

COMPANY PROFILE

Jan.2022

Established in 1999, Aluminum billet casting and extrusion production

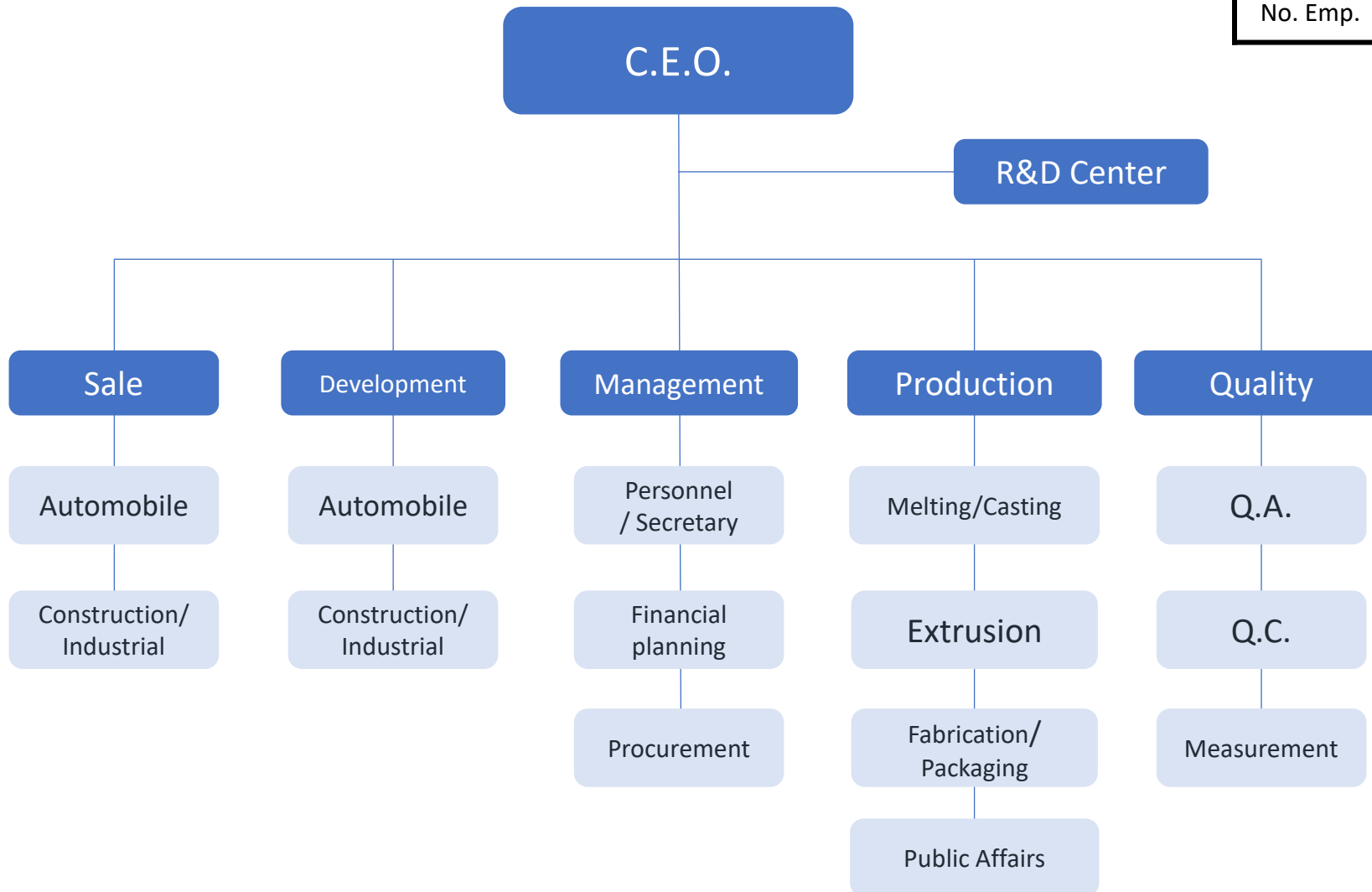
Title	Status
NAME	ALUS Co., Ltd.
ESTABLISH	14 TH July. 1999
C.E.O.	Nak-chul Jeong, Jong-wook Jeong
Employees	73 (Cheonan Fac. 32, Jincheon Fac. 41)
Address	118, Susin-ro, Susin-myeon, Dongnam-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea
Main Product	Aluminum billet casting and extrusion
Capital	980,000,000won (end of 2018)
Financial Status	(Based on estimates for 2021) Sales 61 billion won / Sales profit 5 billion won Assets 48 billion won / Liabilities 24 billion won Capital 24 billion won
Website	http://www.alus.kr

History

1991.07	Established Daedong Industrial Co., Ltd. (automobile equipment trade)
1999.07	Established Daedong Metal (Built casting production line in Cheonan)
2001.03	Established Alus Co., Ltd.
2001.10	Established Alus Technology Research Center
2002.12	Installation of extruder line (1,800 ton 7inch by UBE, Japan)
2004.04	Acquired ISO 9001 certification
2004.06	Acquired KSD-6759 certification
2007.01	Established the 2nd factory in Goesan
2009.03	Established Eumseong 3rd Factory
2010.02	Established the 4th factory in Jincheon
2015.01	Construction of AL formwork & recycling line (Jincheon)
2017.10	Constructed extrusion plant for large-size materials (Jincheon)
2017.11	Installation of extruder line in Jincheon(4,500 ton 12inch by Samwoo)
2020.03	Acquired IATF 16949 / ISO 14000 certification
2020.06	Installation of extruder line in Jincheon(2,200 ton 7inch by SMS, Germany)
2021.01	Selected as an automobile structural material mass production company (battery pack, seat rail)

