

ESON

Automotive Lightweight Profile

 乙盛-KY (5243)



Reporter : JC Chang

ESON



**Company
Profile**



**New Technology
Lightweight**



**Lightweight
Performance**

Part 1

Company Profile

- ▶ Brief Status
- ▶ Milestone



- **Founded Time: 1987**
- **President: Yong Fu, Zheng**
- **Founder :Chia Hsiang, Tsai**
- **General Manager: Mao-Chiang, Chang**
- **Capital: NTD 1.73 Billion**
- **Employee Amount: 8,000**
- **Main Product Range:**
 - (1) **Design & Manufacture of mechanical parts for consuming products.**
 - (2) **Design & Manufacture precision molds.**
 - (3) **Stamping/Plastic injection/Surface Treatment.**
 - (4) **Automotive parts Stamping/ Injection with Sub-assembly**

>>> Milestone

Growth :

- . Set Up factory in Mexico
- . Set Up New factory in Malaysia
- . listed in TW stock market
- . New Business for automotive parts



Developing :

- . Started Business for injection parts
- . Phase in Gamer ME parts
- . HH invested ESON
- . Server order from U.S customer



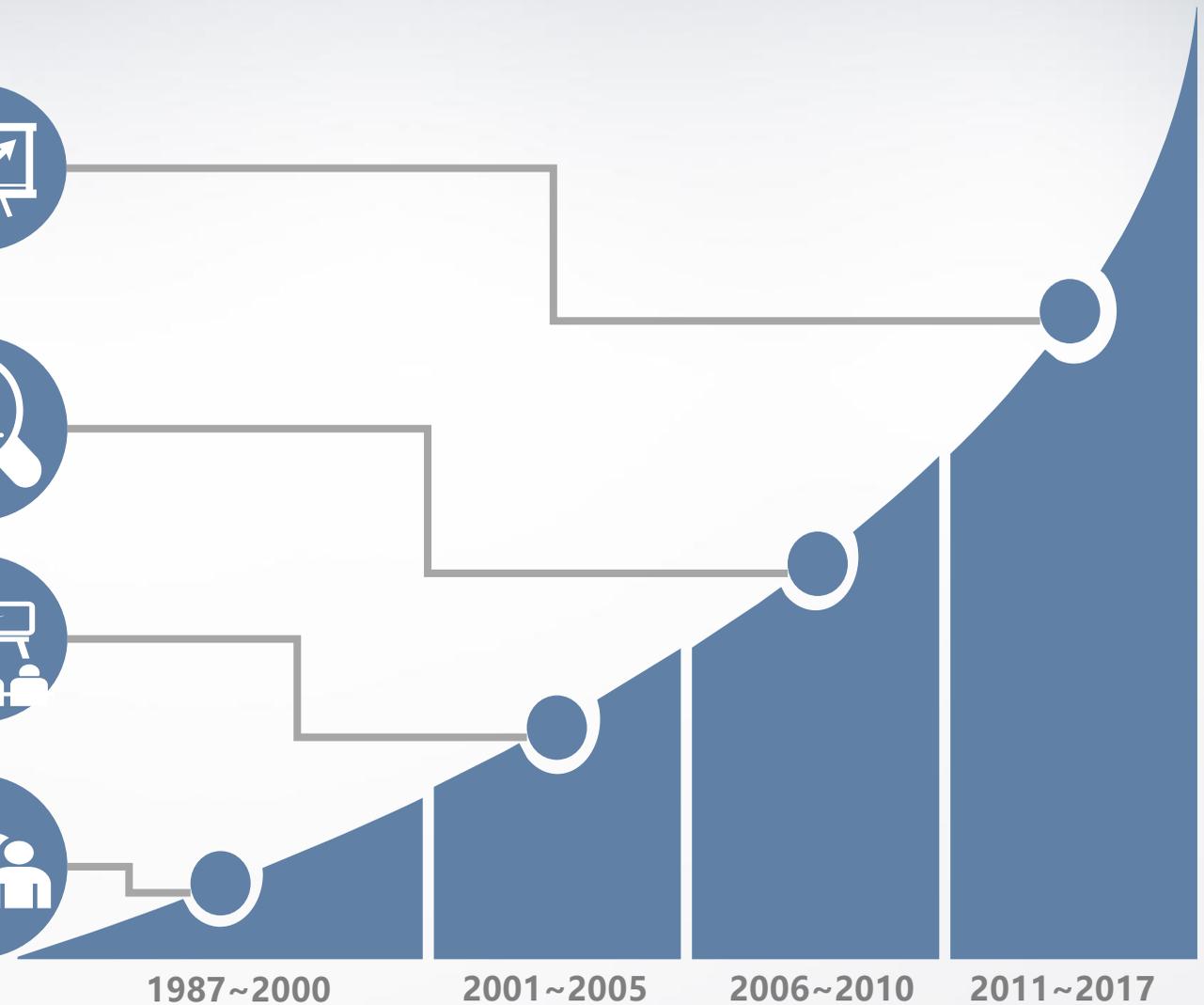
Standing :

