



奥兴集团

AOXING GROUP CORPORATION.,LTD

成都兴光工业科技有限公司

CHENGDU XINGGUANG INDUSTRIAL & TECHNOLOGY CO., LTD.

——致力于为客户提供优质产品和服务

DEDICATED TO PROVIDE CUSTOMERS WITH QUALITY
PRODUCTS AND PROFESSIONAL SERVICE

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集团概况

BRIEF INTRODUCTION



成都奥兴集团汽车事业部 Chengdu Aoxing Group Automotive sector

成都基地 Chengdu Base

成都兴光工业 Xingguang Industry
成都奥兴汽配 Aoxing Auto Parts
西冶奥兴铸造 Xiye Aoxing Casting

主营产品 Products :
变速器、离合器、减速器、电机壳体、
发动机精密铸件、底盘精密铸件
Die-casting & Machining components for
Gearbox, Motor, Reducer, Engine and
chassis

柳州基地 Liuzhou Base

柳州奥兴汽配一厂
柳州奥兴汽配二厂
Liuzhou Aoxing Automotive
Factory 1, Factory 2

主营产品 Products :
变速器壳体、发动机精密铸件、
底盘精密铸件
Die-casting & Machining components for
Gearbox, Engine and chassis

合资企业 Joint venture

四川红光汽车机电
Sichuan Hongguang Auto
Machinery Electric

主营产品 Products :
节气门体及总成, 进气泄压阀
Throttle body & Assy., ETC TB,
Relief Valve

历史进程 History



兴光工业：成立于2005年，诞生于20世纪60年代中国“三线”建设时期，前身是中国兵器装备集团公司直属企业；

Xingguang Industry：Founded in 1960, former enterprises directly under China South Industries Group Corporation for military, reestablished in 2005.

四川红光：成立于1995年，主营特种装备产品，2009年由奥兴和长安进行合资重组；
Sichuan Hongguang: Founded in 1995, was specialized in special equipment components, reestablished as a JV by Aoxing & Changan in 2009;

奥兴汽配：成立于2000年；
Aoxing Automotive: Founded in 2000;

西冶奥兴：成立于2005年；
Xiye Aoxing：Founded in 2005;

奥兴集团：组建于2010年；
Aoxing Group: Organized in 2010;

柳州奥兴：成立于2012年；
Liuzhou Aoxing: Founded in 2012;

摘要

Executive Summary



注册资金共40,900万元

Registered capital : 409,000,000RMB (63M USD)

占地面积共235,332平方米

Floor space : 235,332 sq. m

总员工1644 , 技术218人

1644 Employees in total, includes 218 engineers

2017年销售额共12亿元人民币

Sales revenue of 2017: 185M USD

现有年产能 :

变速器、发动机壳体共860万台套 , 节气门体350万套 ;

柳州新工厂建成后新增300万台套 ;

Annual capacity:

8.6M sets for Gearbox & Engine parts, 3.5M sets for ETC,
3M sets will be added with Liuzhou new facility .



成都基地概况

BRIEF INTRODUCTION OF CHENGDU BASE

成都基地概况 BRIEF INTRODUCTION OF CHENGDU BASE



※ 成都基地含成都兴光、成都奥汽、四川西冶奥兴三家公司，是地方政府重点支持的新兴民营企业，位于四川省成都市郫县何公路**116**号及滨清路**439**号，距成都市区**18**公里。公司现有员工**800**余人，其中技术、管理人员**200**余人。

As an emerging private company which is strongly supported by the local government, Chengdu base consists of Xingguang, Aoqi, Sichuan Xiye Aoxing, the base is located in No. 116, Hegong Road, & No.439, Binqing Road, Chengdu, China. P.C., which is 18 KM away from downtown. Currently there're 800 employees, including 200 technical and management personnel.

※ 公司具有完整的模具设计、模具制造、先进的铝合金压铸及机械加工手段，年产汽车变速器壳体零部件**400**万套、汽车零部件**460**万件的能力。

With complete mold design and manufacturing, advanced aluminum alloy die-casting and machining means, Xingguang has the production capacity of 4 million sets of Automobile Transmission Housing and 4.6 million sets of auto parts.

※ 公司长期为长安汽车、上海通用、上汽通用五菱公司等配套发动机零部件；为青山公司、上汽变速器公司等配套变速箱壳体类零部件。

We have been supplying engine parts to ChangAn, Shanghai GM, SGMW and gear box housing, HUC valve body parts to Tsingshan and SAIC for many years.



柳州基地概况

BRIEF INTRODUCTION OF LIUZHOU BASE

柳州基地概况 BRIEF INTRODUCTION OF LIUZHOU BASE



柳州奥兴隶属于成都奥兴集团公司，位于广西柳州市阳和工业区，工厂占地约 **70**亩，总投入 **3.3**亿，计划打造成为数字化工厂。主要为**SGMW**，**SAGW**及比亚迪等客户提供相应零部件配套服务。

Liuzhou base is 100% owned by Aoxing group. it is located in Yanghe industrial estate, Liuzhou, China, which is invested about 0.33 billion. This base is planned to be develop to be a digitized factory. The main costumer are SGMW, SAGW, BYD and other OEM.

公司有完整的**DCT**自动化生产线以及高标准恒温车间，待完全启用后，变速器箱体年产能**300**万套，其中**DCT**变速箱体年产能**30**万套。

With completely integrated **DCT** automatic machining line and high standard constant temperature workshop, with the annual capacity of 3 million sets of transmission housings after completely application, including 0.3 million pcs for **DCT** housing.



柳州基地概况 BRIEF INTRODUCTION OF LIUZHOU BASE



DCT壳体自动化加工线 DCT housings automatic machining line



离合器壳体加工线
clutch housing machining line



主壳体加工线
main housing machining line



合箱自动化线
Automatic assembling line



离合器清洗线
Clutch housing cleaning line



端盖加工线
Cover machining line



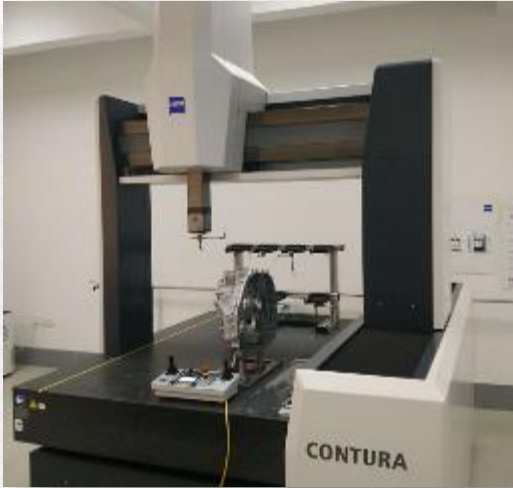
合箱自动化清洗线
Automatic cleaning line

整条线选用日本进口加工设备，具有自动上、下料、自动打标、自动扫码、自动装夹、自动清洗、自动检测功能。

The production line is based on the imported machining equipment which contains the full automatic functions with automatic uploading & loading, marking & scanning, clamping, cleaning, leakage testing, online inspection process.

柳州基地概况 BRIEF INTRODUCTION OF LIUZHOU BASE

DCT检测设备 DCT housings inspection equipment



蔡司三坐标
Zeiss CMM



SPC工作台
SPC station



清洁度自动分析系统
Cleanliness analysis system



轮廓仪
contour graph



清洁度检测仪
Cleanliness tester

为保证产品质量，选用高精度检测及计量设备，保证产品过程质量受控。

The high precision inspection equipment are applied to ensure the products' & process quality.