Title	Melting & Casting Factory	Extrusion Factory
Location (Area)	118, Susin-ro, Susin-myeon, Dongnam-gu, Cheonan-si, Chungcheongnam-do (land: 14,500m ² , factory 6,600m ²)	274-8, Jingwang-ro, Iwol-myeon, Jincheon-gun, Chungcheongbuk-do (land: 33,000m ² , factory 14,500m ²)
Establish	Jul. 1999	Nov. 2017
Capacity	current) 36,000ton/year → 72,000ton/year (23'~)	current) 20,000ton/year → 32,000ton/year (22'~)
Factory View		

Title	Cheonan plant	Jincheon plant	Office staff	Production staff
No. Emp.	32	41	33	40

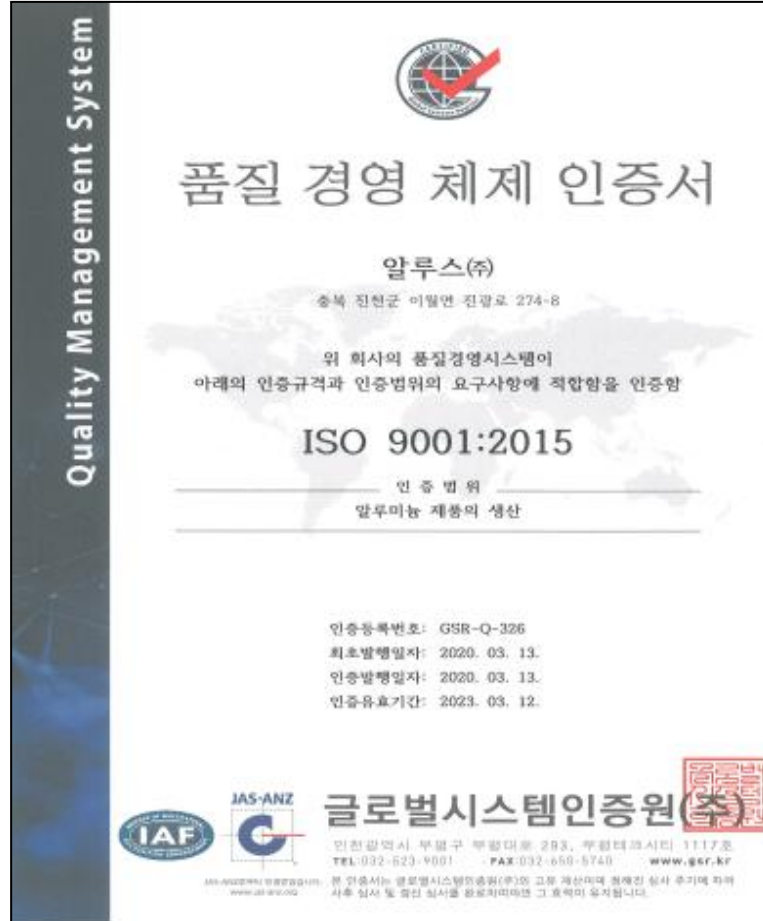


Automobile organization	
Title	No. of Member
Quality	3
Sales	2
Develop.	3
Research	3
TOTAL	11

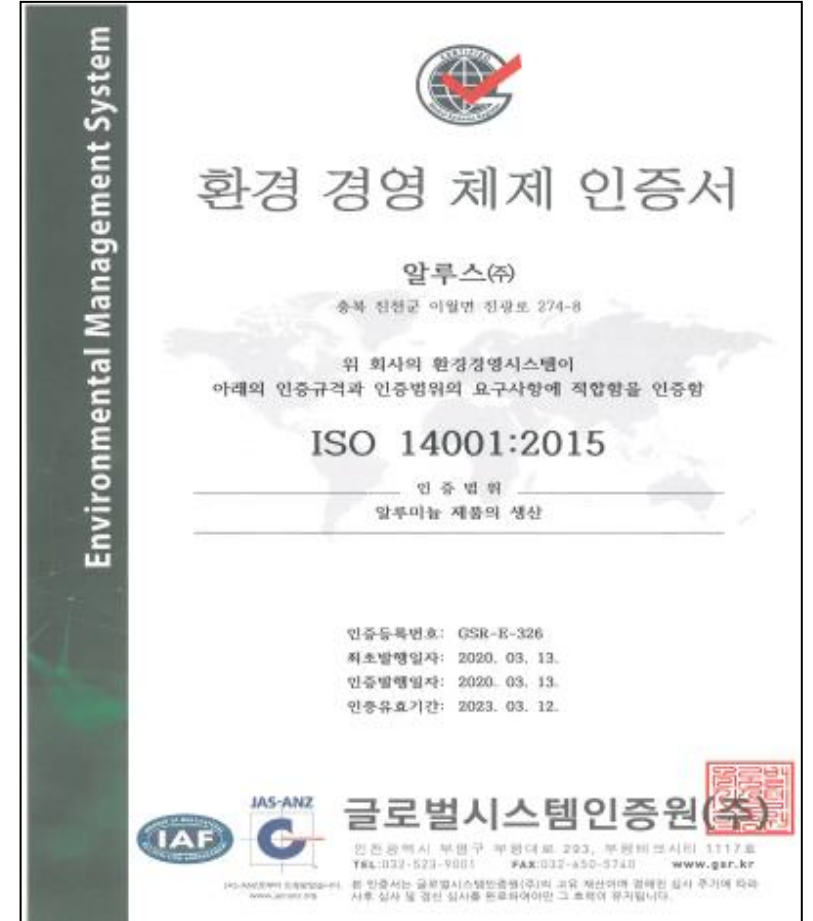
Established a quality system for customer quality satisfaction by acquiring the quality management system certificate required for the automobile business



▲ IATF 16949



▲ ISO 9001



▲ ISO 14001

New melting & casting facilities for technological prowess, and new 2 extruder lines for expand of automobile parts business

Melting & Casting Line (Choenan Plant)

- 2 melting furnaces(25t)
- 2 Casting Machines
- * New melting/casting line to be completed in Jincheon plant in 2023