- . Set up Kunshan factory
- . New Business for automotive tooling



Founding :

- . Founded tooling Plant in Taipei
- . New Business with Japanese Brand



1987~2000

2001~2005

2006~2010

2011~2017

Part 2

New Technology

- ▶ PC lightweight
- ▶ Metal lightweight

● Advantages of PC v.s. Glass

PC V.S. GLASS :

Density: 1.2 V.S 2.5
Reduce weight 30%~50%

Lightweight
轻量化

Safety
安全性

PC V.S. GLASS :

Good impact resistance
Protect passengers

PC V.S. GLASS :

Make elegant line come true
Integrate with other parts
Function integration
Simplify product

Design
Freedom
设计自由

Additional
Advantages
附加优势

PC V.S. GLASS :

Hot insulation
Sound insulation
Misting slowly
Water drops

»»» PC Lightweight



»» PC Lightweight

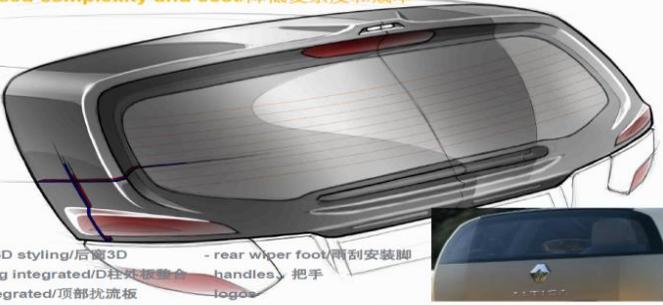


»» PC Lightweight



»» PC Lightweight

3 Parts Integration/零件整合
 reduced complexity and cost/降低复杂度和成本



- backlight with 3D styling/后窗3D
- D-Pillar cladding integrated/D柱处整合
- roof spoiler integrated/顶部扰流板
- CHMSL/中央高位刹车灯
- rear wiper foot/雨刮安装脚
- handles/把手
- logos
- aerodynamic features/空气动力学元素




Spoiler

Defroster

Turn Light Cover

Rear Window

Black Optical Plate

Break Light Cover

Plastic Steel Composite Place

Wiper Hole

Day/Night Back Light Cover

Cave For Licence Plate

Logo

Award E-Mark and Chinese Certificates

TÜV Rheinland
Luxemburg GmbH



ORDER FOR :

Reservation of approval number(s) from the Société Nationale de Certification and Homologations

TÜV Rheinland Luxembourg GmbH applies for approval number(s) for:

Manufacturer	Type	Approval number	TR no.
Kunshan Eson Precision Engineering Co., Ltd.	Rigid Plastic Panes (V-VIII/B/M 4mm)	E13*43R00*43R01*XXXX*00 9787	87-R43-0326/17-00

(1 for combined lamps same approval number)
(2 for combined lamps separated approval numbers)

It is certified, that the above mentioned processes are tested positively and that the corresponding reports for approval will be in Luxembourg within 6 weeks

A type-refered confirmation from the manufacturer about the appropriate use of the reserved approval number(s):

- is attached
- is there in Luxembourg
- is at TÜV Rheinland India

The authorization of the manufacturer's representative and a copy of the enrollment in the trade register:

- is attached
- is there in Luxembourg
- is at TÜV Rheinland India

The report of the factory inspection or ISO 9001 certificate:

- is attached
- is there in Luxembourg
- is at TÜV Rheinland India

TÜV Rheinland Group

Test Report No. 87-R43-0326/17-00

Manufacturer : Kunshan Eson Precision Engineering Co., Ltd.
Vehicle-Type / Type : Rigid Plastic Panes (V-VIII/B/M 4mm)



Make : ESON
Type : Rigid Plastic Panes (V-VIII/B/M 4mm)
Name and address of the manufacturer : Kunshan Eson Precision Engineering Co., Ltd.
No. 88 Yuanfeng Road, Yushan Town, KSND, Kunshan City, Jiangsu Province, People's Republic of China

The above mentioned type is in compliance with the ECE-Regulation indicated in the following test report.

