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seit 1974

CHUNJI CORPORATION

Der Name *Chunji* ist angelehnt an einen Kratersee
des *Baek-Du*, dem höchsten Berg in Korea

Geschichte

1970
-
1980

Okt. 1974	Gründung der Feingießerei
Mai. 1978	Zulassung zum Lieferant für militärische Komponente
Jul. 1988	Anerkennung als Werk mit erstklassigem Qualitätssystem

1990

Mär. 1991	Erwerbung von AD 2000 durch TÜV
Nov. 1992	Eröffnung des F&E Center
Mär. 1993	Zulassung zum Lieferant durch Korean Nuclear Power Company
Jul. 1999	Erwerbung von ISO 9002 durch TÜV

2000

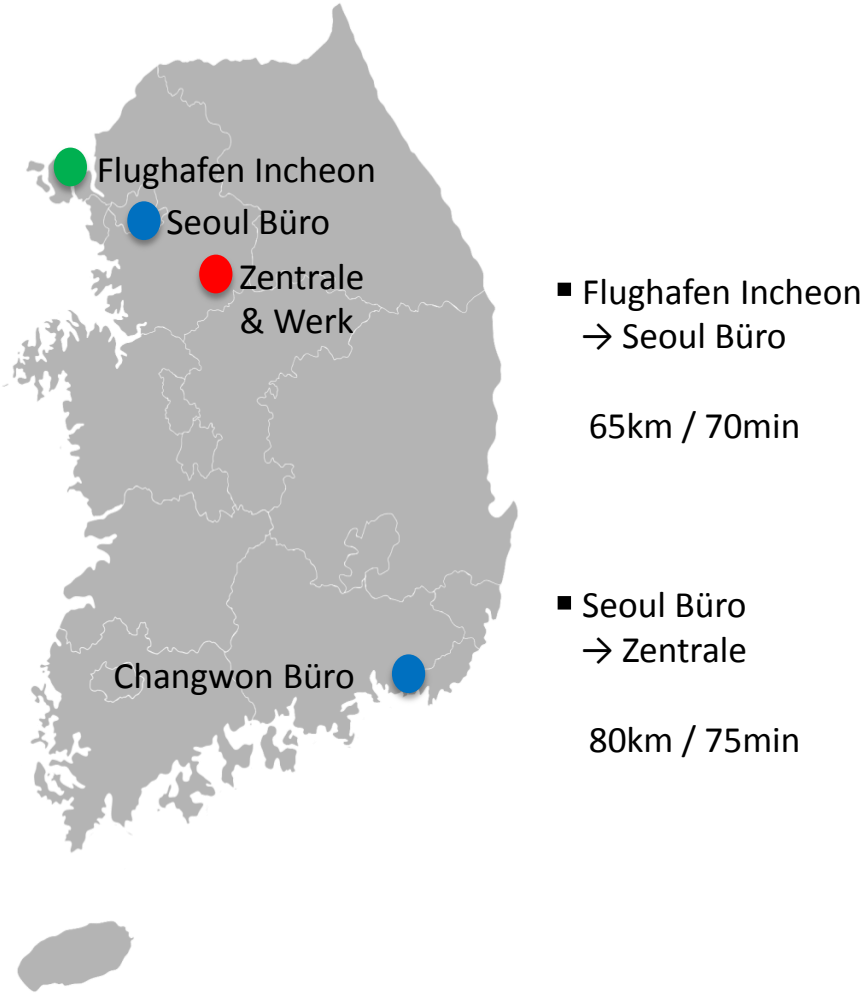
Nov. 2000	Erwerbung von Boeing DI 9000
Jun. 2001	Zulassung zum Lieferant durch Korean Aerospace Institute
Nov. 2003	Erwerbung von AS 9100 / ISO 9001
Jun. 2007	Verlagerung der Zentrale und Werk (Seoul → Yeosu)

2010

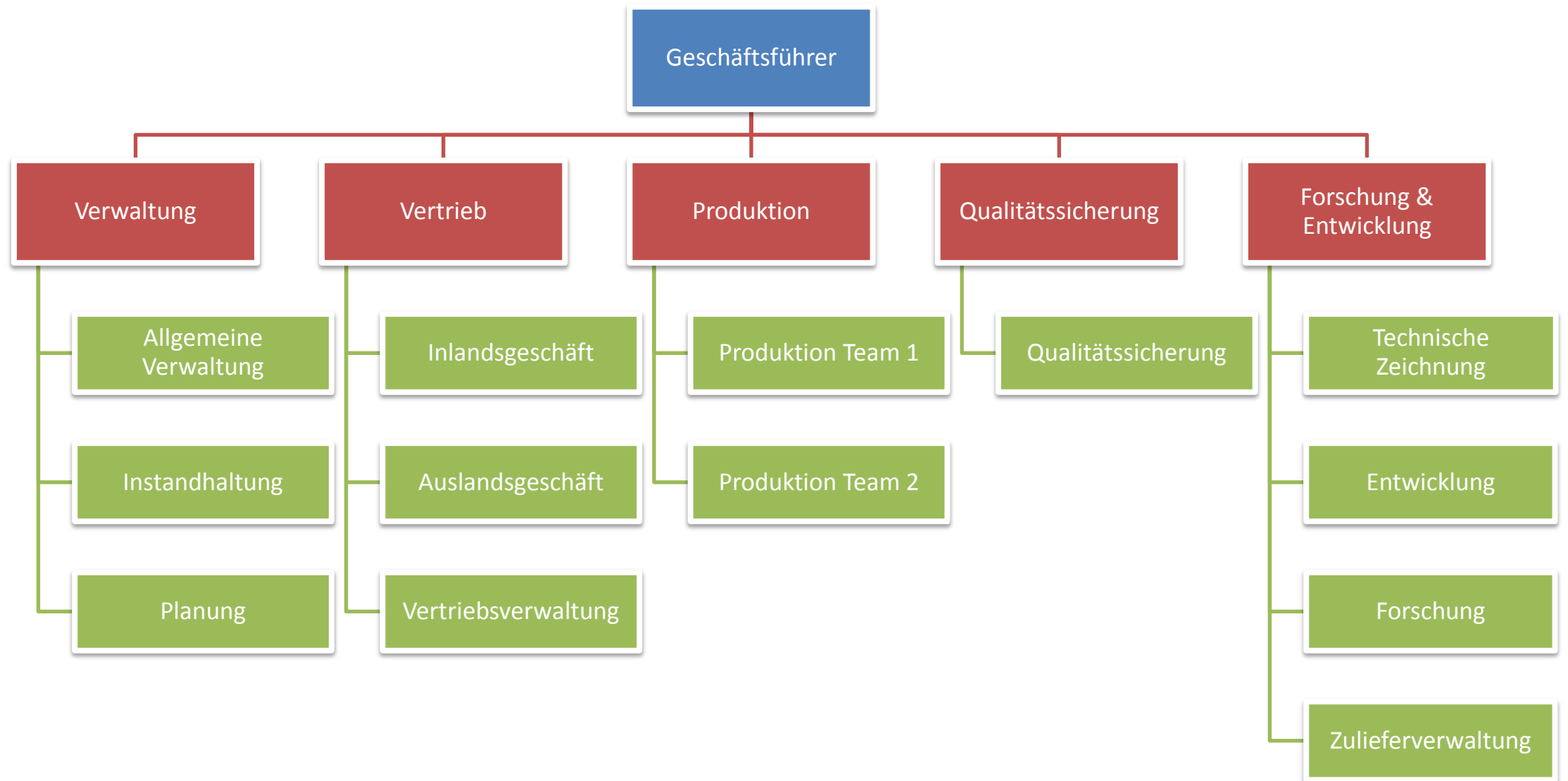
Okt. 2011	Erwerbung von 7 Vessel Class Certificate
Jul. 2012	Erwerbung von TS 16949 / ISO 14001
Apr. 2013	Erwerbung von SQ (Supplier Quality) durch Hyundai-Kia Motors
Sep. 2017	Investition in den zweiten Vakuumfeinguss