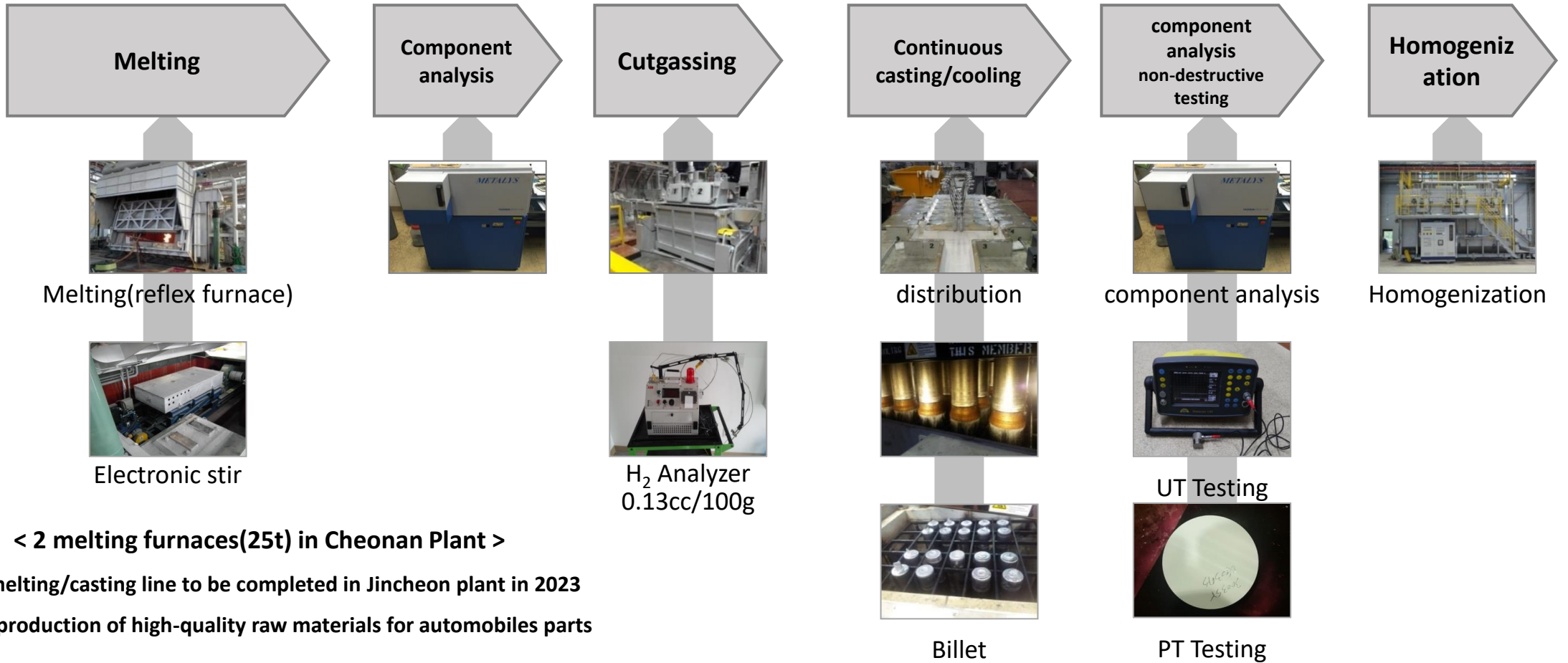


Extrusion Line (Jincheon plant)

- 4,500 ton 12 inch extruder
- 2,200 ton 7 inch extruder
- * Facility investment 2022'
- 2,200 ton 8 inch
- 1,800 ton 7 inch



❖ Production Process – Aluminum Casting



< 2 melting furnaces(25t) in Cheonan Plant >

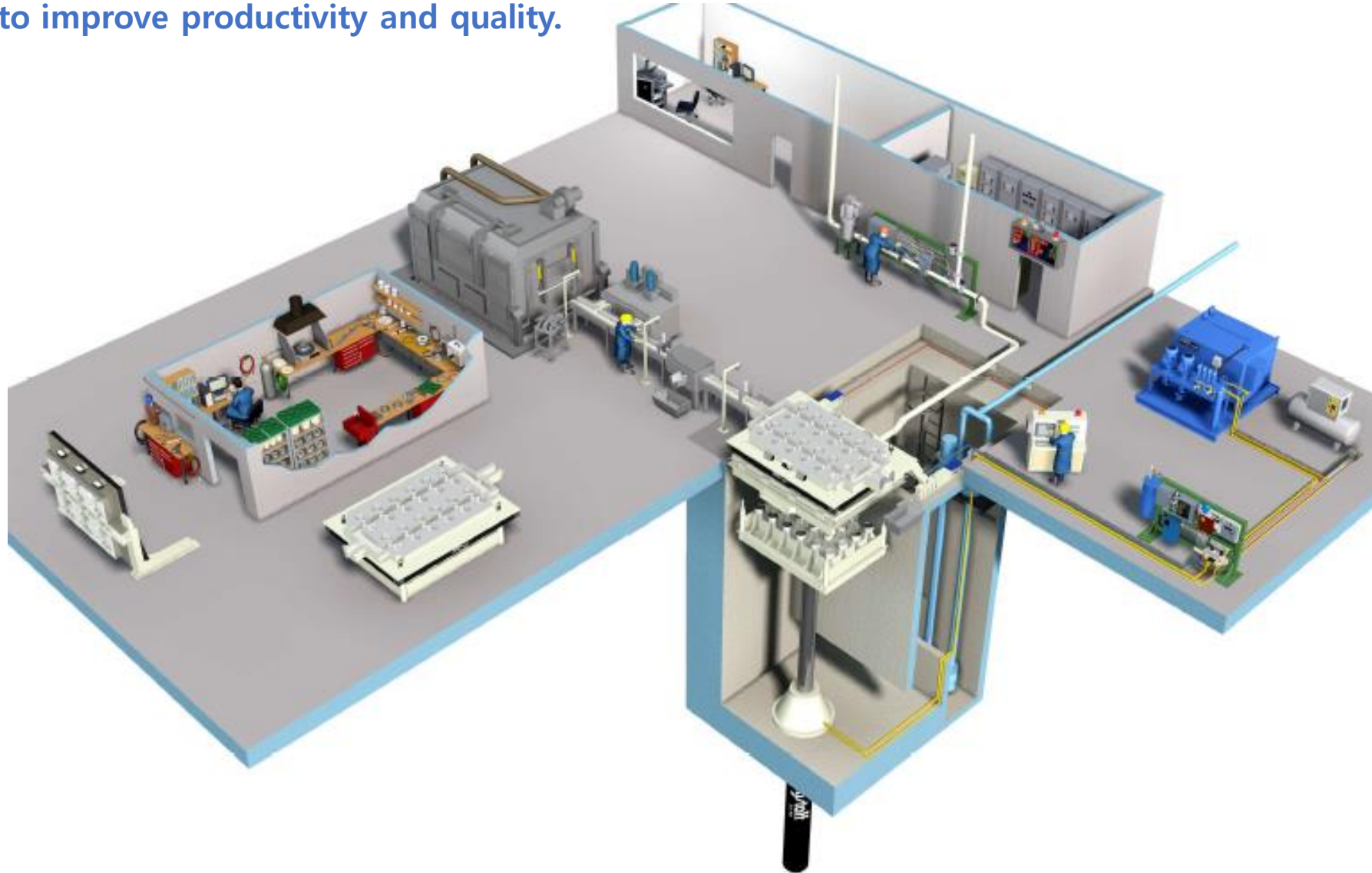
New melting/casting line to be completed in Jincheon plant in 2023
for the production of high-quality raw materials for automobiles parts

