负责人	完成日期	备注
1	现场清理	5-17	生产部	陈亚	在几辆车周围	黄工	5-18	制定5S-10	黄工	6-11	
2											
3	物料门吊损坏	6-9	生产部	陈亚	物料架损坏	黄工	6-10	联系维修	黄工	6-11	
4	夜班 5-10 夜班	5-10	生产部	陈亚	夜班人员少	黄工	5-10	增加夜班人员	黄工	6-11	
5											
6											
7	员工门岗检查	5-14	技术部	陈亚	员工门岗	黄工	5-15	制定制度	黄工	6-11	
8											
9	物料门吊损坏	5-10	生产部	陈亚	物料架损坏	黄工	5-10	联系维修	黄工	6-11	
10											

出勤表

POCA 跟踪表

6月 每日质量状态 2015

Fast-response meeting 9:00 every morning: to analyze and solve the quality and product issues occurred internally and externally the day before, then keep record on board. Review the implementation progress each day and assign current works.



## Quality – to realize Formel Q7 and QSB



Layered process audit board of working procedure



## **Quality – Quality Policy**

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**To provide all-round satisfactory product and service to our customers**

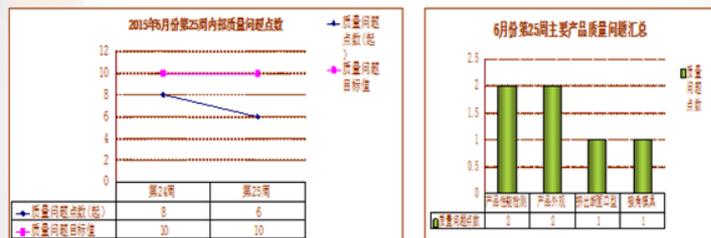
**We devote to provide top quality product and service to satisfy our customers through strengthening internal management, saving energy and cost, optimizing production process, continuous technical and management innovation to guarantee zero defect of product throughout design development and batch production of product**



# Quality – PDCA

Quality meeting will be held at certain time each week to review all internal and external quality issues occurred during the week and make countermeasures by PDCA .

2015年6月份第25周内部质量问题



Plan				Do			Check	Action
客户	问题描述	根本原因	改善措施	责任人	改进目标	完成日期	效果确认	目前状态
B40	后顶盖产品接角碰条子	模具问题	修理模具	许立波	使产品接角后符合外观要求	2015、6、6	完成	良好

2015年6月份第25周外部质量问题



Plan				Do			Check	Action
客户	问题描述	根本原因	改善措施	责任人	改进目标	完成日期	效果确认	目前状态
柳汽	C20清槽划伤、接角部位发白	①接角硫化时间不到。②接角胶料用的是冬季配方，需更换夏季配方。	①严控接角的温度和硫化时间使其符合工艺要求②更换夏季配方。	①王奎志②向东磊	严格遵从工艺生产，杜绝不良品出厂。	6月8日	6月10日下午生产	需放置2天再确认状态



# Quality – Test center

We have independent inspection and test center which has passed the ISO/IEC 17025:2005 CNAS.





## Quality – Laboratory equipment

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No.	Equipment	Q'ty.	Suppliers	Spec.	Tests	Pictures
1	Thickness tester	2	Shanghai	0-10mm	Test the thickness of test piece	
2	Shao Er A hardness tester	2	Gaotie	LX-A	Test the Shao Er A hardness of rubber plastic test piece	
3	Shore D hardness tester	1	Shanghai	XHS-D	Test the Shore D hardness of rubber plastic test piece	



## Quality – Laboratory equipment

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No.	Equipment	Quan.	Suppliers	Spec.	Tests	Pictures
4	Electronic scales	1	Japan	UW220	Apparent density of rubber plastic	
5	Electronic microscopy thickness meter	1	Shanghai	MFM-600	Wear-resistance property of rubber plastic flocking and coating	
6	Electronic universal testing machine	1	Yangzhou Jiangsu	JPL-500N	Mechanical property and aging property of rubber plastic materials	



## Quality – Laboratory equipment

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No.	Equipment	Quan.	Suppliers	Spec.	Tests	Pictures
7	Universal tensile testing machine	1	Italy	LAX	Test the CLD, insertion & extraction force, joint split force	
8	Abrasion resistance tester	1	Yangzhou Jiangsu	TH7088	Test the abrasion resistance property of rubber plastic flocking and coating	
9	Hot air aging test chamber	1	Nantong Jiangsu	401-A	Aging property of rubber plastic materials	