Mitarbeiter & Standorte

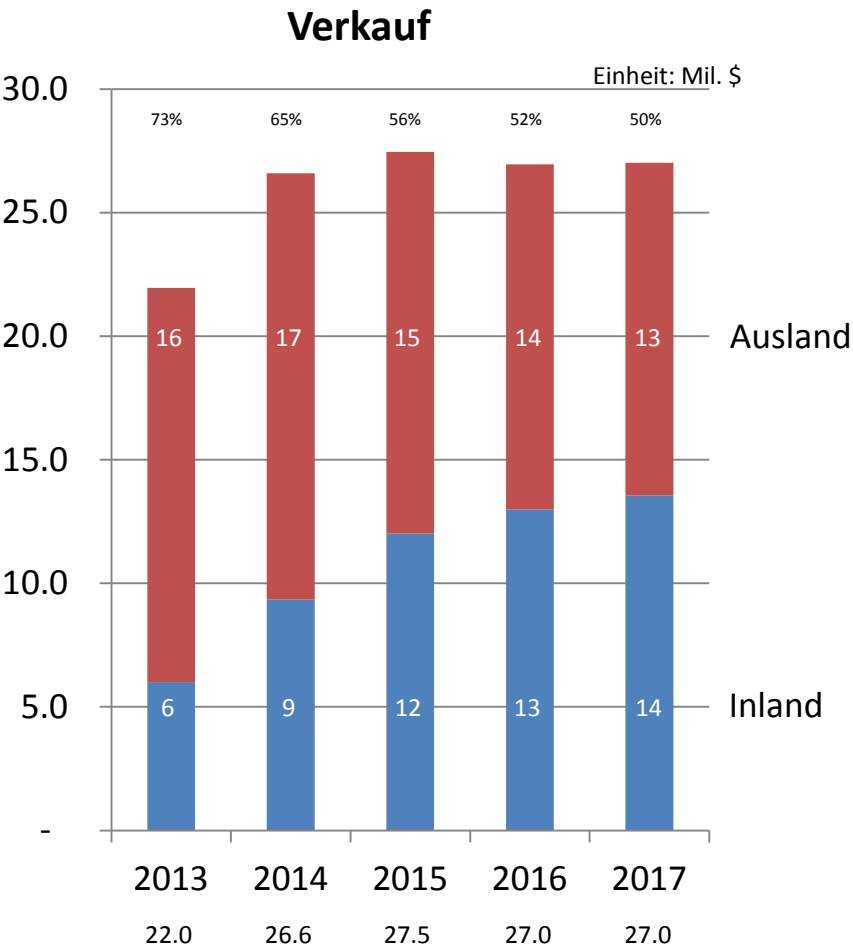
MITARBEITER	white	blue	GESAMT
Verwaltung	12	-	12
Vertrieb	13	-	13
Produktion	15	110	125
Qualitätssicherung	7	10	17
F & E	10	5	15
GESAMT	57	125	182



Organigramm



Verkauf & Produktionskapazität

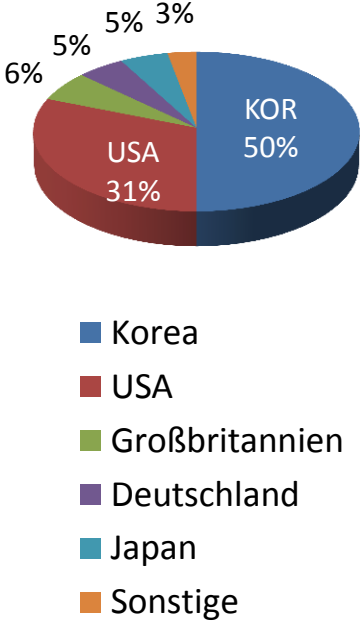


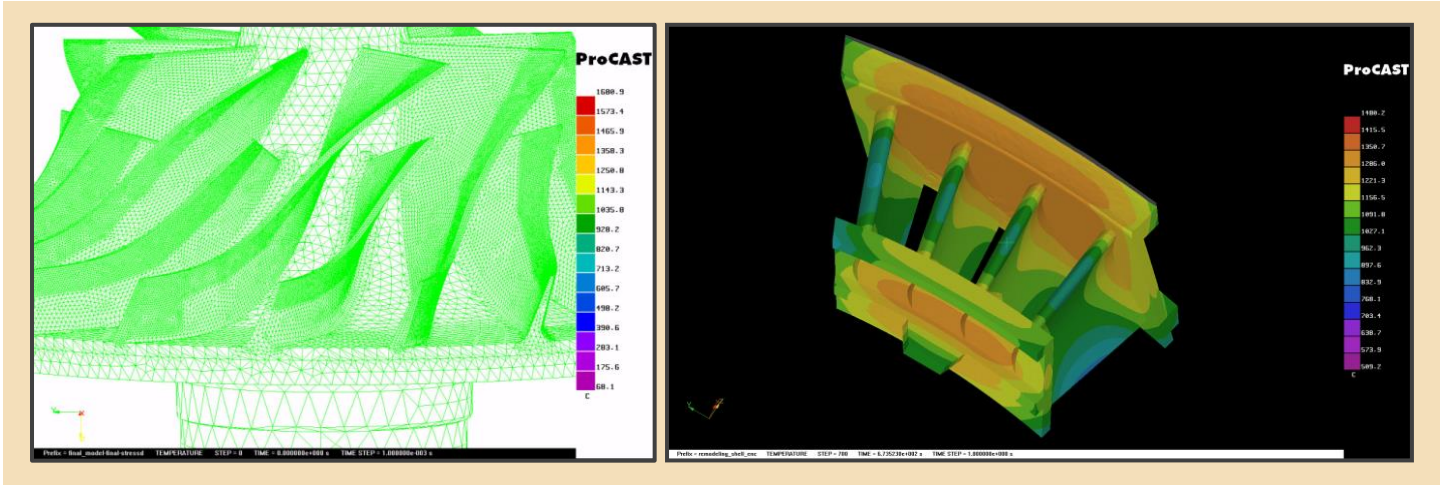
Kapazität	Feinguss: 13.500 molds/Monat (ca.120t) Tooling: 50 EA/Monat
Fertigungszeit für Tooling und erstes Muster	Gussteile: 45 Tage / Gussteile + Bearbeitung: 60 Tage
Fertigungszeit für Massenproduktion	Gussteile: 30 Tage / Gussteile + Bearbeitung: 40 Tage