Aluminum alloy molten metal control technology
(Securing melting temp., molten metal pretreatment technology for each alloy)

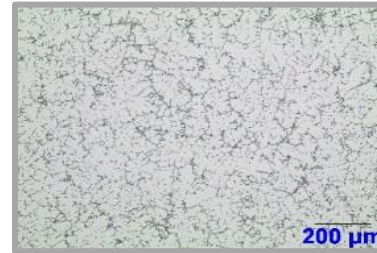
Aluminum casting technology
(Optimization of casting / homogenization conditions for each alloy)

PLAN OF NEW MELT CASTING LINE

For new melting and casting facility, we will benchmark the melting and casting facilities of advanced ALCOA company to bring technology of ALMAX for melting and refining facilities, and Wagstaff technology for casting facilities to improve productivity and quality.



❖ Production Process – Aluminum Extrusion



Mechanical property test

Extrusion

Metallographic test(Macro)

Aging



Dimension measurement



Metallographic test



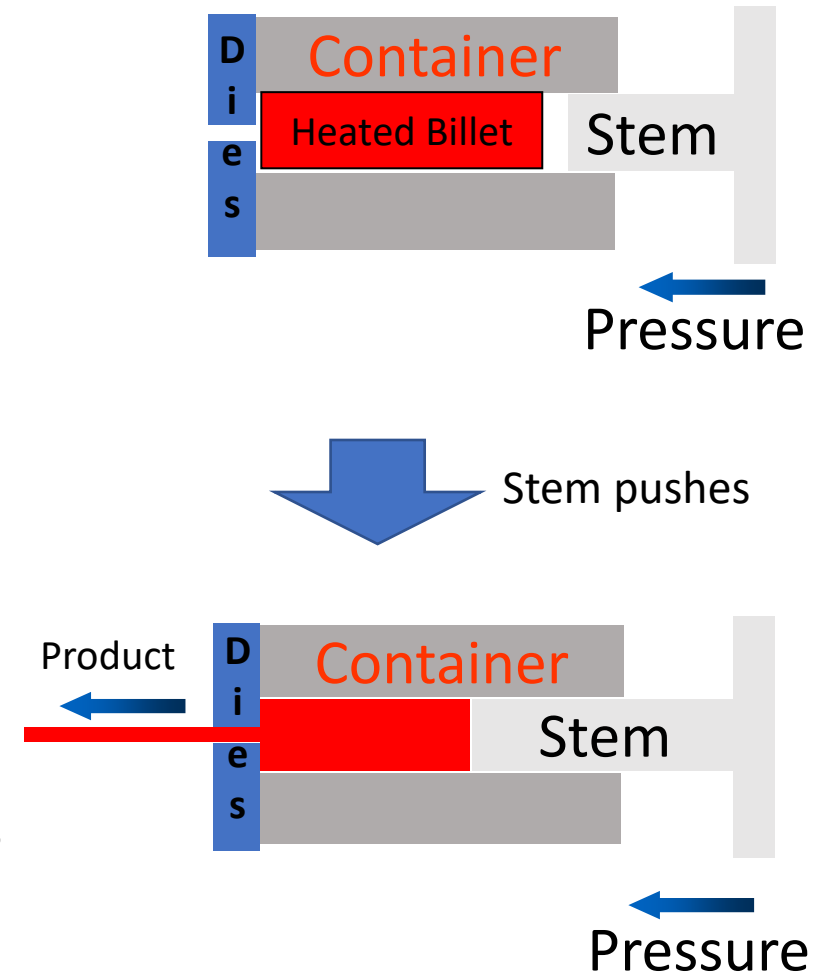
Rockwell Hardness Test

EXTRUSION PROCESS OVERVIEW

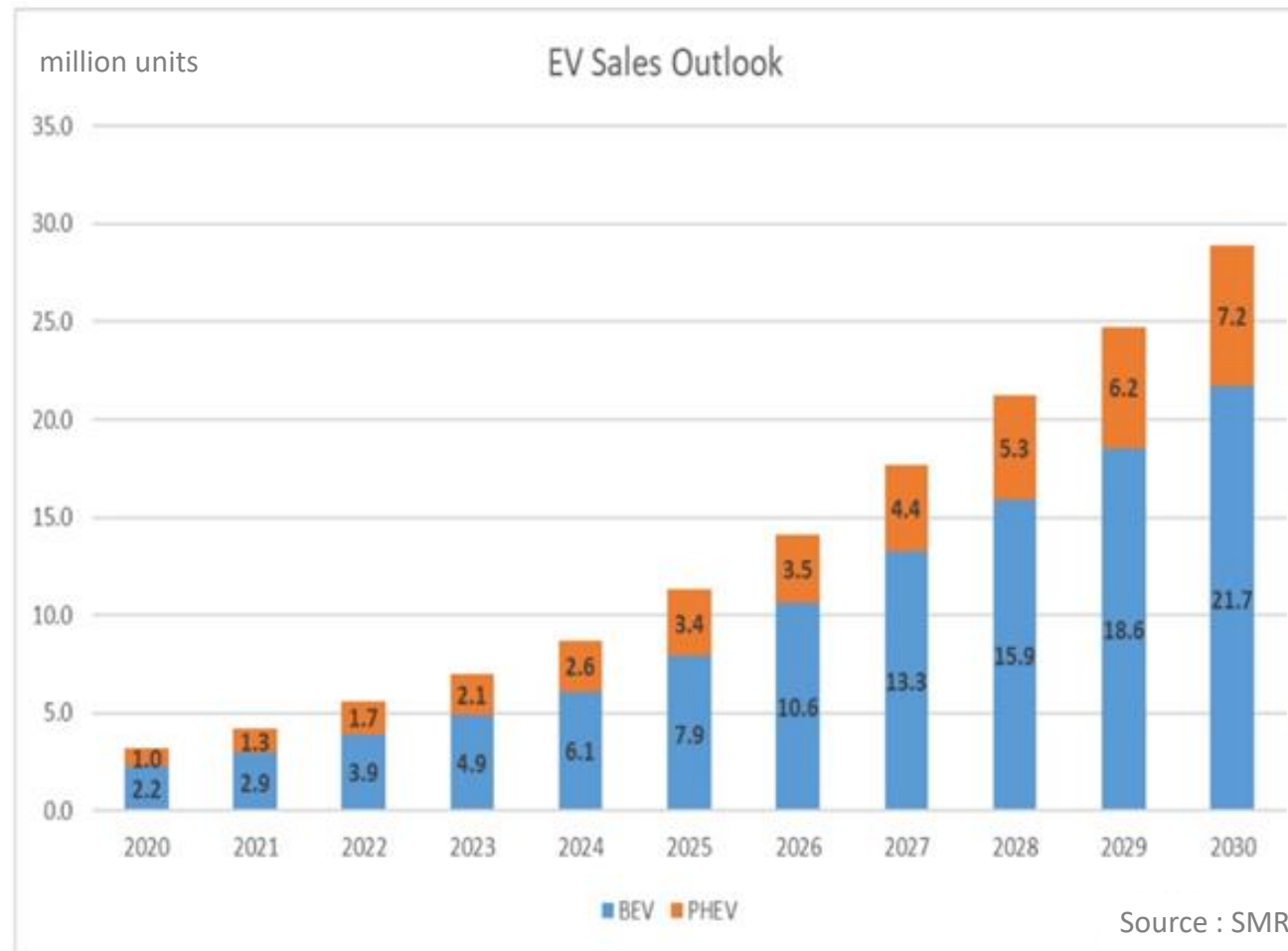
For the production of aluminum extruded parts for electric vehicles, we pursue customer satisfaction and secure competitiveness by stable production and quality assurance with advanced extrusion machines such as UBE(Japan) and SMS(Germany).