Documentation
Test report no.: 87-R43-0326/17-00 by Heng Huang

Additional communication concerning the ECE approval

Place: Luxembourg
Date: March 10, 2017

TÜV RHEINLAND LUXEMBURG GMBH

Dipl.-Ing. Holger Hütz

国家安全玻璃及石英玻璃质量监督检验中心 检验报告

报告编号: WT2016E09A00866-2 第 2 页 共 3 页

样品规格: 1300mm × 400mm × 4mm 仪器设备: T2-91 Q-SUN 紫外耐候试验箱 Q-01 SGT-A 玻璃透射比智能测定仪

环境温度: 20℃ 环境相对湿度: 49%RH

检验项目	模拟气候老化试验(透射比及外观检查)	
标准要求	ECE R 43: 2012要求: (1) $\frac{Y}{X} \times 100\% > 95\%$; (2) $Y > 70\%$; (3) 无气泡或变色, 乳白龟裂纹等可见缺陷。 注: X为试验前的可见光透射比; Y为试验后的可见光透射比; Y > 70%的要求仅适用于驾驶员视区部分。	
试验结果	试验后的样品状态	
样品细分号	$\frac{Y}{X} \times 100\% = 100\%$	(3) 试验后样品无气泡或其它可见分解变色, 乳白龟裂现象。
43	(2) Y=20.4%	(3) 试验后样品无气泡或其它可见分解变色, 乳白龟裂现象。
44	$\frac{Y}{X} \times 100\% = 99.5\%$	(3) 试验后样品无气泡或其它可见分解变色, 乳白龟裂现象。
45	(2) Y=20.7%	(3) 试验后样品无气泡或其它可见分解变色, 乳白龟裂现象。
45	$\frac{Y}{X} \times 100\% = 99.5\%$	(3) 试验后样品无气泡或其它可见分解变色, 乳白龟裂现象。
单项判定	符合	
备注	适用于驾驶员非视区部位	

审核: 李向阳

检验报告

报告编号: WT2016E09A00866-1 第 9 页 共 10 页

样品规格: 100mm × 100mm × 4mm 仪器设备: Q-08 TABER5151 标准磨耗仪 Q-07 SGH-2 高精度雾度测定仪

环境温度: 22℃ 环境相对湿度: 52%RH

检验项目	抗磨性		
标准要求	ECE R 43: 2012要求: 对M类材料, 外表面因磨耗而引起的雾度应 < 10%, 内表面因磨耗而引起的雾度应 < 4%。		
试验结果			
样品细分号	磨前雾度/%	磨后雾度/%	前后雾度差值/%
1	1.16	9.13	7.97
2	1.22	6.54	5.32
3	1.20	6.47	5.27
4	1.27	3.75	2.48
5	1.11	3.95	2.84
6	1.13	3.90	2.77
判定	符合(M类)		
注	样品细分号1-3的磨耗转数为500转, 磨外表面; 样品细分号4-6的磨耗转数为100转, 磨内表面。		