Garantie und Verantwortung: gemäß Vereinbarung

Richtlinie für fehlerhafte Proukte: Kostenlose Ersatzlieferung

Hauptabnehmer



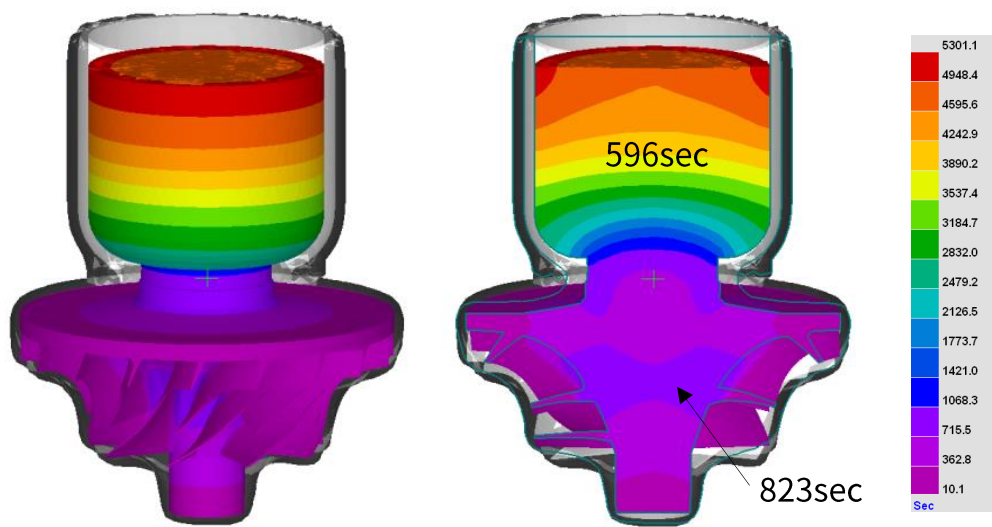


Programm

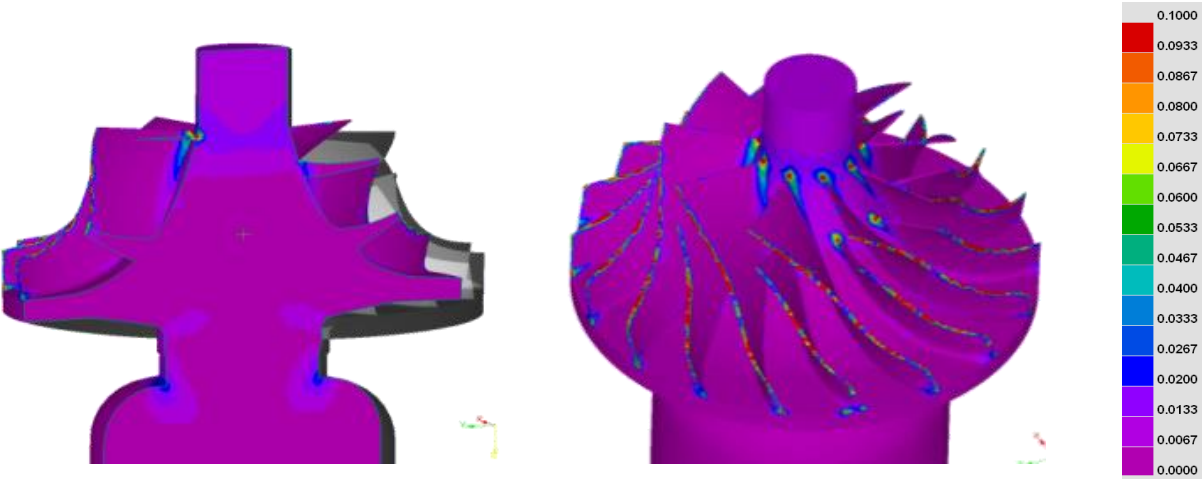
Model

CAD	AUTO CAD 2012 (2D)
CAM	TOP SOLID CAM Ver.10.0
UG	NX 8 (3D)
Simulation	PROCAST

Flügeldeformation



Effektive plastische Verformung



Verfügbare Materialien



Aluminiumlegierungen (356, A356, A357 A201, etc.)

Edelstahl, ausscheidungsgehärtet (15-5PH, 17-4PH)

Austenitstahl (304, 305, 306, 316)

Martensitstahl

Duplex- und Super-Duplex-Stahl

Nickel- & Cobaltlegierungen (air melt)

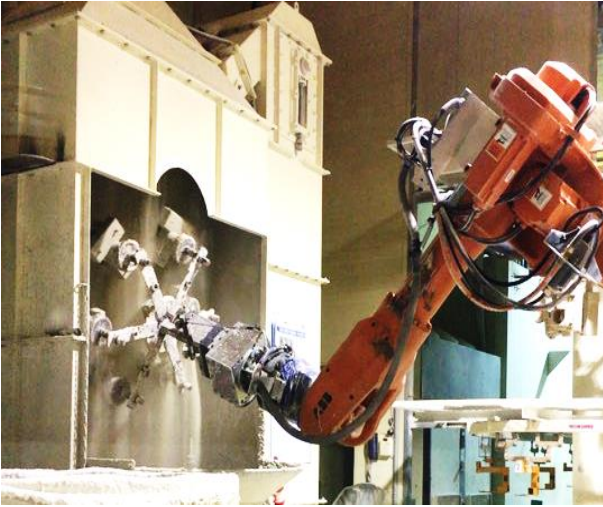
Nickel- & Cobaltsuperlegierungen (für Vakuumlegierungen)

Hitzebeständige Legierungen

Kohlenstoffstahl & niedrig legierter Stahl

Gussstahl

Fertigungsstätte



Bearbeitungszentrum, CNC-Drehmaschine

Wachsspritzautomat

Robotik für Beschichtungssysteme

Stückierungsanlage

Wachswiedergewinnungsanlage

Autoklav

Hochfrequenzinduktionsschmelzofen

Automatische Gießeinrichtung

Vakuumgießanlage für Aluminiumfeinguss

(GBF : Gas Bubbling Furnace)

Vakuuminduktionsschmelzverfahren für Superlegierungen

Wasserstrahlanlage

FAM Schleifmaschine

Hydraulikpresse



Vakuuminduktionsschmelze (VIM)



Zusammenfassung

CONSARC in USA

Guss system	2-Kammer(2-zonen)system (Schmelz- und Formkammer)
Stromnetz	225 kW, 3000Hz'
Primärspannung	460 V / 3 Phasen / 60Hz
Max. Temp.	1,650°C
Vakuumpumpenleistung	1200m³/h (Gebläse), 250m³/h (Kreiselpumpe) – Schmelzkammer 4,200m³/h (Gebläse), 500m³/h (Kreiselpumpe) – Formkammer
Fassungsvermögen	75kg
Formgröße	1) Querschnitt: 600mm, 2) Höhe: 700mm
Endvakuum (Schmelzkammer)	$4.5 \times 10^{-5} \sim 10^{-6}$ torr (Diffusionspumpe)
Production Produktionskapazität	7.5 t/Monat, 400 Formen/Monat



Prüf- und Testanlagen



Emissionsspektrometer

Koordinatenmessgerät (3 Anlagen)

Profilprojektor

Metallurgisches Mikroskop

Härtemessgerät - Brinell, Rockwell

Universalprüfmaschine

Durchstrahlprüfanlage

Anlage zur fluoreszierenden Eindringprüfung (FPI Equipment)

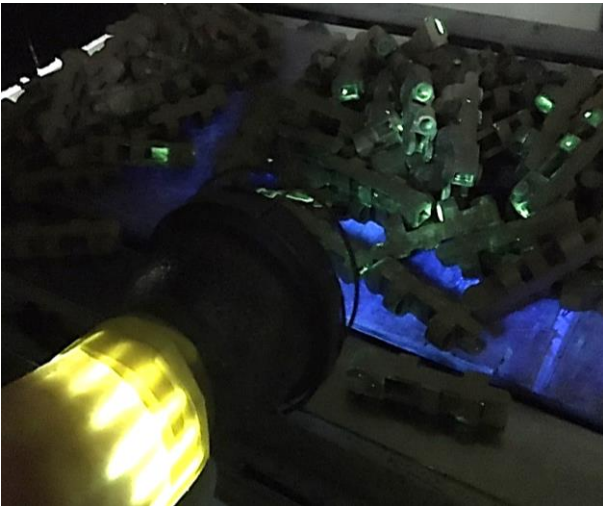
Magnetpulverprüfgerät

Charpy Impact Tester

High Temperature Tensile Tester

Ultrasonic Tester

Fatigue Tester (Creep, Stress Rupture)