- The direction in which the force is applied to the billet and the direction in which the product comes out are the same.
- Grain growth due to severe friction
- The stem enters the container and pushes the heated billet, causing a lot of friction between the container and the billet. Therefore, frictional heat is generated in the product, which affects the grain growth and causes irregular properties in the product properties.



The global sales forecast for electric vehicles will grow rapidly,
11 to 14 million units in 2025' and 29 million to 31 million units in 2030'.
Hyundai Motor's electric vehicle domestic sales was about 280,000 units in 2021'
Expected short of Aluminum parts supply due to a surge demand 1.7 million units in 2026'

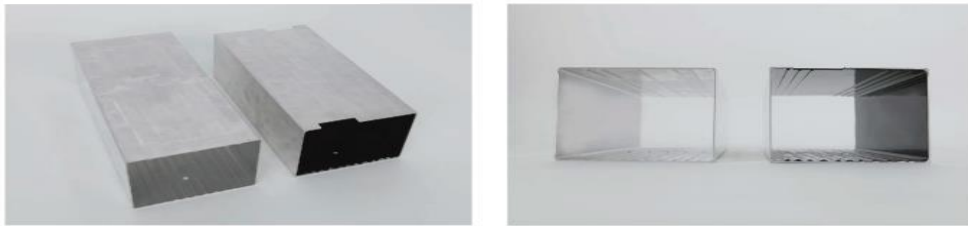


Alus achieved quantitative growth by focusing on industrial and construction materials according to the boom of the domestic construction industry after its establishment. In line with the growing aluminum market in the Electric Vehicle era, we are promoting changes in the main market with high-quality automotive materials and parts.