审核: 李向阳

»»» PC Lightweight

Electrochromic PC Sunroof

Before

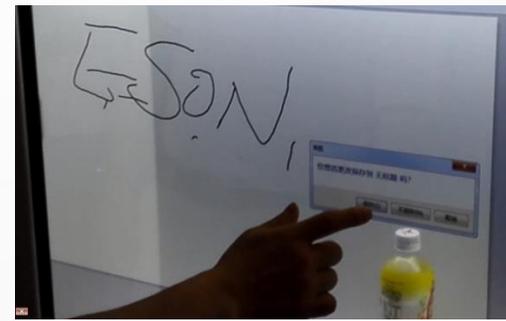
After



Solar energy PC Sunroof



Touch Window



➤➤➤ Metal Parts Lightweight

Advantages :
Weight decrease : 20%~35%
Cost Down : 10%~25%

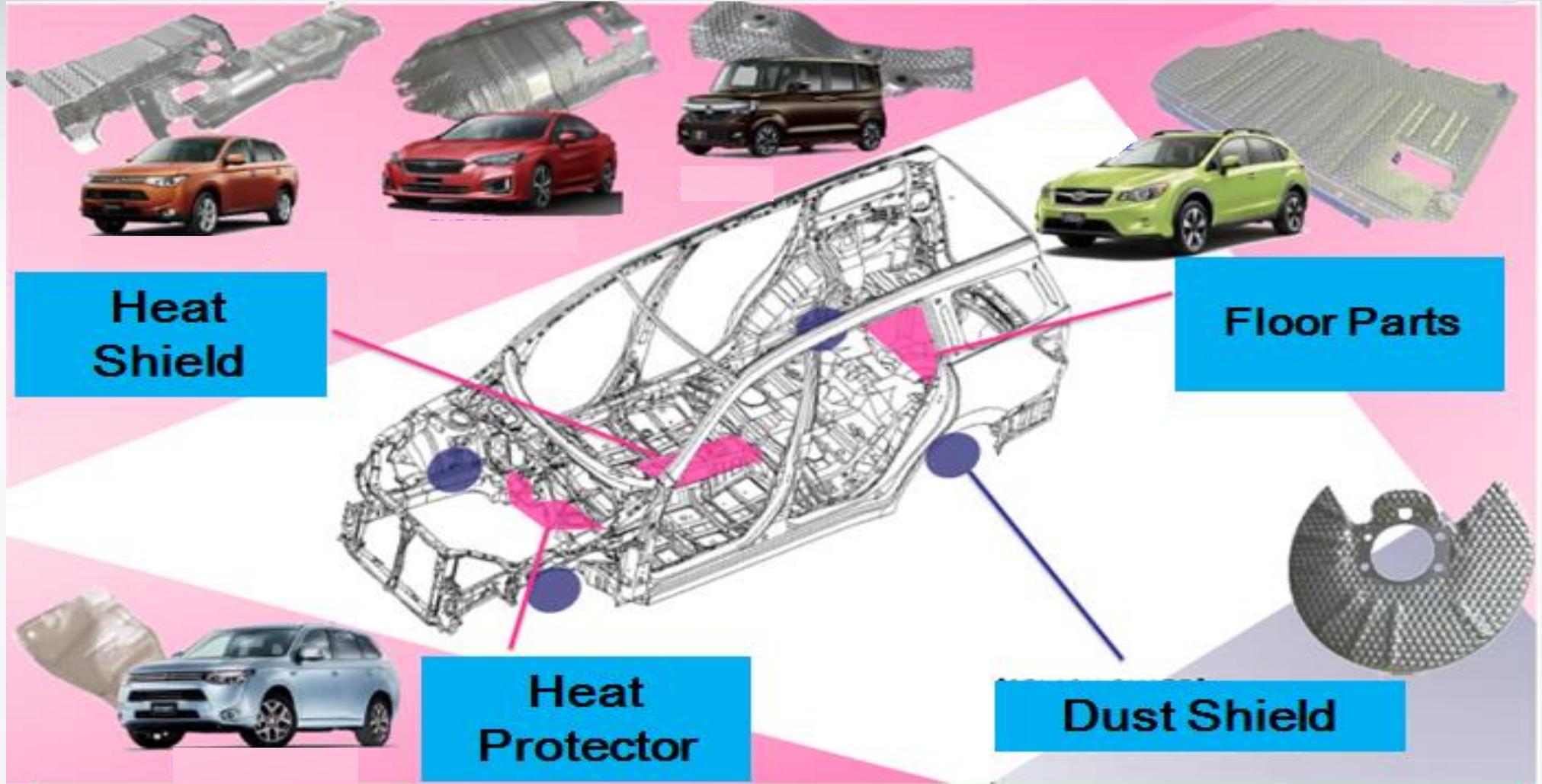