Zertifikate

ISO 9001 & AS 9100



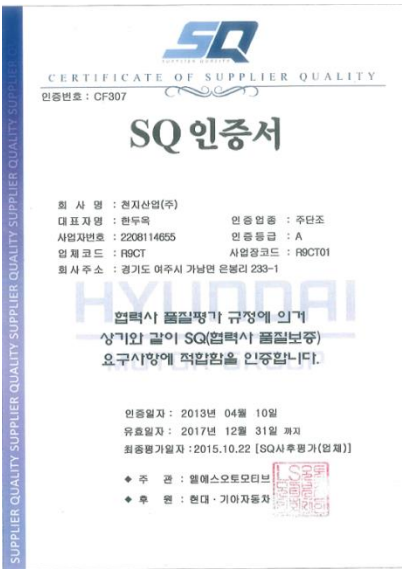
AD 2000



TS 16949



SQ (Hyundai Kia Motors)



ISO 14001



Product information & Supply field



Industrial plant

- Flange, Housing
- Cage, Vee ball, Bracket, Body
- Impeller

Automotive parts

- Turbo charger
- Exhaust Gas Recirculation
- Gasoline Direct Injection

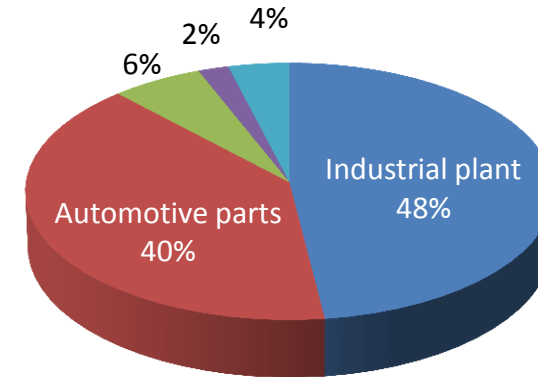
Defense

- Air missile
- Submarine missile

Aerospace

- Combat plane
- Launch vehicle

Nuclear power plant



- Industrial plant
- Automotive parts
- Defense
- Nuclear power plant
- Other



Transmitter Parts

- Flange, Adapter, Amp Dai



AI Parts

- GPTTS Housing

- Housing Electro Optical System

Industrial plant 2/3 (Cage, Vee ball, Bracket, Body)

1" to 8" Cages



Material CB7Cu-1, CF3M, CF8M
Duplex(4A)
Super Duplex(6A)
Stellite 6(R30006)
WC9

1" to 12" Vee Balls



Material CG8M, CF3M, CF8M
Stellite 6(R30006)
CW2M(Hastelloy)

1" to 8" Attenuator



Material CG8M, CF8M
CK3MCuN

Module Base, Housing,
Terminal Box, Cover, Bracket



Material CF8M

1" to 2" Body



Material CF3M

0.5" to 4" Body



Material CF3, CF8, CF3M, CF8M
WCB
M35-1 (Monel)
CD3MCu

1" to 2" Bonnet

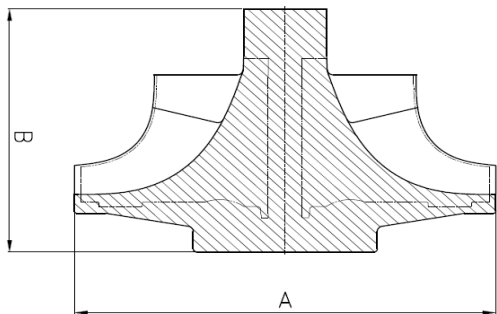
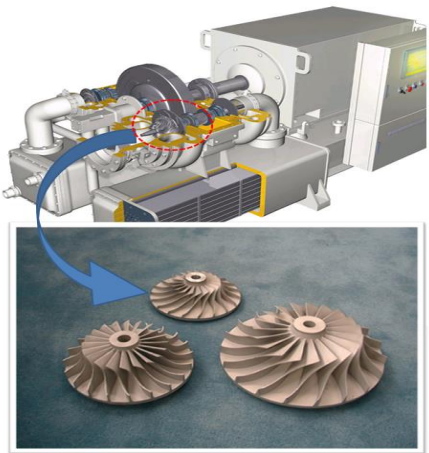
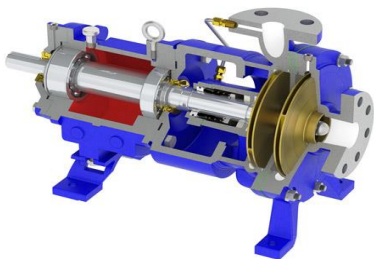
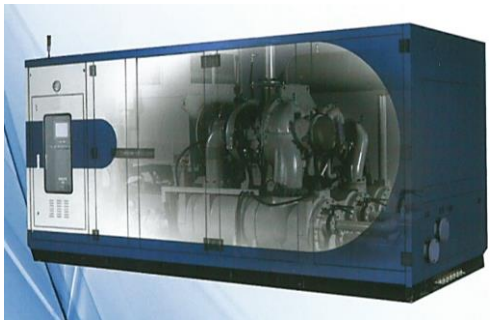


Material CF8M

1" to 8" Seat Ring



Material Stellite 6 (R30006)
CF8M, CA15



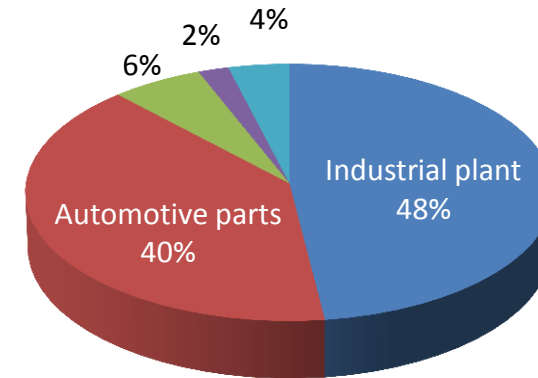
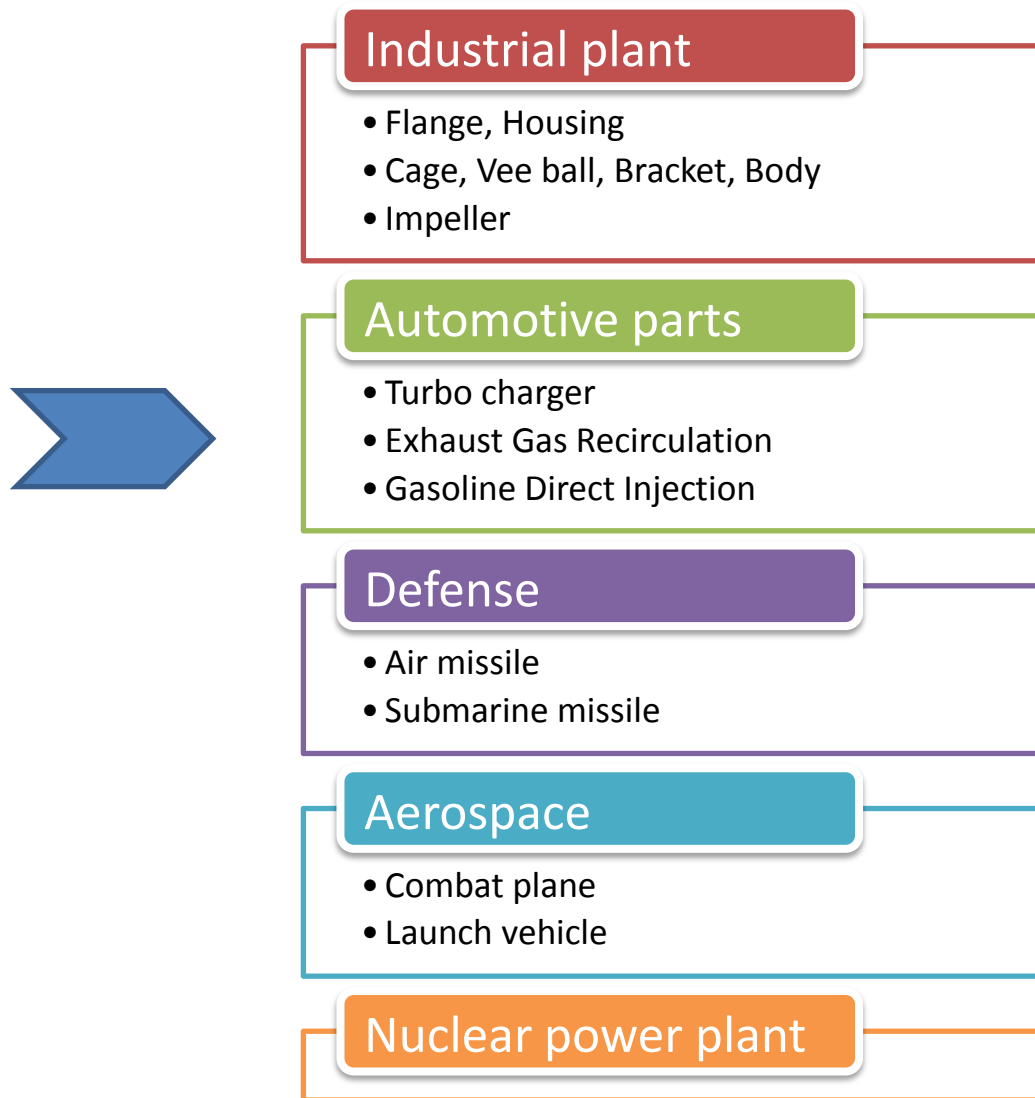
Impeller for Pump