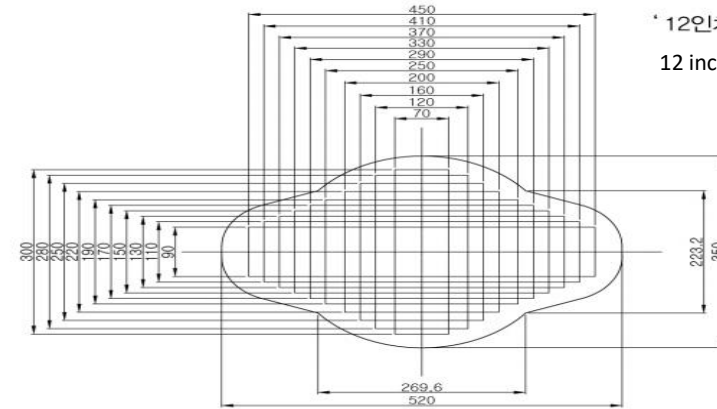
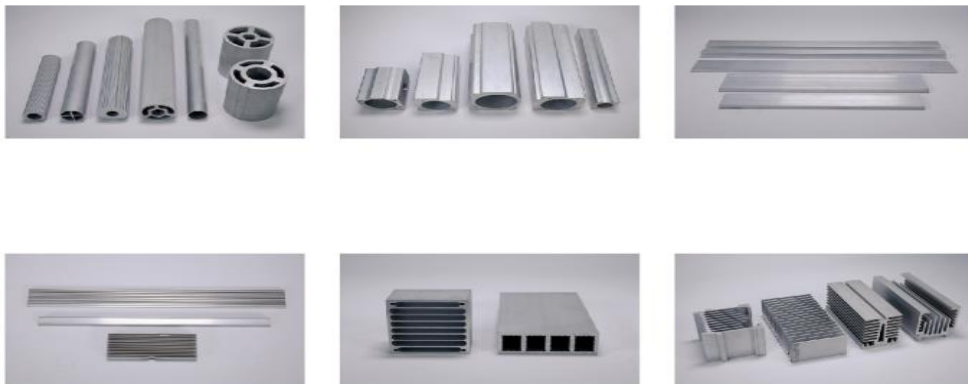
알루미늄 배터리 케이스

Battery Case



산업용 압출재

Industrial Products



* 12인치 압출기 생산가능 사이즈 *
12 inch extrusion press product size

가구용 압출재

Furniture Parts

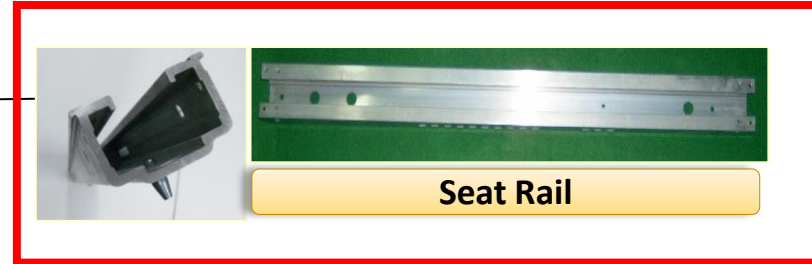


건축용 압출재

Construction Materials



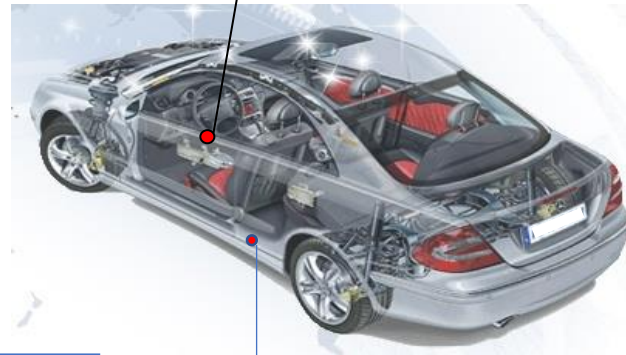
Electric Vehicle battery cases and parts are being mass-produced, and aluminum bumpers and seat rails are under development with the goal of mass-production in 2013 (development tasks are in progress with company H, company D, company S, etc.)