战略规划 STRATEGY PLAN

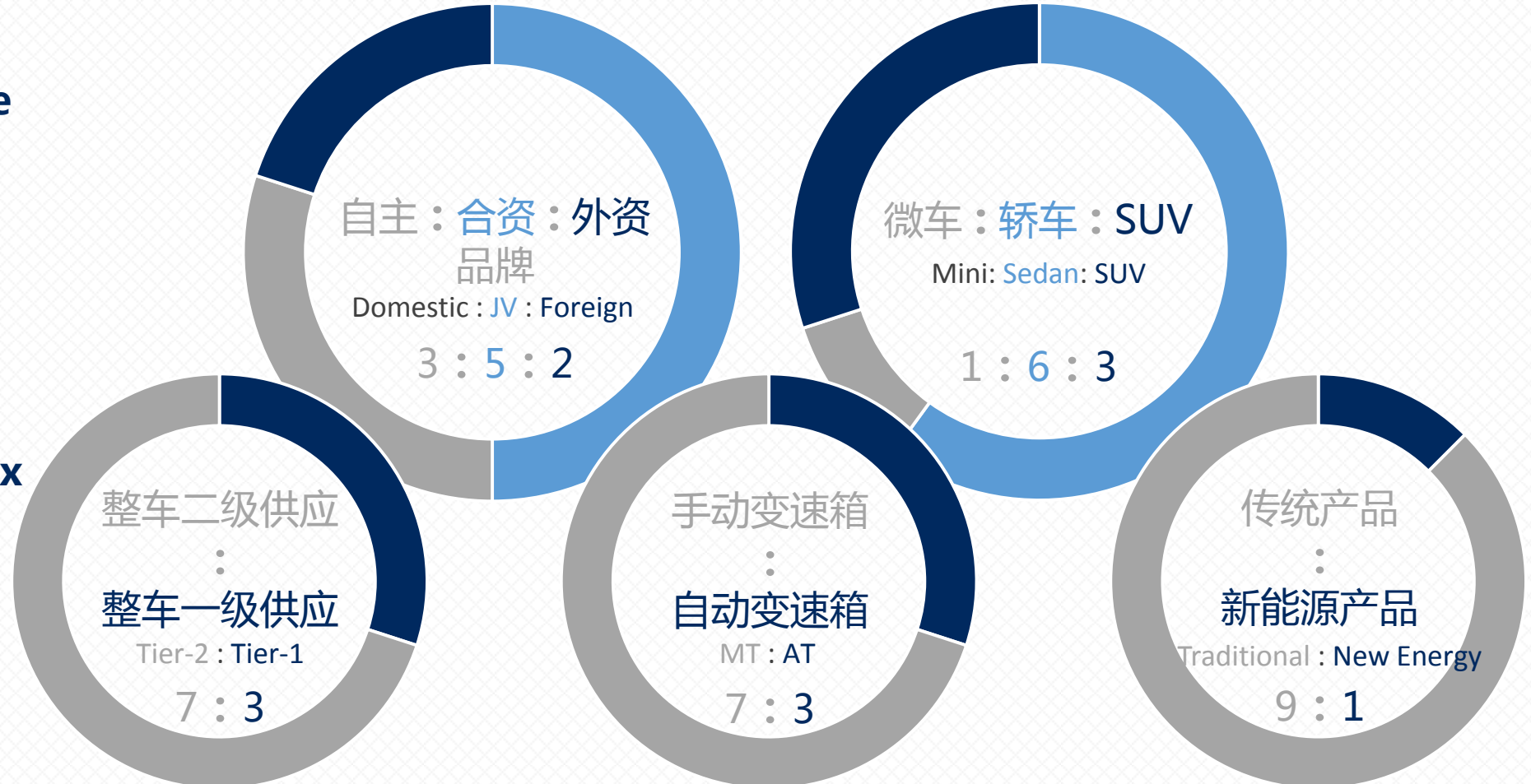
2016-2020市场规划 2016-2020 Market Planning

- **已有客户业务拓展** Expansion of business
 - 上汽通用 SGM 上汽通用 五菱SGMW 大陆 Continental
- **新客户进入** New Customer Development
 - 国内供应链：舍弗勒、沃尔沃、长安福特、北京现代
Domestic: Volvo, Chang 'an Ford, Beijing Hyundai
 - 全球供应链：全球通用、麦格纳、博格华纳
Global: GM, Magna, BorgWarner



2016-2020产品规划 2016-2020 Product Planning

- 客户升级
Customer Upgrade
- 车型升级
Model Upgrade
- 一级供应
1-tier Supply
- 自动变速箱
Automatic Gearbox
- 新能源
New Energy



2016-2020核心能力建设

2016-2020 Core Capability Building

- **自动化 Automation**
2018年**全面实现压铸制造自动化、机加制造部分产品自动化。**
Realize die-casting manufacturing automation for all products and machining manufacturing automation for some products in 2018.
- **信息化 Informatization**
全方位完成**信息化基础建设和系统集成**，包括MES、ERP、OA、EDI等。
Complete the infrastructure and integration of information systems, including MES, ERP, OA, EDI, etc.
- **人力资源 Human Resource**
加强**技术研发团队建设**，逐步增强团队**国际化能力。**
Strengthen the R&D team. Improve the internationalization competence.
- **投资建厂 Investment**
2018年完成**柳州压铸生产基地建设。**
Finish the construction of Liuzhou die-casting base in 2018.



2018年在美国、德国建立业务

Create business at the US and Germany in 2018

- 市场拓展
- Business development
- 客户服务
- Customer service
- 仓储物流
- Warehouse & Logistics





公司实力 COMPANY STRENGTH

技术实力 Technical Strength

公司具有较强的模具设计、压铸工艺、机加设计（过程）开发能力，在技术来源上得到各主机厂的大力支持。

Strong capabilities of mold design, die-casting process development and machining process development, which is strongly supported by customers.

品质保证 Quality Assurance

公司拥有先进的检测设备，并严格按照质量管理体系和QSB要求，坚持以顾客为关注焦点，加强过程控制，规范公司在产品开发、制造、交付及服务中的管理程序，确保产品品质。

With advanced inspection equipment, comply with the requirements of TS16949 and QSB, focus on clients, strengthen the process control, standardize the procedures and ensure the quality.



信息化 Informatization

- MES（生产过程管理）系统
Manufacturing Execution System
- ERP（企业资源管理）
- OA办公自动化



生产能力 Production Capacity

拥有多台先进的压铸生产设备和多台卧/立式加工中心，拥有多条汽车变速箱壳体生产线和汽车发动机零部件生产线。

Own many die-casting production equipment, multiple CNC, series of auto gearbox housing production lines and auto parts production lines.