Unit : mm	Dim.A	Dim. B	Dim. C	Dim. D	Weight
	Φ150	max 450	7 - 10	over 5	max 80kg
	Φ151 - 200			over 7	
	Φ201 - 300			over 9	
	Φ301 - 400	max 250	10 - 20	over 12	
	Φ401 - 500			over 15	
	Φ501 - 800			over 20	

Impeller for Turbo compressor

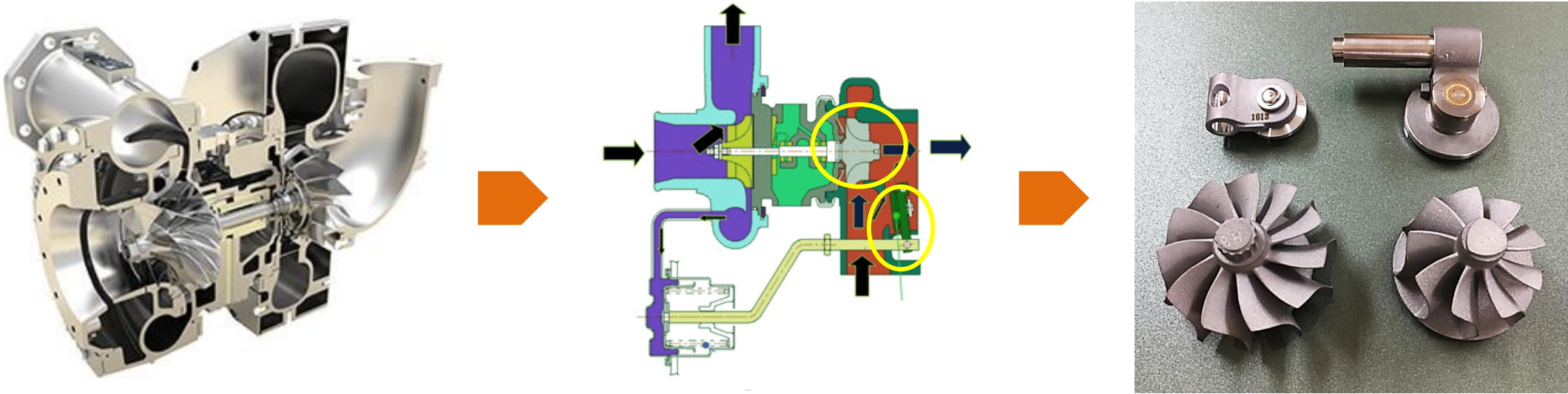
Unit : mm	Dim. A	Dim. B	Weight
Maximum allowance	max Φ600	max 350	max 80kg

Product information & Supply field



- Industrial plant
- Automotive parts
- Defense
- Nuclear power plant
- Other

Turbine wheel and Waste gate valve assembly for Turbo charger



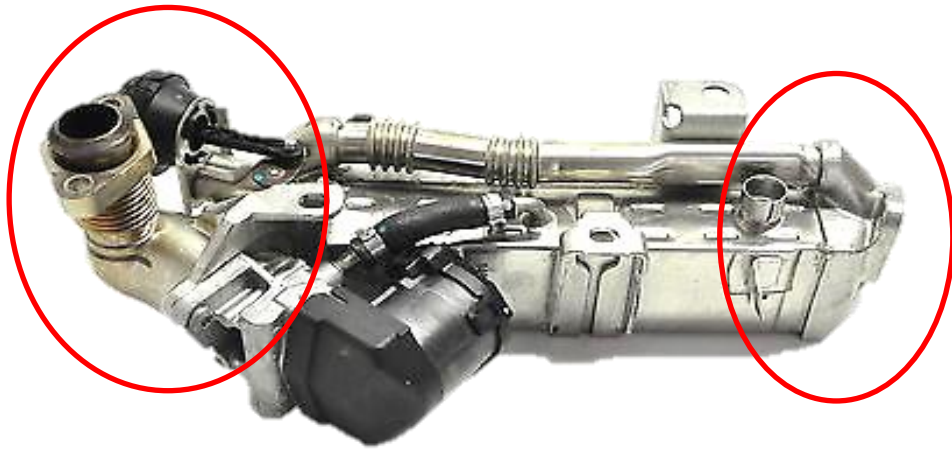
OEM : Hyundai Motors, Kia Motors, Honda, Mc Laren

Material : Inconel 713C, HK30, DIN 1.4957 etc.

Annual quantity : 200,000 - 400,000 pcs

SOP date: Jun. 2016

By-pass block and Flange outlet for EGR valve (EGR: Exhaust Gas Recirculation)



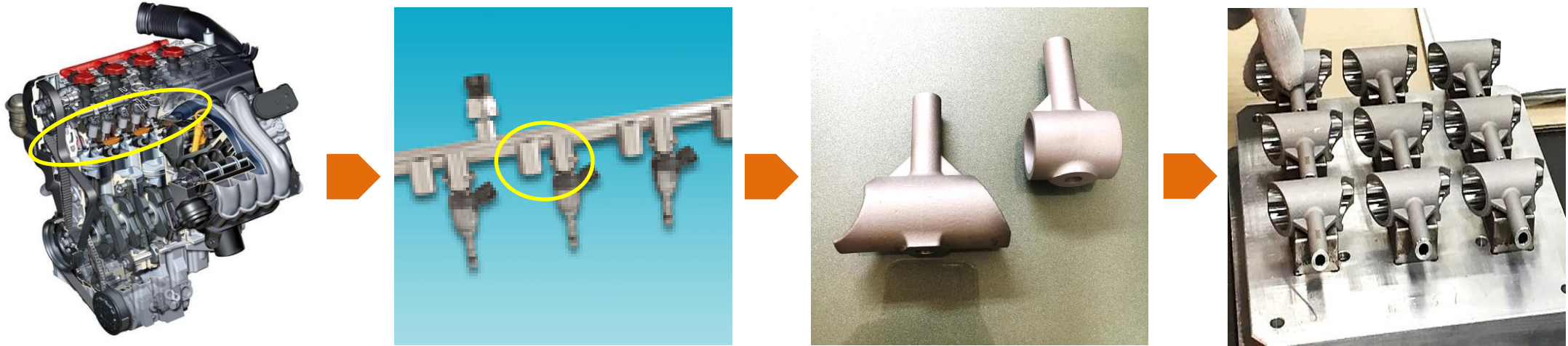
OEM : BMW

Material : CF8

Annual quantity : 150,000 - 250,000 pcs

SOP date: Jan. 2014

Casting Bracket for GDI rail (GDI: Gasoline Direct Injection)