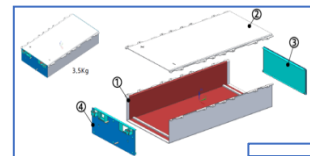
Development in progress



Reliability test in progress



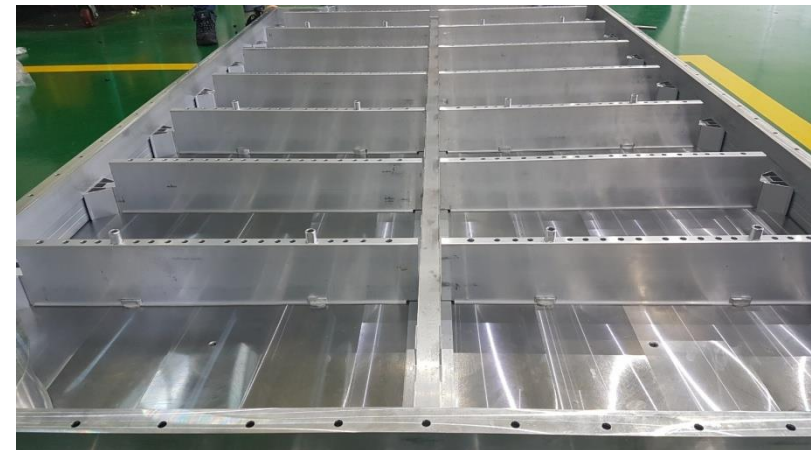
Battery Pack, Battery Case



Under mass production

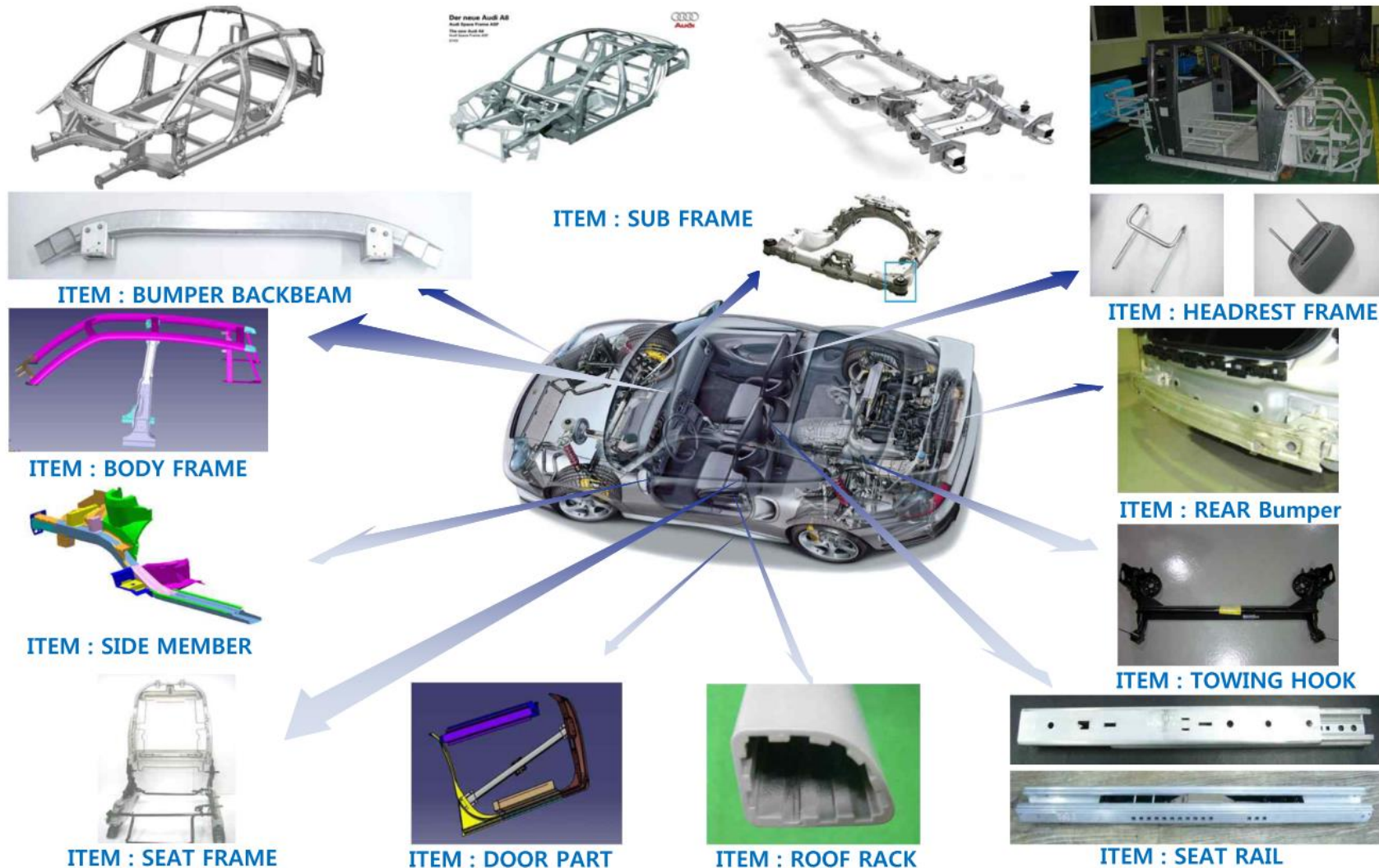
STATUS OF CURRENT DEVELOPMENT

We secured the production capacity of automobile parts by securing various alloy technologies and realizing optimization of extrusion mass production process through R&D of alloys and extrusion of battery cases for electric vehicles in 2020'-2021'



STATUS AND PROSPECT OF AUTOMOBILE PARTS

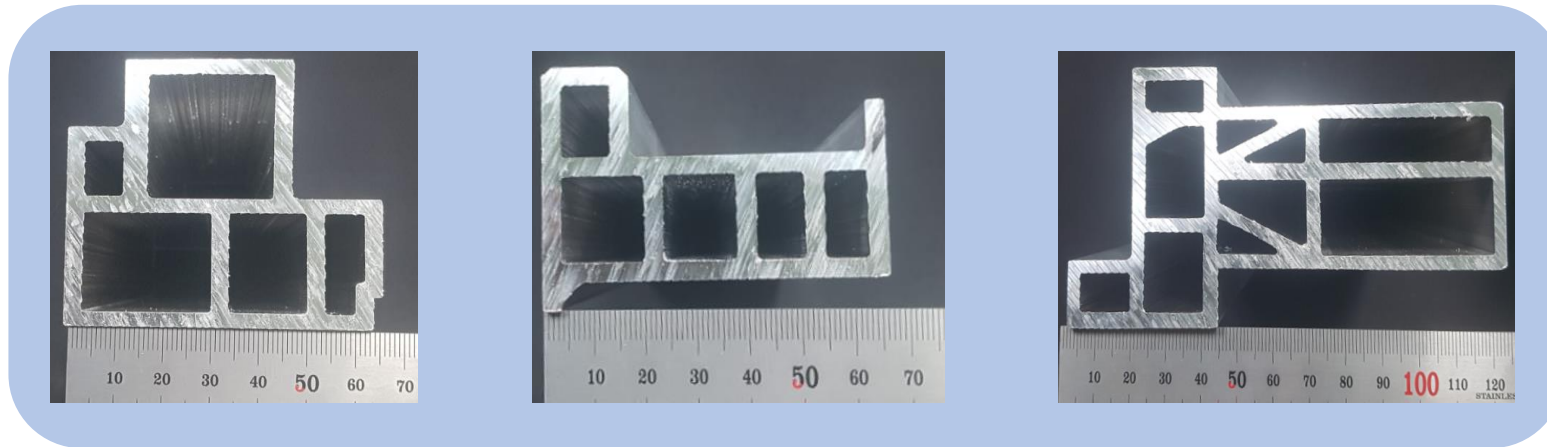
In order to achieve the carbon regulation and CO2 emission reduction target, the demand for weight reduction due to the rapid conversion of Electric Vehicle is predicted by Bloomberg and other forecasting agencies, even though aluminum costs about three times the cost of steel, but due to the weight reduction of 1/3, the demand for aluminum is expected to increase explosively.



PRODUCTS OF EV PARTS(ONGOING)

After producing high-strength alloys through self-melting and casting facilities, we are producing high-precision extrusion processing of major key parts such as electric vehicle battery pack cases and side seals, and secure competitiveness through continuous productivity and quality improvement.