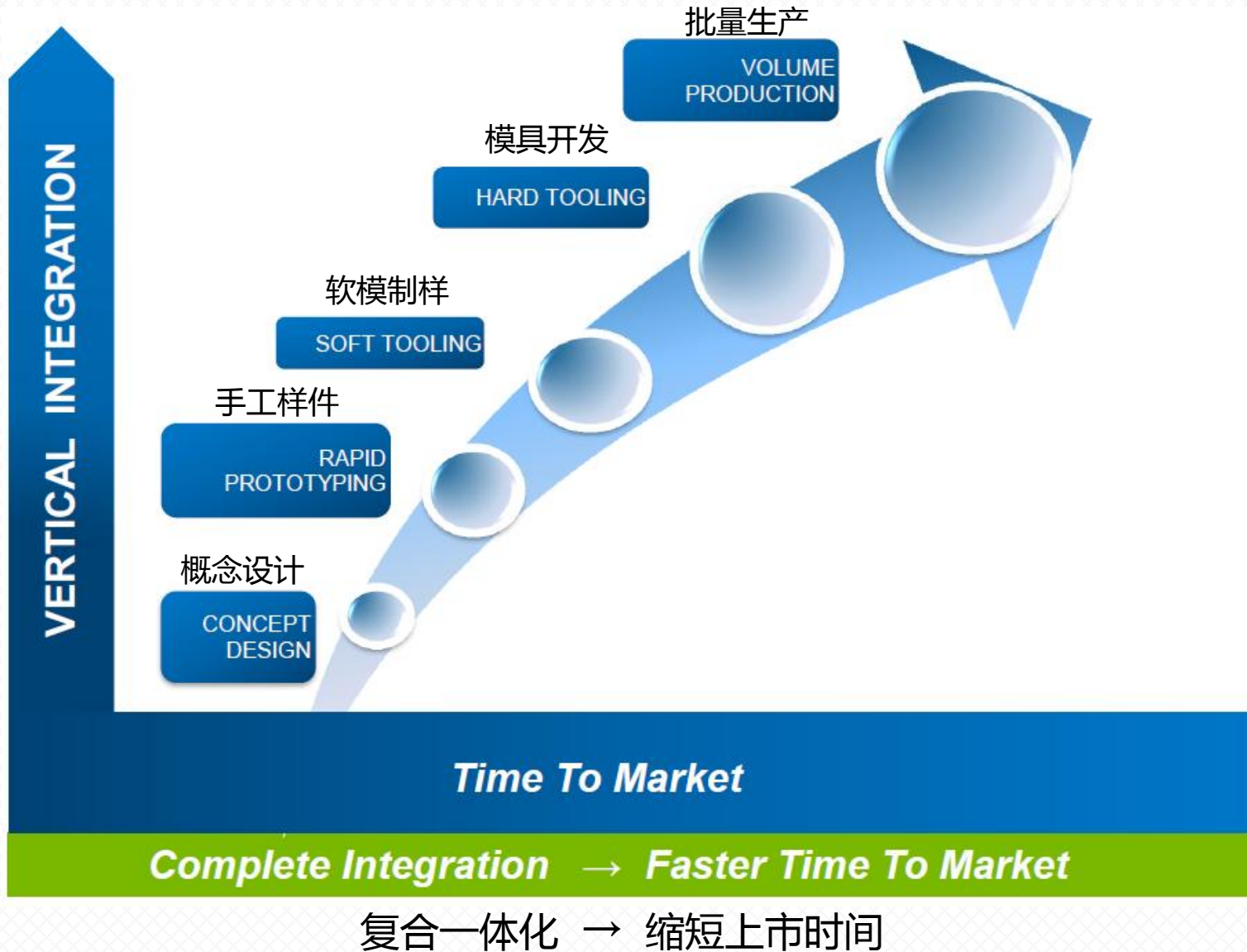




技术实力 TECHNICAL STRENGTH

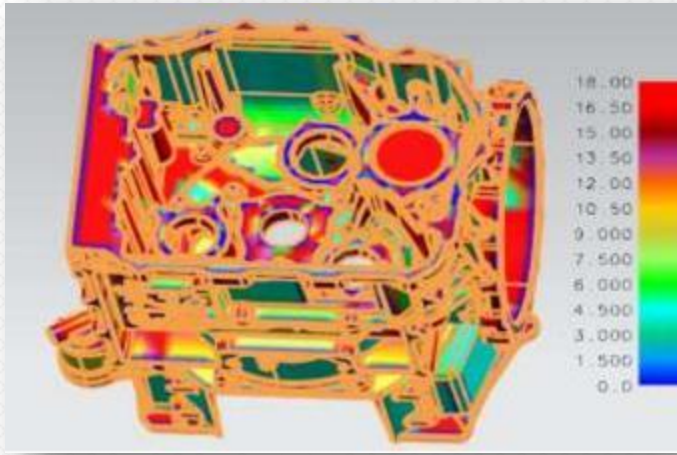


技术实力 TECHNICAL STRENGTH

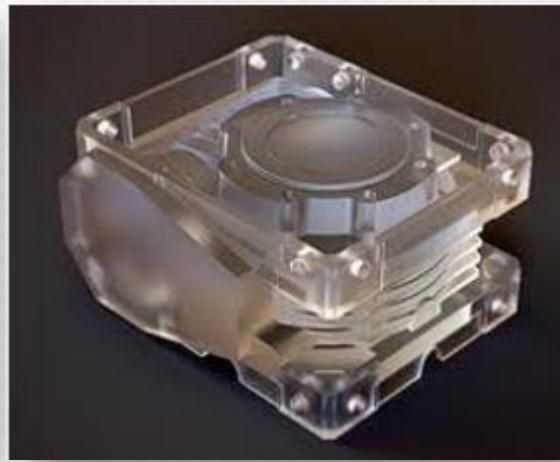


公司建有四川省企业技术中心和实验检测中心，配备有模具设计、压铸技术、机械加工技术、质量先期策划方面专业高级技术人员40余人，实现与客户同步设计、优化和验证设计；新产品开发，严格按照APQP开发流程进行模具开发、压铸工艺设计、机加工工艺设计、工装和量检具设计，实现与用户同步开发。

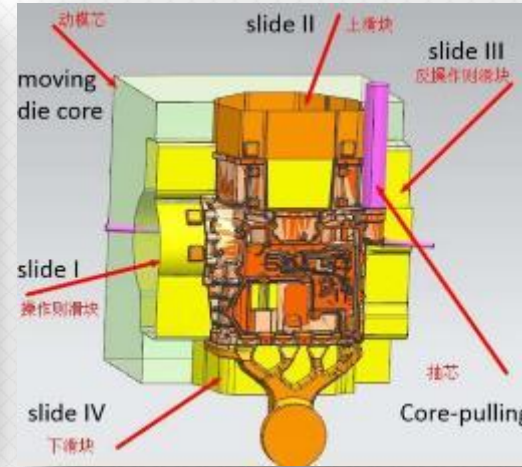
Aoxing owns a Sichuan Provincial Technical Center with over 40 technical professionals as well as a test center. Responsible for mold design, die-casting process design and optimization, machining process design, tooling design, gauge design and new product development according to APQP process. Capable of interactive and value added development with customers.