OEM : Volkswagen, Audi, Porsche

Material : CF8

Annual quantity : 680,000 - 960,000 pcs

SOP date: Jun. 2014

Product information & Supply field

Industrial plant

- Flange, Housing
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Automotive parts

- Turbo charger
- Exhaust Gas Recirculation
- Gasoline Direct Injection

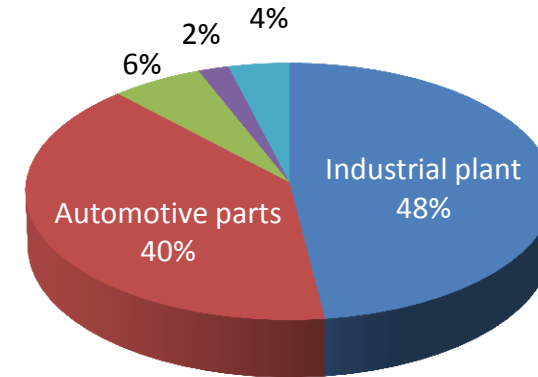
Defense

- Air missile
- Submarine missile

Aerospace

- Combat plane
- Launch vehicle

Nuclear power plant



■ Industrial plant

■ Automotive parts

■ Defense

■ Nuclear power plant

■ Other



Airborne EW System(ALQ 200)

Externally mounted airborne self-protection jammer jams RF of hostile anti-aircraft guns and missiles, increasing the probability of aircraft survival.
*The National Defense R&D Award (Sep. 2005)



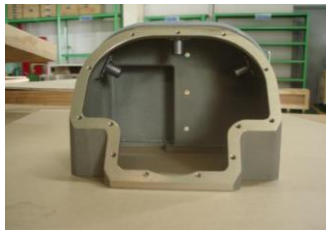
Short Range Surface-to-Air Missile(Pegasus)

Protects mobile forces and major facilities from hostile aerial attacks.
*Recipient of the Defense Science R&D Award (Dec. 1999)



Connection ring

Weight 1,500 g
Size 196 x 155 x 69
Material A357-T6



Receiving antenna housing (Front/Rear)

Weight 734 g
Size 160 x 121 x 133
Material A356-T6



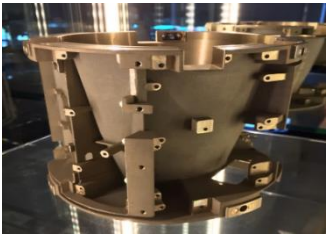
Adapter (Front/Rear)

Weight 4,140 g
Size 328 x 254 x 125
Material A356-T6



Body

Weight 654g
Size Ø157 x 125
Material A357-T6





Korean Anti Submarine Missile(Red Shark)

Vertical launched lightweight torpedo mounted on surface ships to strike hostile submarines from a remote distance outside the radius of action.



Heavyweight Torpedo (White Shark)

Heavyweight torpedo deployed from submarines to strike hostile surface ships and submarines.

• Won Defense Science R&D Award(Dec. 1999)



Duct

Weight 5,080 g
Size Ø259.5 x 196.7
Material ASTM-B26/26M D771-T6



Rear Rotor

Weight 1,391 g
Size Ø280 x 63
Material ASTM-B26/26M D771-T6



Rotor

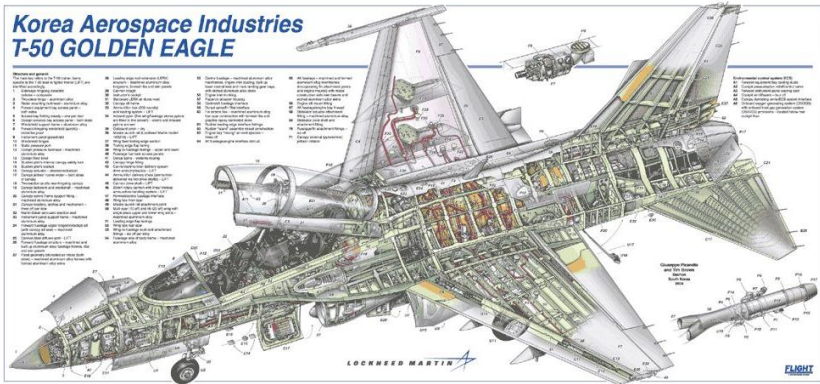
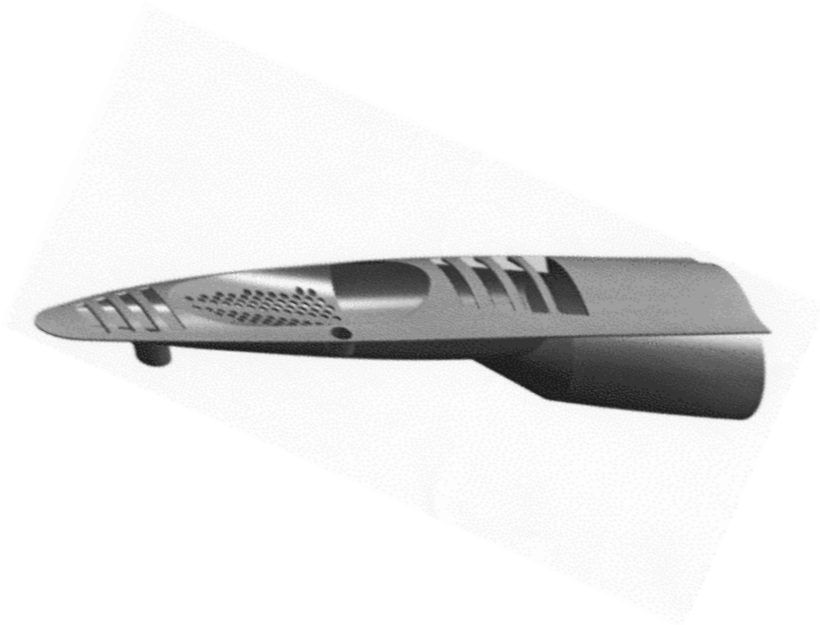
Weight 1,955 g
Size Ø214 x 66
Material ASTM-B26/26M D771-T6



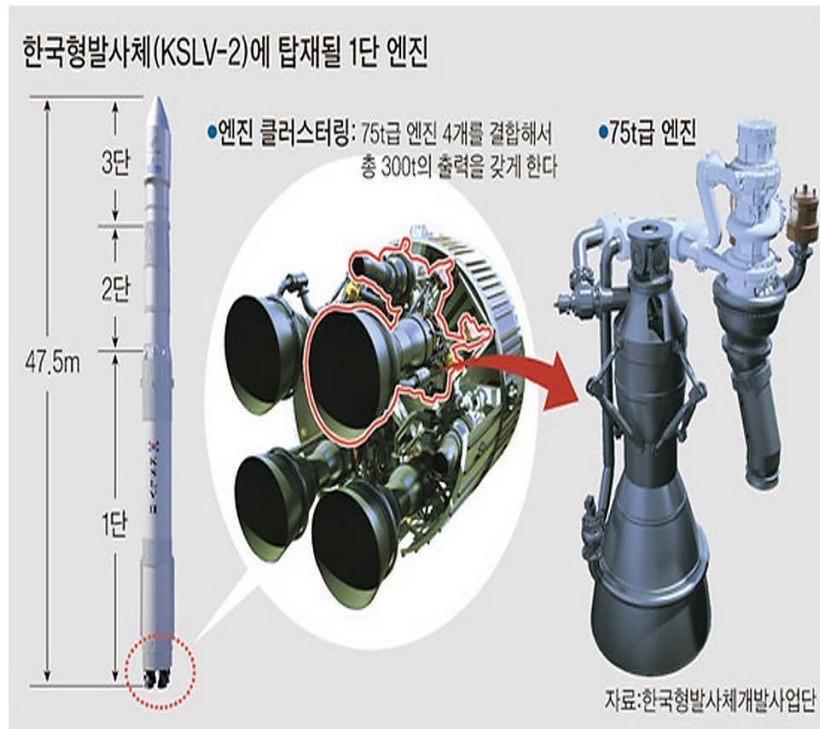
Case

Weight 3,272 g
Size 203 x 293 x 176
Material AC4C-T6

Structure parts for Combat plane (T-50 Golden Eagle)