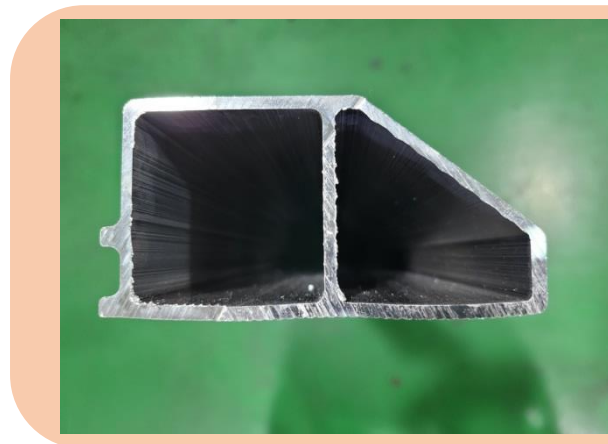
Structural materials for electric vehicle battery packs



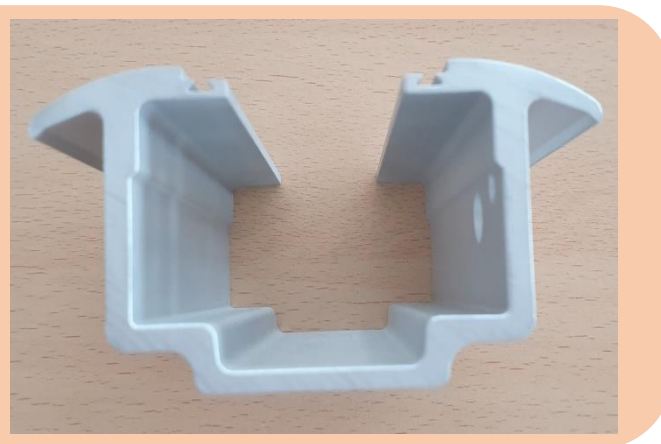
Side seal of electric vehicle



Bumper



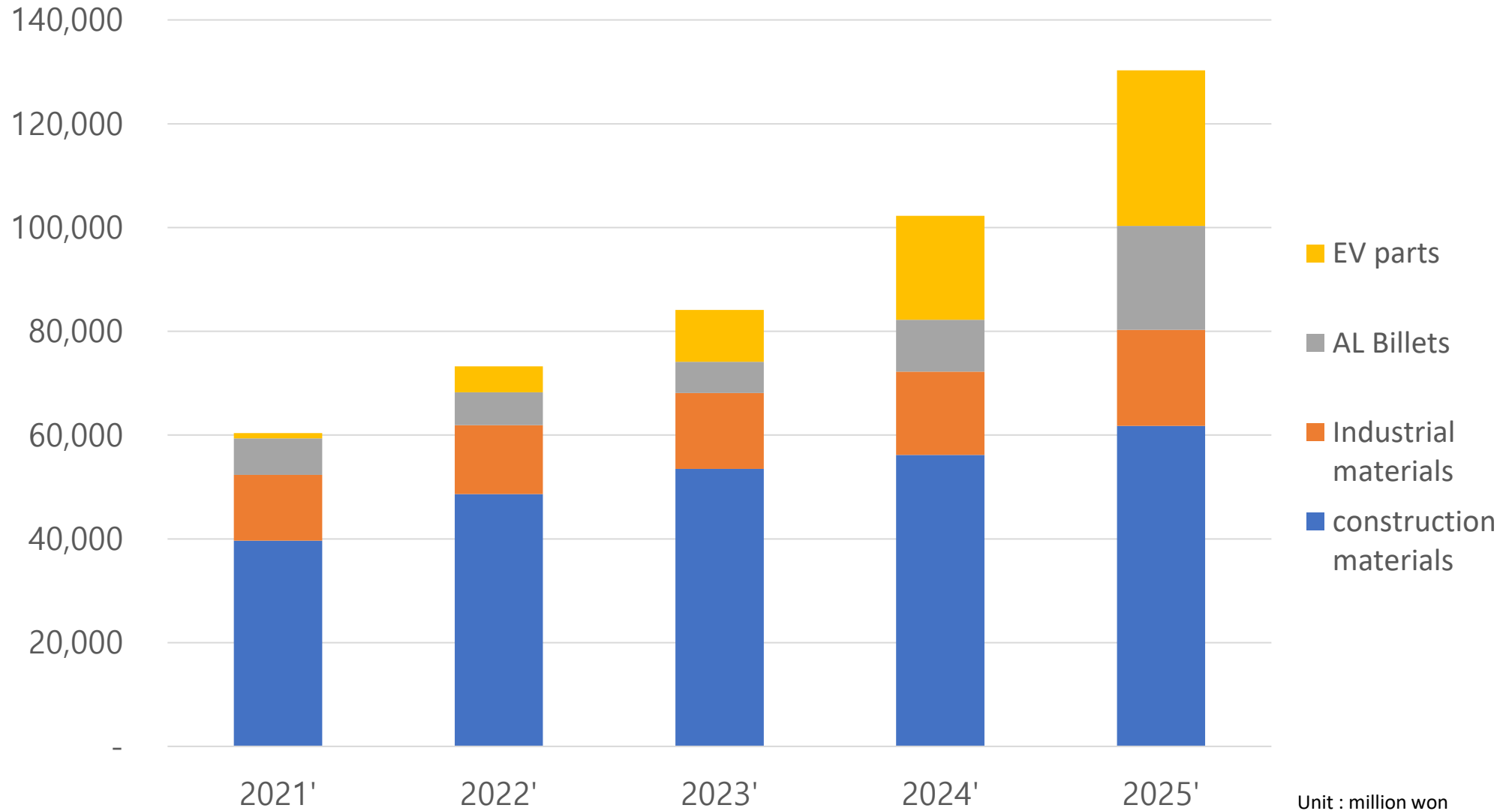
Seat rail



Battery module case



Expected sales



2022. 03~04.	Installation of 8-inch extrusion line
2022. 05~06.	Installation of 7-inch extrusion line
2022. 12. ~2023. 02.	Earthworks for new melting line
2023. 03~07.	Factory(8,300m ²) construction and Pre-IPO
2023. 10~12.	Installation of melting line
2024. 01~04.	Listing on KOSDAQ
2025.	Construct extrusion line in US