产品设计 结构优化
Design Optimization



快速样件
Rapid Sample



模具设计
Tooling Design



模具制造
Mold Manufacturing

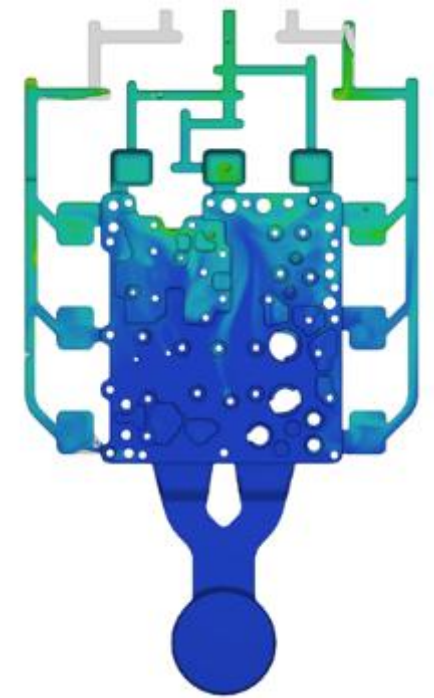
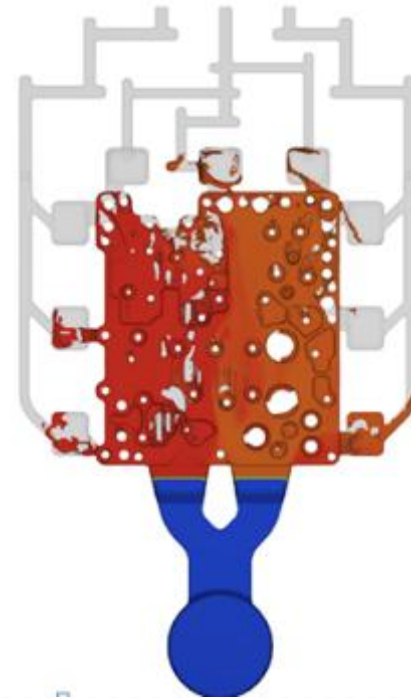
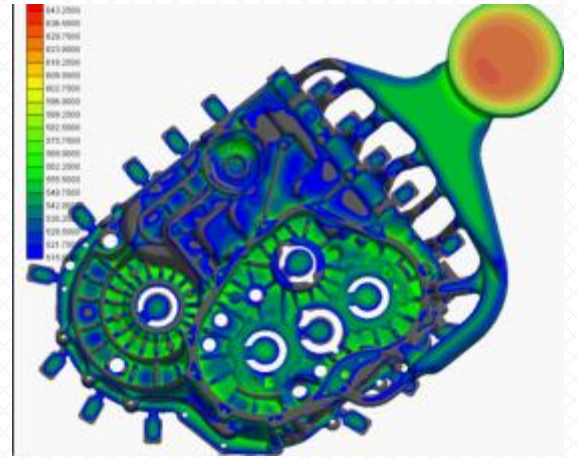
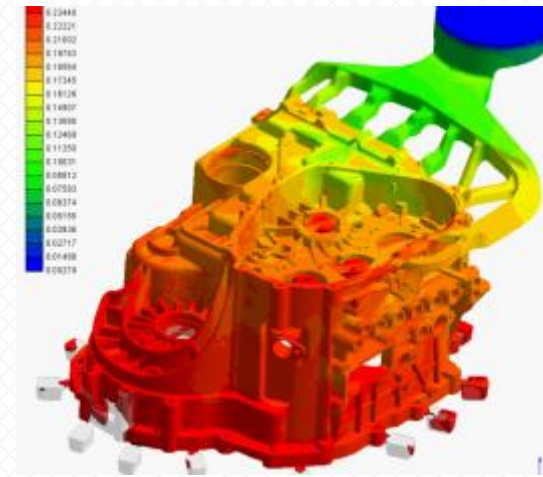
基于动力总成铝压铸行业20余年的专业经验，具备高度专业的同步设计和优化客户设计的能力，不断配备和提升同步验证的保障能力，与客户同步开发，真正达到为客户创造更多价值，而不仅仅是节省成本。

- ☆同步设计，优化客户设计，达到客户生产可行性（SAGW DCT360）；
- ☆同步设计，优化客户设计，达到客户产品盈利性（Hofer Karma）；
- ☆同步设计，优化客户设计，帮助客户提高合格率（BYD 6DT35）。

Based on more than 20 years professional experience in powertrain die-casting, we are highly capable of design with customer together and design optimization, guaranteed with upgraded verification ability, to achieve VALUE ADDED rather than cost saving.

- ◆ 设计开发运用UG、PROE等三维制图软件；模具设计运用MAGMA模流分析软件，对产品压铸成型时铝液的卷气进行模拟分析，同时通过对成型过程中温度场的分析制定相应冷却方案平衡模具温度以便合理制定模具设计方案，有效控制产品成型、气缩孔及其它压铸缺陷。

Product development study with UG, PROE etc software. Mold flow analyze with MAGMA software which can simulate mold flow, cooling and porosity risk status during casting. As well as optimize casting die design with temperature distribution study to confirm cooling optimisation. We can analyse for product outline, porosity and other defect during this analysis.



快速样件 PROTOTYPING TECHNOLOGY



铝坩样件 Block Machining

建立由4台卧式加工中心，2台立式加工中心组成用新品试制生产线，满足顾客各种产品开发需要。

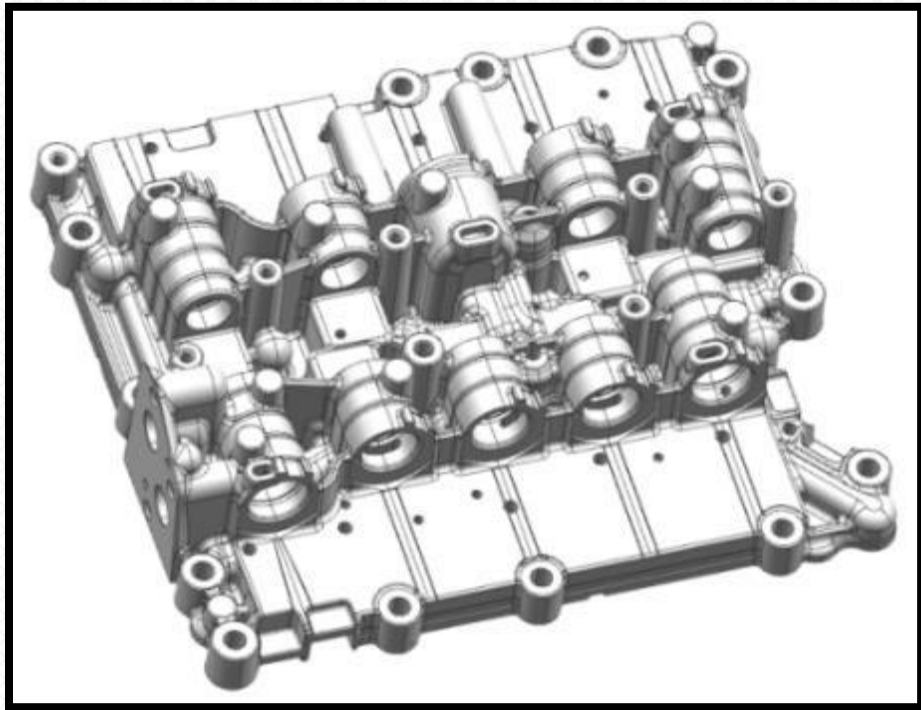
Professional development team, with a dedicated new trial production line consisting of 4 horizontal machining centers and 2 vertical machining centers to meet all the needs of customers.