Traditional Structure



New Structure



»» Metal Parts Lightweight-Embrella Structure



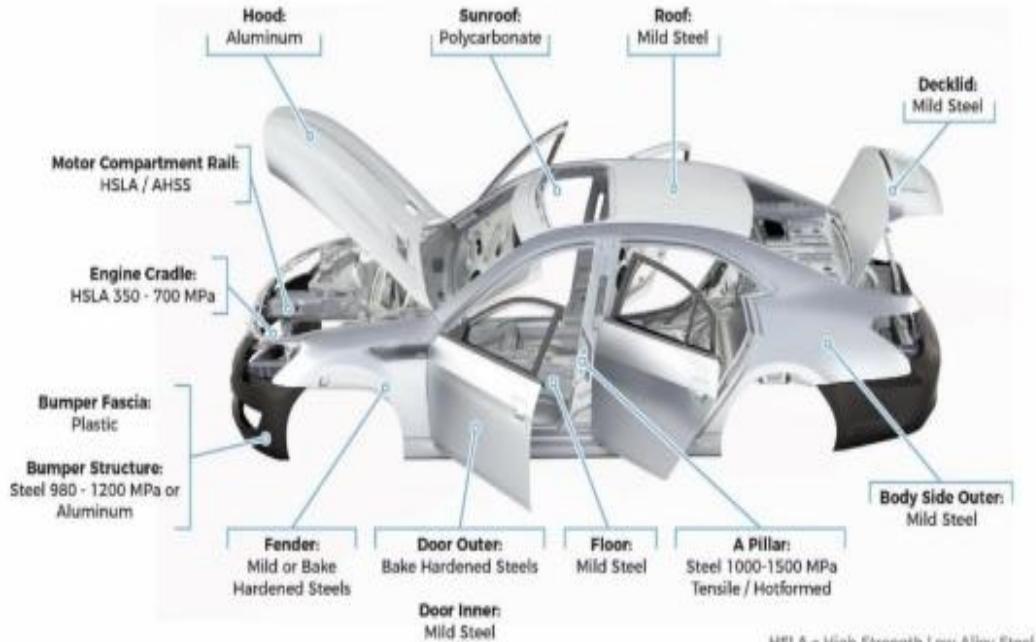
Part 3

Automobile Performance

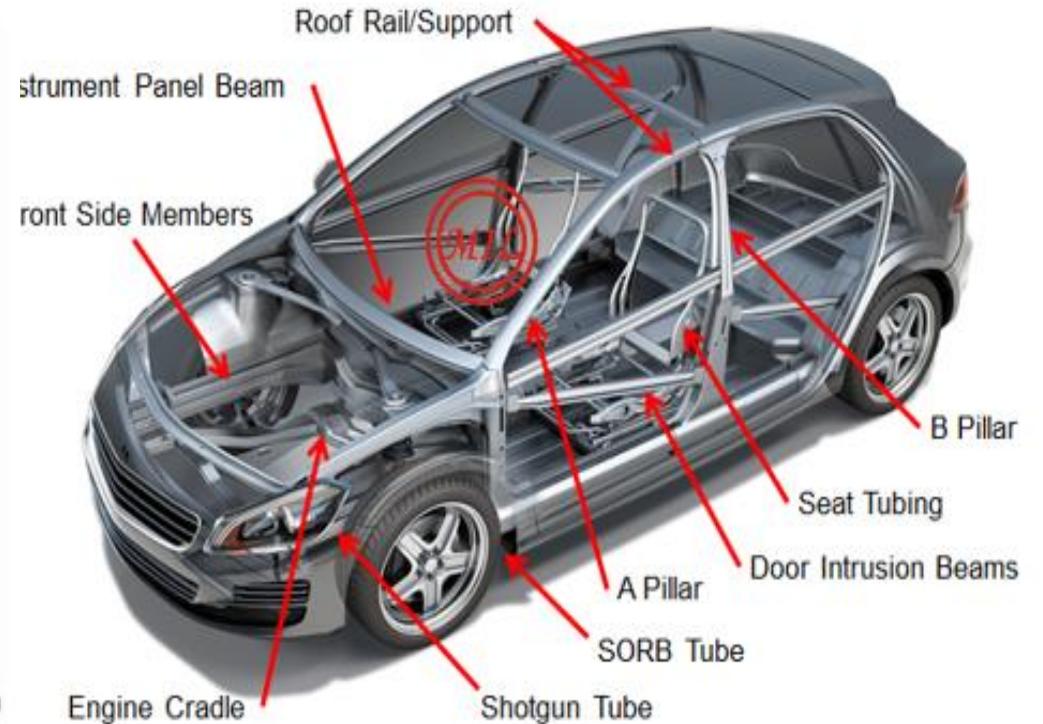
- ▶ Product Performance
- ▶ Production Capacity Profile