## Quality – Laboratory equipment

No.	Equipment	Qua n.	Suppliers	Spec.	Tests	Pictures
10	Brittleness temperature meter	1	Yangzhou Jiangsu	MZ-068	Test the brittleness temperature of rubber plastic materials	
11	Xenon lamp aging chamber	1	Chongqing	XD080B	Test the weather resistance and stain resistance of rubber plastic materials and product	
12	Programmable high-low temperature test chamber	1	Chongqing	SDH702P	Test the low-temperature resistance of rubber plastic materials and product	



## Quality – Laboratory equipment

No.	Equipment	Quan.	Suppliers	Spec.	Tests	Pictures
13	Ozone aging chamber	1	Italy	0-100°C	Test the Ozone resistance of rubber plastic materials and product	
14	Sulfur variometer	1	Gaotie	R500	Test the sulfur changing performance of compound	
15	Mooney tester	1	Gaotie	V600	Test the mooney of compound	
16	Flame-resistance tester	1	Beijing	MST8925	Test the flammability of rubber plastic materials	



## Quality – Quick test room on site

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Quick test room functions on the floor, test sulfur changing and mooney of compound by sulfur variometer and mooney tester, test insertion and extraction force of profile by tensile test and test the conformity of cross sections by 10x projector.

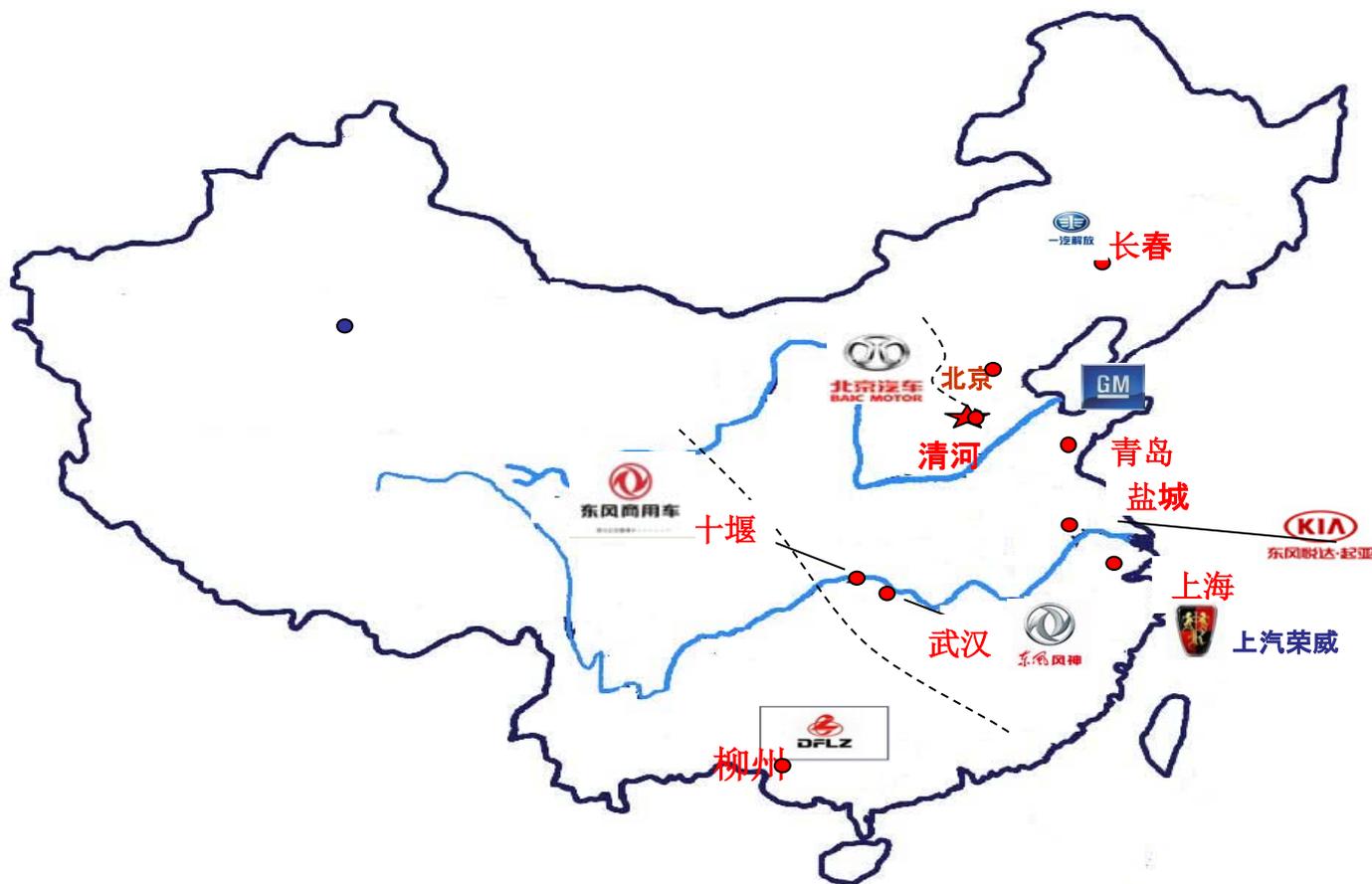




## Market – Market distribution

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We now mainly supply for SAIC GMW, FAW, Dongfeng Motor Co., Ltd. Dongfeng Yueda Kia Motors Co., Ltd., BAIC, Dongfeng Liuzhou Motor Co., Ltd. and SAIC,etc.  
Covers SUVs, passenger cars and heavy trucks, etc.





## Market – Car types

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No.	Customers	Car types	Product	Pictures	Share %
1	SAIC GMW	N300	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		70%
2	SAIC GMW	N310	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		100%
3	BAIC	BJ40	Whole car sealing product (secondary/primary door seal, rear door seals, waist belt, GRC, hood seal, side window)		100%



## Market – Car types

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No.	Customers	Car types	Product	Pictures	Share %
4	Dongfeng Liuzhou Motor Co., Ltd.	B12	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		80%
5	Dongfeng Liuzhou Motor Co., Ltd.	CM7	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		100%
6	Lingzhi	Lingzhi	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		50%



## Market – Car types

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No.	Customers	Car types	Product	Pictures	Share %