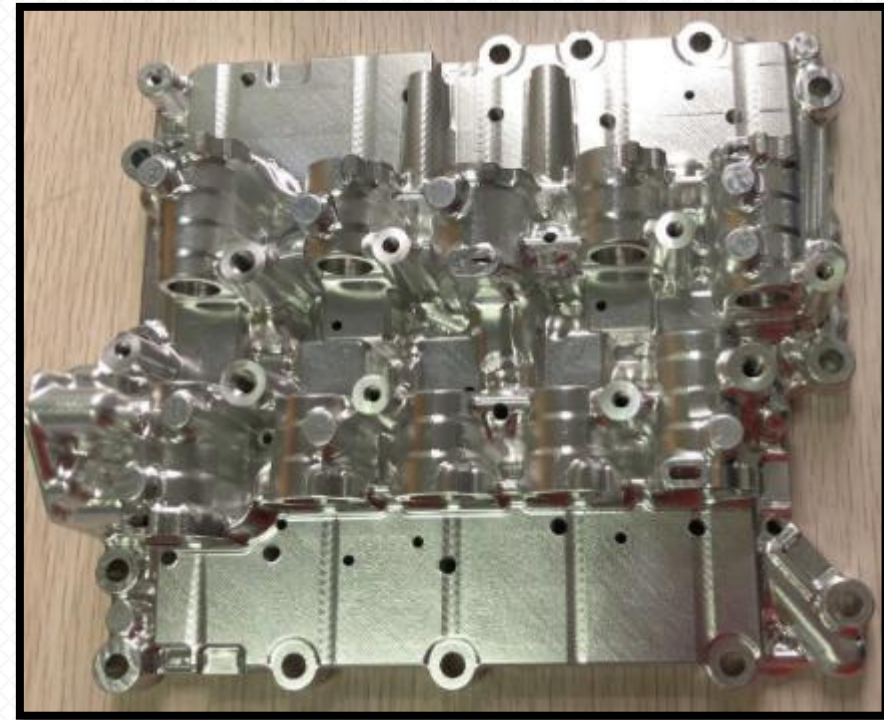
砂铸样件 Sand Casting



快速样件 PROTOTYPING TECHNOLOGY



阀板3D数模 3D model for valve body

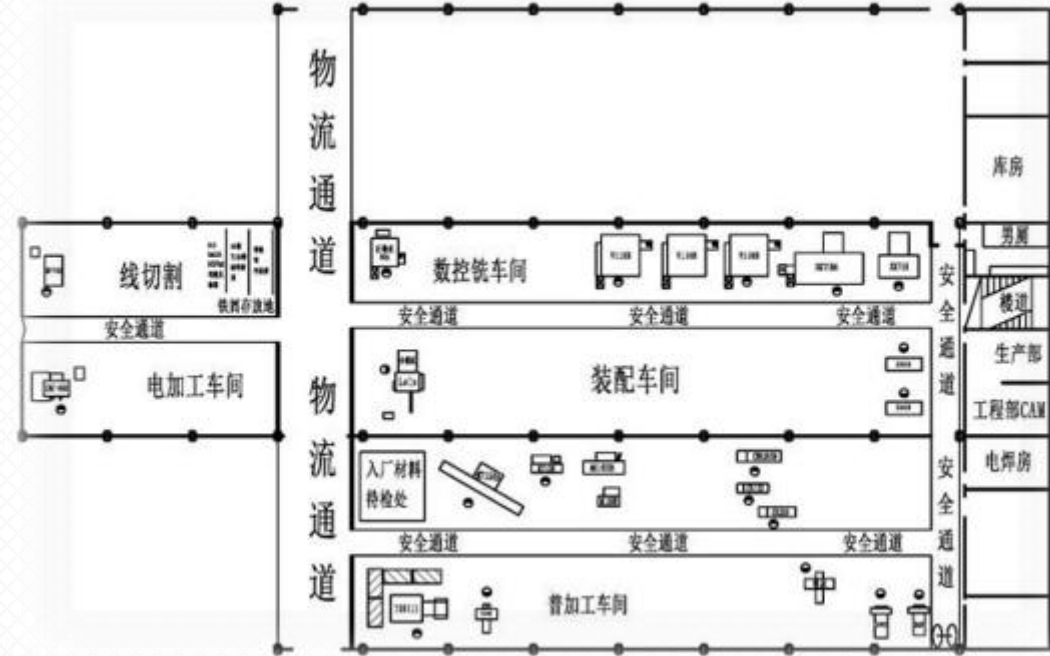


阀板铝坭样件 Prototype sample

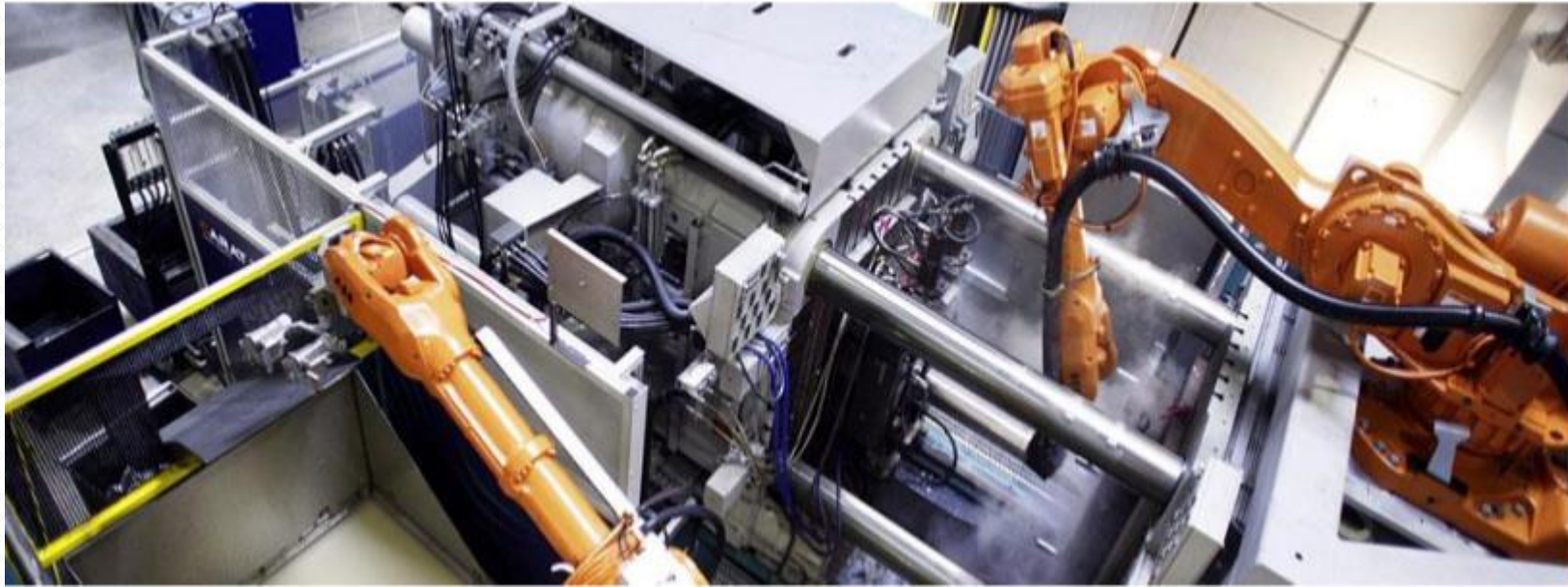
拥有丰富的砂铸和铝坭快速样件经验，在设计验证阶段，快速成型，与客户同步开发，提前验证项目量产设计的制造可行性、优化设计，确保项目量产的平顺化和可行性。

With rich experience of sand casting, block machining and soft tooling rapid samples, which enables us to deliver a full service from design concept to industrialized production.

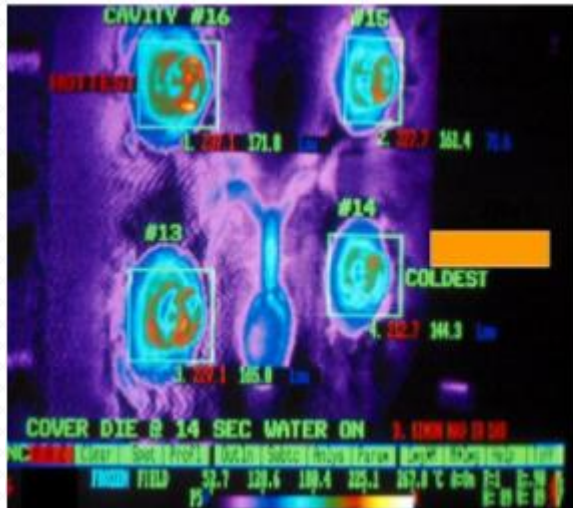
模具能力 TOOLING CAPABILITY



- 模具制造共有38人，其中模具工程师8人。
There are 38 employees for tooling manufacturing, including 8 mold engineers.
- 拥有1250T以下模具的自制能力，年产200套。
Capable of manufacturing molds below 1250T, 200 sets capability per year.
- 计划持续提升模具制造能力，产品覆盖3000T以下模具，人员增加到60人，达到300-400套年产量。
Plan to improve tooling manufacturing capability continuously to produce the tooling up to 3000T. In 2018, it's expected to grow to 60 employee and 300-400 annual output.