Development of Fuel pump parts for Launch vehicle (KSLV II)



Integral Volute Nozzle Block, 7tons

Material Inconel 718

Weight : 12kg



Integral Volute Nozzle Block, 7tons

Material 17-4PH (H1150)

Weight : 7.5kg

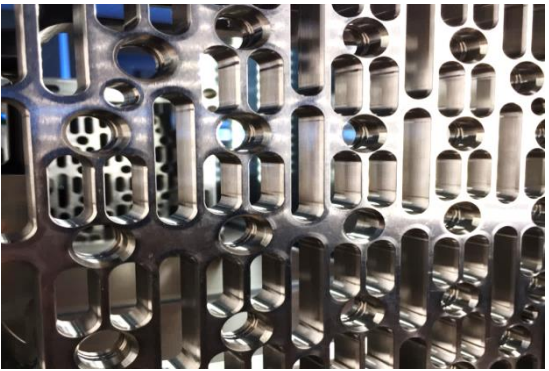
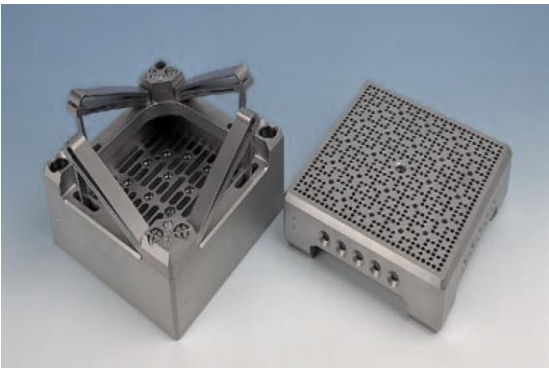
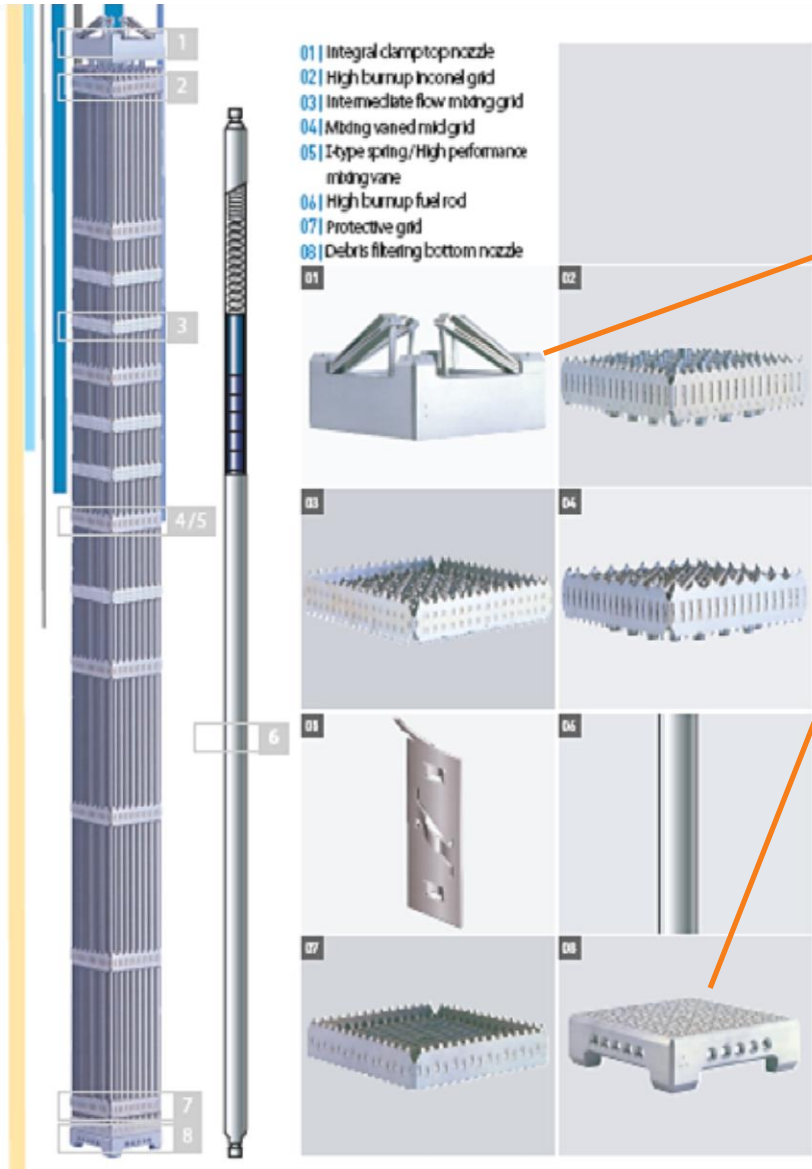
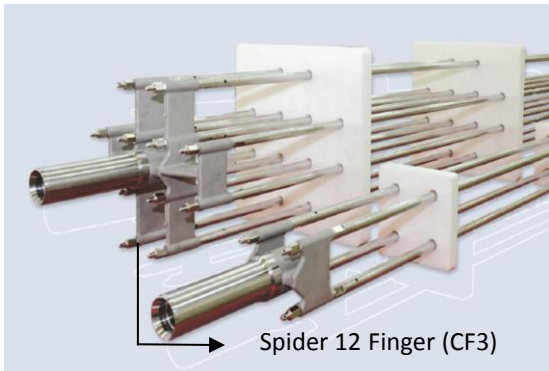