Product Performance

Parts being processed :
Metal Stamping _ 32 parts
Plastic Injection _ 12 parts

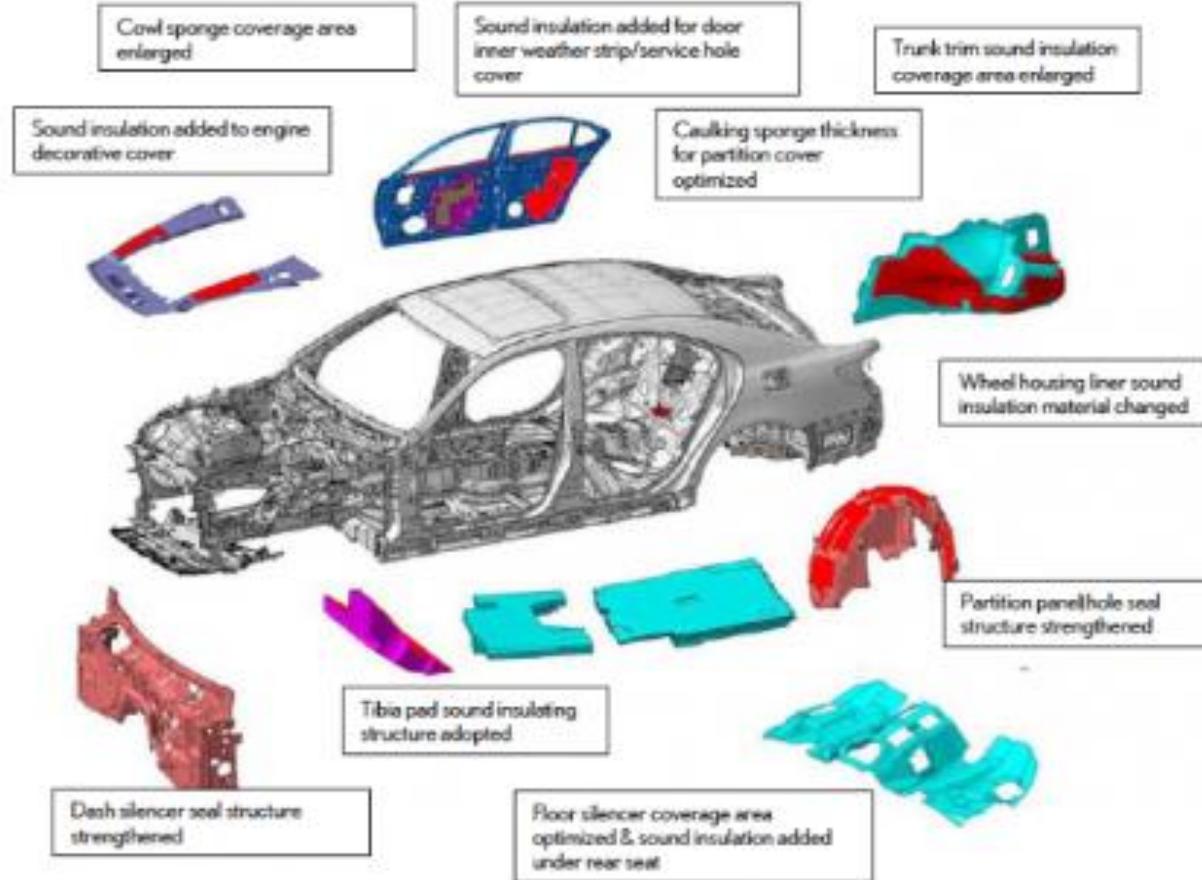


HSLA = High Strength Low Alloy Steel
AHSS = Advanced High Strength Steel



➤➤➤ New Parts in development

New Parts :
Metal Stamping _ 25 Parts
Plastic Injection _ 5 Parts



»» Production Capacity Profile

Hydraulic Press (2000T - 1000T - 800T - 800T - 1600T)



Production Capacity Profile

Mechanical Press (1600T - 800T - 800T - 630T - 630T)



ESON

Thank You



ESON-KY (5243)