- ◇ 真空压铸
Vacuum Casting
- ◇ 局部挤压
Local Squeezing
- ◇ 低速慢射
Low Speed Injection



- ◇ 高压细水点冷
High pressure fine water spot cooling
- ◇ 模温控制
Mold Temperature control
- ◇ 细芯冷却
Jet Cooling



生产能力

PRODUCTION CAPACITY



原材料供应 RAW MATERIAL SUPPLY



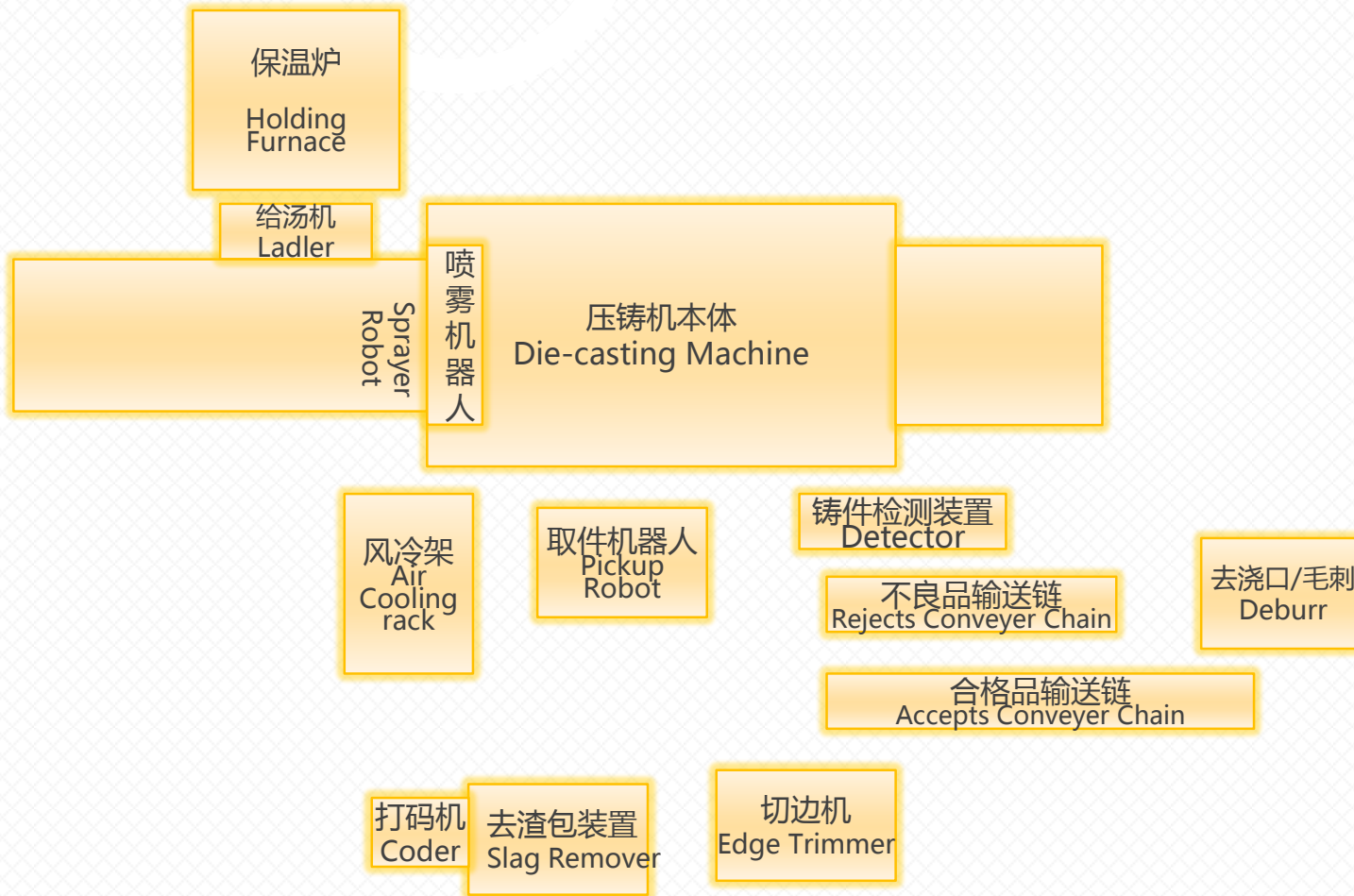
- ◇ 厂中厂铝液直供
Supplier inside our facility
- ◇ 月产能3500吨
Monthly capacity 3500T
- ◇ 铝液密度达到2.65克/cm³ , K值
小于0.1
Density : 2.65 g per cubic
centimeter, K value < 0.1



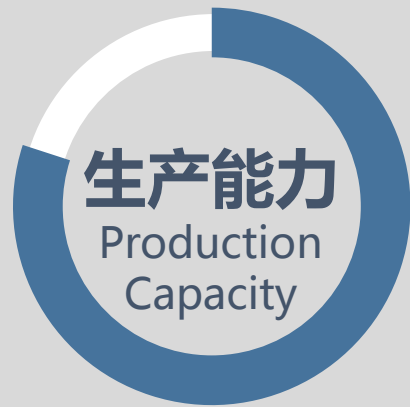
- ◇ 技术和设备领先
Advanced equipment &
automation technology
- ◇ 自动给料系统
Automatic feeding system
- ◇ 原料预热烘干系统
Raw material preheating
system
- ◇ 机械搅拌泵
Mechanical mixing pump
- ◇ 陶瓷过滤 , GBF除气除渣
Ceramic filtration, GBF de
gassing & de slagging

压铸生产单元岛布局图

Die-casting Production cell Layout



- ◇ 全自动单元岛布局，工艺稳定
Full automation production cell which provides stable process
- ◇ 工序间防错防呆
POKA-YOKE in process
- ◇ 模具温度监测及保证
Tooling temp. monitoring and guarantee



国内一流的全自动压铸岛

Domestic First-class Full Automatic Die-casting Unit

国内一流的350T - 3000T全自动压铸单元机41台，压铸机吨位谱系齐全，实时控制高自动化满足了可靠优质高效的生产目标。

41 first-class full automatic die-casting units (350T-3000T) ensure product quality and improve production capacity significantly.



生产能力 PRODUCTION CAPACITY



模温机 Die Heater

使用模温机控制，保证模具的温度具有可控性和稳定性。
The Die Heaters ensure the temperature of die is stable.



脱模剂配比机 Mixing Proportioning for Mold Release Agent

自动脱模剂配比机具有喷涂压力异常报警装置，压力较低时报警停机。
Proportioning has alarm device for abnormal spray pressure and stops when pressure is low.



真空压铸系统 Vacuum Die-casting System

在铝液填充进模具之前，先把型腔内的空气抽出，有效减少铸件内部的气孔问题，提高产品合格率。
Remove the air from the cavity before filling liquid aluminium into the mold, which reduces porosity in castings and improve production pass rate.



合模机

Die mating Machine

机加工能力 MACHINNING CAPABILITY

机加生产线采用U型单元式生产布局，实现加工、高压清洗、检漏、检测等工序一个流。

One piece flow is achieved by U shape unit layout of machining production line which contains CNC, high pressure cleanliness, leak test and inspection.



407 台机加设备，包括德国巨浪、日本牧野、日本马扎克、韩国威亚等高精密度机加设备和全自动机加工生产线。

407 sets of CNC machining centers, includes automatic machining Japanese Makino, Japanese Mazak, German Chiron, Korean Hyundai WIA.