7	Dongfeng Liuzhou Motor Co., Ltd.	Heavy trucks	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		100%
8	Dongfeng Liuzhou Motor Co., Ltd.	LV S50	Whole car sealing product (secondary/primary door seal, trunk seal, waist belt, GRC, hood seal, side window)		100%
9	Dongfeng Yueda Kia Motor Co., Ltd.	TDC (福瑞迪) Forte	Hood seal		100%



## Market – Car types

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No.	Customers	Car types	Product	Pictures	Share %
10	Dongfeng Yueda Kia Motor Co., Ltd.	AMC Soul	Hood seal		100%
11	Dongfeng Yueda Kia Motor Co., Ltd.	SLC Sportage	Trunk seal/hood seal		100%
12	Dongfeng Yueda Kia Motor Co., Ltd.	TFC (K5) K5	Trunk seal/hood seal		100%



## Market – Car types

No.	Customers	Car types	Product	Pictures	Share %
13	Dongfeng Yueda Kia Motor Co., Ltd.	QBC (K2) K2	Trunk seal/hood seal		100%
14	Dongfeng Yueda Kia Motor Co., Ltd.	YR (K3) K3	Trunk seal/hood seal		100%
15	Dongfeng Yueda Kia Motor Co., Ltd.	PFC (K4) K4	Trunk seal/hood seal		100%



## Market – Car types

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No.	Customers	Car types	Product	Pictures	Share %
16	Dongfeng Yueda Kia Motor Co., Ltd.	KC KX3	Trunk seal/hood seal		100%
17	Dongfeng heavy trucks	D310	Whole car sealing product		10%
18	Dongfeng passenger car	EJ02	Whole car sealing product		100%



## Production – Equipment

No.	Major equipment	Type/spec.	Origin	Q'ty.	Productivity	Current load ratio	Remark
1	Four-extruder extrusion line	SG-50-75-90	Germany	1	3.46 million m/year	45%	
2	Four-extruder extrusion line	SG-45-75-90	Guangdong	2	7.60 million m/year	55%	
3	Tri-extruder extrusion line (one flocking line)	XJP-75-90	Guangdong	6	25 million m/year	60%	
4	Single-extruder extrusion line	GS90	广东 Guangdong	2	14 million m/year	65%	



## Production – Equipment

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No.	Major equipment	Type/spec.	Origin	Q'ty.	Productivity	Current load ratio	Remark
5	Rubber injection molding press	HYZ-30J	Hengyang Huayi	33	2.6 million pieces/year	65%	
6	Jaw rubber injection molding press	H-XZB/ES350	Ningbo Qianpu	42	8.4 million pieces/year	65%	



## Production – Equipment

No.	Major equipment	Type/spec.	Origin	Q'ty.	Productivity	Current load ratio	备注 Remark
7	Pressure type mixer	XK-450	Shanghai	3	12,000 tons /year	50%	
8	Open type mixer	X(N)N-55*30	Shanghai	3	12,000 tons /year	50%	
9	Rubber sheet cooling machine	XPL-600	Shanghai	2	12,000 tons /year	50%	



## Workshop overview

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Sun Smile

Contact us

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## Sun Smile Corporation

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# Thanks !