设备清单 Equipment List

生产重要
设备列表

Main
Manufacturing
Equipment List

序号 No.	设备名称 Equipment Name	数量 Qty.
1	350T Die Casting Machines	4
2	400T Die Casting Machines	2
3	500T ~ 630T Die Casting Machines	5
4	800T Die Casting Machines	5
5	1000T~1250T Die Casting Machines	8
6	1600T ~ 1650T Die Casting Machines	6
7	2000T Die Casting Machines	4
8	2500T Die Casting Machines	4
9	3000T Die Casting Machines	4
压铸机总计 Sum of Die Casting Machines		41
10	CNC加工中心 CNC Machines	407
11	辅助设备 Auxiliary equipment	40



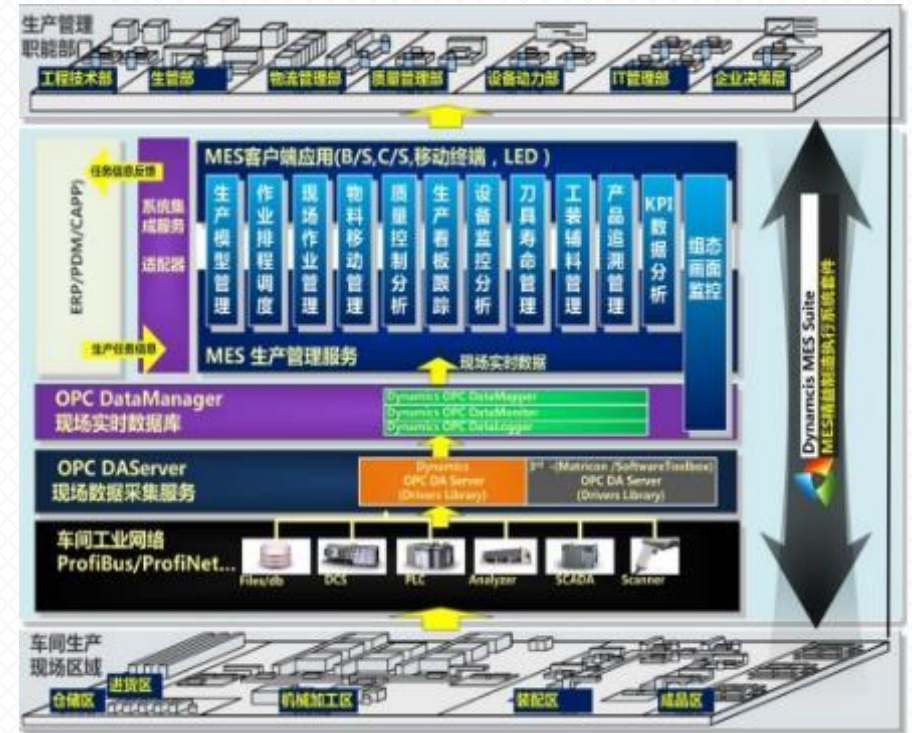
信息化 INFORMATIZATION

MES (生产过程管理) 系统 Manufacturing Execution System

以完全定制化的MES系统（精益制造执行系统）为平台，整合财务、OA、智能化物流、考勤等业务系统，打造“数字化工厂”，对参与生产的人、机、料、法、环进行全面管理，指导和组织工厂的生产活动，实现精益生产，达到减少非增值活动，提高生产效率的目的，同时对质量的事前、事中、事后控制以及质量追溯管理更有助于产品质量的提高和持续改进，最大限度满足客户的需要，预计2018年底实现。

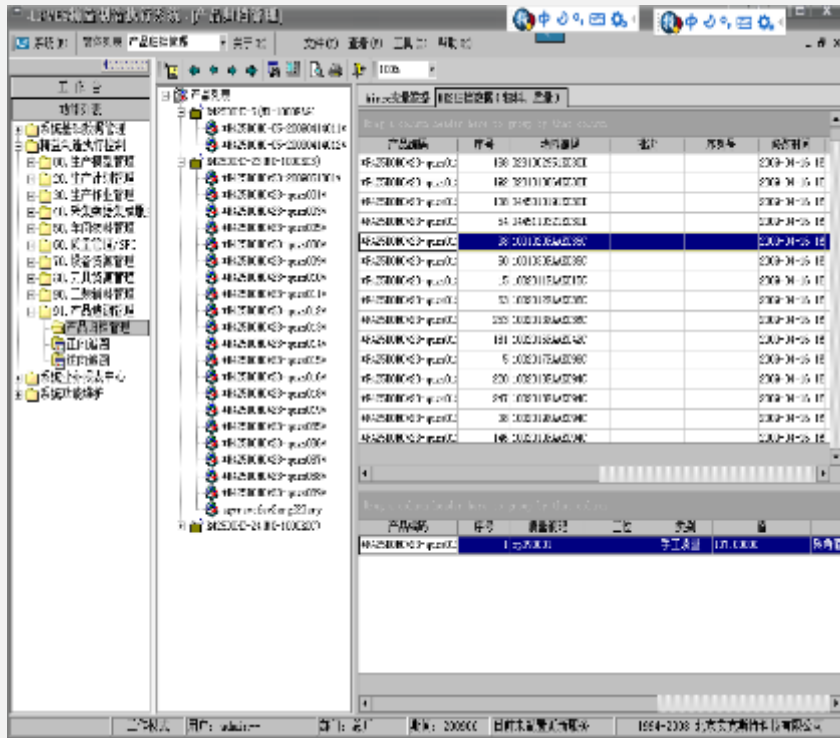
Based on the entirely customized MES (Manufacturing Execution System), integrate systems such as finance, OA, smart logistics, attendance and build "Digital Factory". Manage comprehensively from people, equipment, material, process to environment. Coach and organize production activity. Realize Lean Production. Reduce non-value added activities and improve production efficiency. For the continuous improvement of quality, control the quality in advance, in the course and afterwards as well as quality tracing.

信息化
Informatization



MES功能结构示意图
Function Sketch Map of MES

产品追溯系统 Traceability System



➤产品正向追溯示意：输入产品序列号，可查询在当时生产环境下所有的生产数据。
Forward tracing example: type in product serial number and get all the data when manufacturing.



➤产品逆向追溯示意：根据既定生产环境，查询在该生产条件下的所有产品列表，可作为召回的数据源。
Reverse tracing example: get the list of all the products on the given manufacturing condition for the recall.



品质保证 QUALITY ASSURANCE





公司于2006年7月通过ISO9001：2000质量管理体系认证。2011年正式通过了ISO/TS16949：2009技术规范。公司严格按照TS16949、VDA6.3质量管理体系的要求及顾客特殊要求（长安QIP及上汽通用QSB），坚持以顾客为关注焦点，加强过程控制，规范公司在产品开发、制造、交付及服务中的管理程序，持续改进产品质量及管理体系，实现顾客满意的目标，并保持有效运行。

Aoxing passed ISO9001:2000 QMSC in July 2006 and ISO/TS16949:2009 in 2011.

Aoxing strictly complies with the requirements of quality management system.

Focus on customers, strengthen process control, standardize management procedures of product development / manufacturing / payment / service.

Continuously improve product quality, realize customer satisfaction and keep the system running effectively.

质量体系 Quality System

一、职业健康安全方针、目标 Policy and Target of Safe and Health production

方针：遵章守法，安全生产每一秒；持续改进，健康生活每一天。

Policy: Observe disciplines and law. Produce safely every second. Improve continuously. Live healthily.

- 目标：(1) 公司生产零伤亡 Zero casualty.
Target (2) 职业病发生零例 Zero occupational disease.
(3) 交通事故零发生 Zero traffic accident
(4) 职业安全培训百分百 100% occupational safety training.
(5) 器具合格百分百 100% safety equipment qualified.

二、环境方针、目标 Policy and Target of Environment

方针：遵章守法，清洁文明搞卫生，节能降耗减废，持续建设绿色工程。

Policy: Observe disciplines and law. Clean. Save energy. Reduce cost. Become green.

- 目标：(1) 提高环保意识，控制噪声排放，使之符合国家行业标准要求 Promote awareness. Control noise.
Target (2) 节能降耗，原料消耗不超过设计标准 Save energy. Reduce cost. Below design standards.
(3) 美化环境，减少植被破坏 Beautify the environment. Minimize the vegetation destruction.
(4) 火灾事故零发生 Zero fire accident.
(5) 工业垃圾进行分类回收 Recycle industrial waste.
(6) 不发生污染事故 No contamination accident.

预计2018年12月30日前通过ISO14001与OHSAS18001认证，目前已建立相关环境、安全、健康体系，正等待环境及安全的评定审核。

Expected to achieve ISO14001 & OHSAS18001 certification in Dec,2018. At present, the system of environment/safe/healthy has been built and waiting for the related audit.

品质保证能力 QUALITY ASSURANCE



压铸探伤实验室Casting X-ray lab



三坐标检测中心3D measurement lab

贯彻和执行汽车行业5S和精益化生产的精髓与准则，实现质量管控体系和工厂布局走在行业最前沿，压铸和机加实现过程检验和工序间防错防呆，确保一次性合格率。

清晰的物料流（蓝色代表待检，绿色代表合格，红色代表不合格）保证强有力的生产全过程的质量检测。

2018年计划更多的X-Ray探伤机和高精度的三坐标检测中心，计划第3-4季度到位。

Utilising automotive 5S & lean principles, quality is at the forefront of both the systems and factory layout, in process checks & Poka-yokes in both casting and machining centers, ensure right first time quality. Clear material flow (pending – blue, passed – green, failed – red) ensures robust quality inspection adherence throughout manufacture. In addition to the equipment inhouse, investment in 2018 for additional x-ray & high precision CMM have been made and will be in place by Q3-Q4.

原材料检测 Raw Material Inspection

硬度计

Hardness Tester

用途：产品表面
硬度检测

Function:
Hardness Test



拉力试验机

Tensile Tester

用途：试棒力学
性能检测

Function: Tensile
Test

铝液测氢仪

Hydrogen Analyzer

用途：现场铝液氢
含量测定

Function:
Hydrogen Check of
Aluminum Liquid
on Site



光谱分析仪

Spectrum Analyzer

用途：原材料成
分分析

Function: Raw
Material Analysis

产品检测 Products inspection

金相显微镜

Microscope

用途：分析金属
内部结构组织

Function:
Metallographic
Structure Inspection



X光探伤仪

X-ray

用途：产品内部
结构探伤

Function: product
porosity detection



气动量仪

Pneumatic Meter

用途：现场产品
尺寸测定

Function:
Dimensional Check
on Site



德国蔡司三坐标

CMM Germany ZEISS

用途：产品坐标尺
寸检测

Function: Dimension
Measurement



产品检测 Products inspection

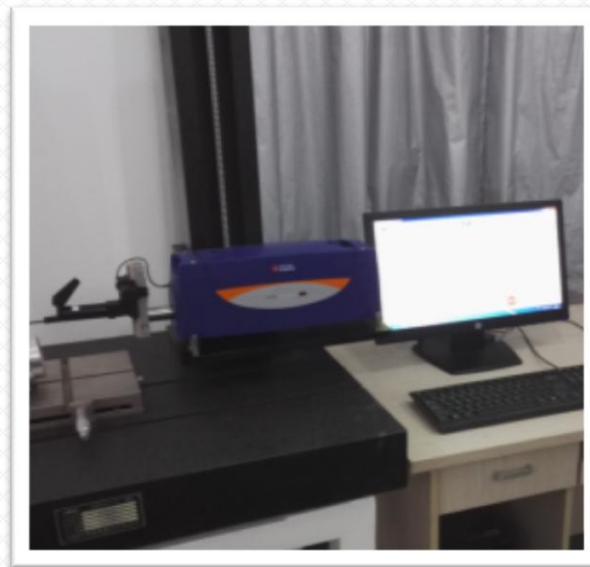


海克斯康关节臂扫描仪

Hexagon arm CMM

用途：产品三维尺寸检测

Function : 3D Dimensional Measurement



英国泰勒轮廓粗糙度仪

UK Taylor Profile Roughness Meter

用途：产品外轮廓检测

Function : Profile and Roughness Measurement



武汉高德热成像仪

WUHAI Gaud Thermal imager

用途：模具温度检测

Function : Mold Temperature detection Measurement



业务情况

BUSINESS OVERVIEW

主要产品
Main
Products

Compressor Bracket
压缩机支架



Engine Parts
发动机零部件

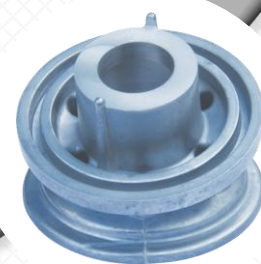


Camshaft Cover
凸轮轴盖

ETB housing assy
电子式节气门体总成



Crankshaft Rear Cover
曲轴后端盖



Oil Filter Base
机滤安装座

主要产品
Main
Products



DCT变速器壳体
DCT Gearbox Housing



GP50变速器后壳体
GP50 Gearbox Rear Housing

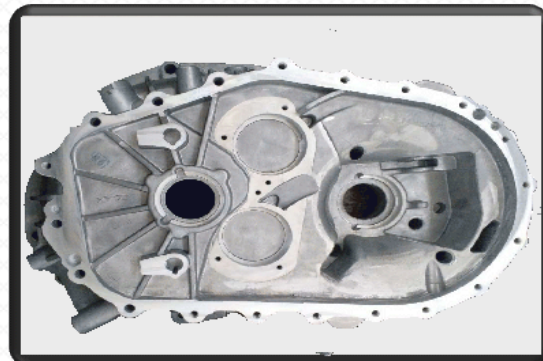


SH12M5后壳体
SH12M5 Rear Housing

Gearbox Parts 变速器零部件



DCT阀板
DCT Valve Plate



626左箱
626 Left Housing



SH15M5后壳体
SH15M5 Rear Housing

主要客户
Main
Customers

Continental 

MAHLE

CCMG
— 中国长安 —


上汽通用汽车
SAIC-GM


上汽通用五菱
SGMW

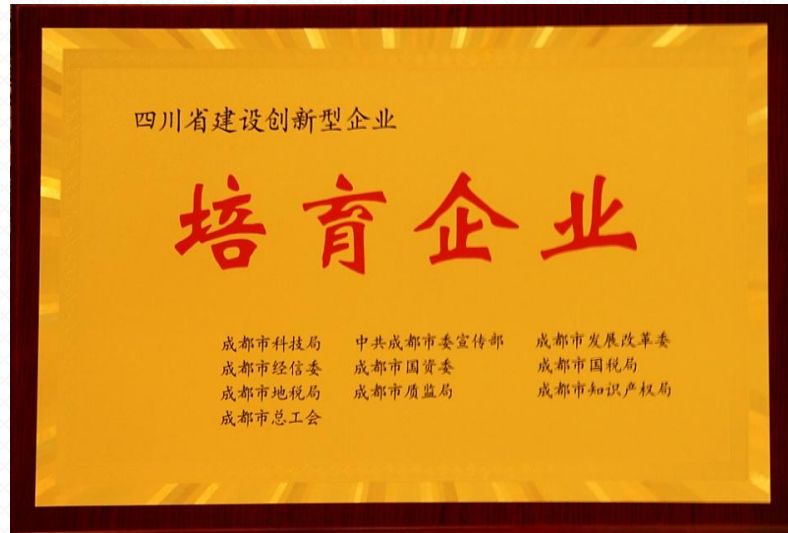

长城汽车
专注 专业 专家

SAGW



TSINGSHAN

资质荣誉
Qualificati
on
& Honors



THANKS

成都兴光工业科技有限公司