Inlet Casing, 75tons

Material : A356-T6

Weight : 24kg

Nuclear power plant

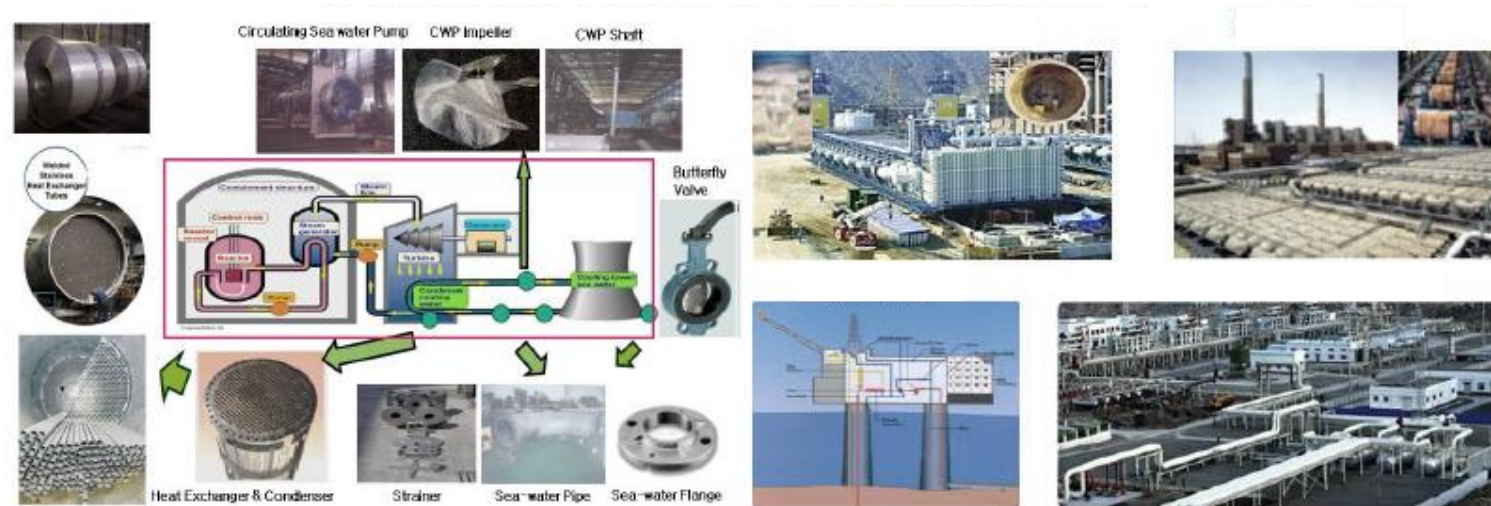


- Top Nozzle Casting(CF3)
- Bottom Nozzle Casting(CF3)

PREN 50 grade high corrosion-resistance casting/forging steel material & Process technology

Main institute	Korean Institute of Machinery & Material R&D Center (KIMS)
Participants	Chunji Corporation , Korean Institute of Industrial Technology, 4 universities, 2 Casting and Forging companies
Project period	01.06.2012 - 30.11.2015 (42 months)
Project scale	USD 3.2 Million

High corrosion-resistance alloy material required industry fields

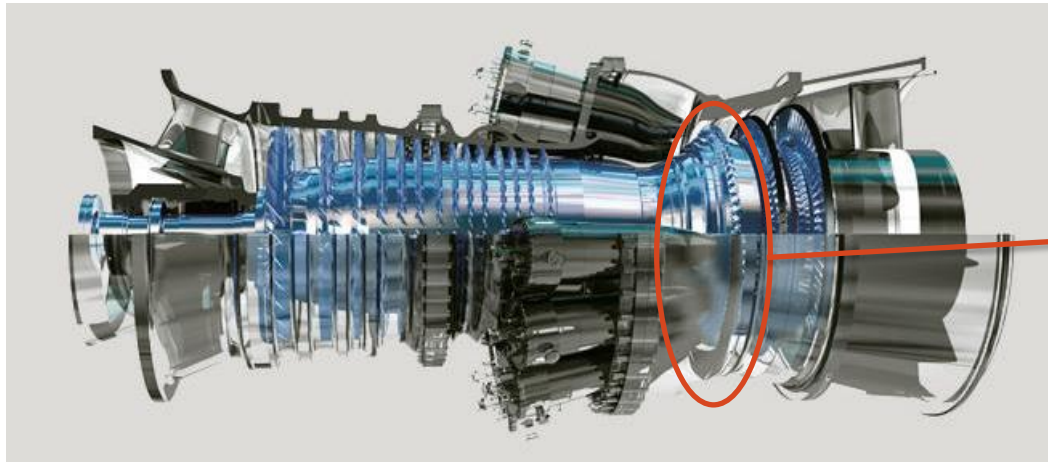


Main parts of Nuclear power plant Sea water system

Sea water desalination, Main parts of Offshore plant

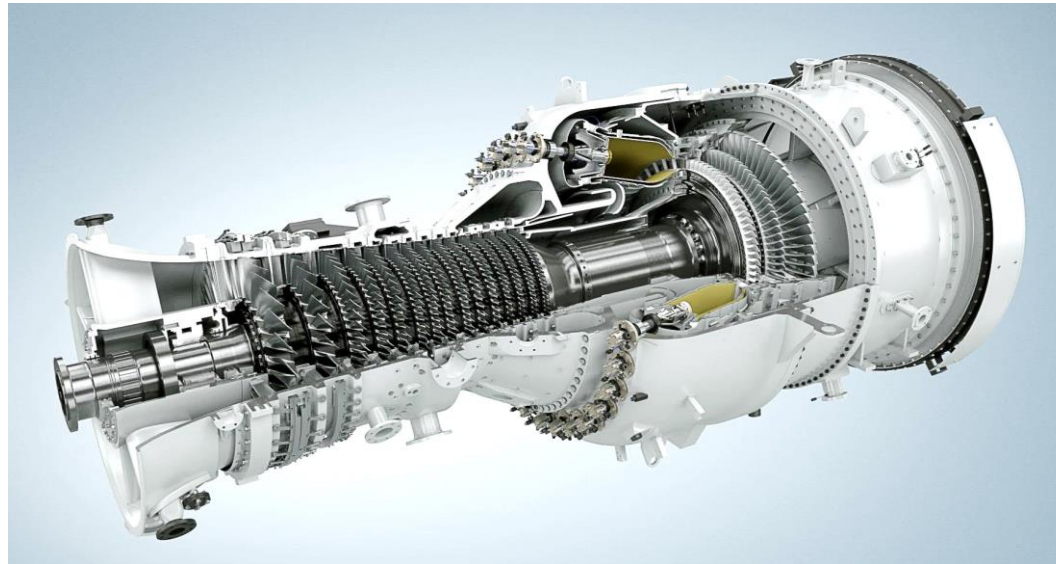
Development of Gas turbine parts with Super alloy for Single crystal casting (J Class / TIT : 1.600°)

Main institute	Chunji Corporation
Participants	Sewon Hardfacing, Korean Institute of Machinery & Material R&D Center (KIMS), Korean Institute of Ceramic Engineering and Technology (KICET), National Institute for Material Science (NIMS/Japan), Kookmin University, Changwon University
Project period	01.11.2012 - 31.10.2019 (7 years)
Project scale	USD 9.1 Million



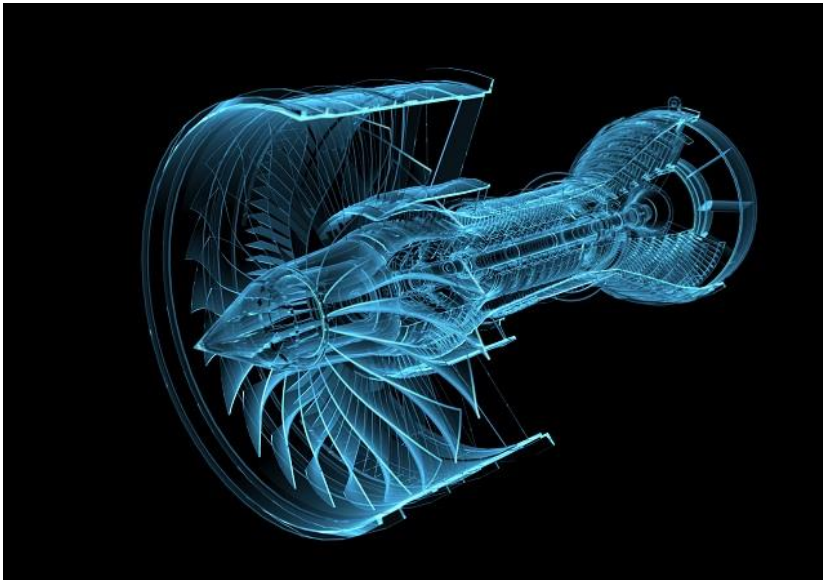
Manufacturing technology for large size power system of high-temperature Gas turbine parts

Main institute	Domestic casting company
Participants	Chunji Corporation , Doosan Heavy Industry, 3 Casting companies
Project period	01.07.2013 - 31.05.2018 (5 years)
Project scale	USD 3.6 Million



Localization of 1100° grade Gas Turbine (W501D5) 3rd stage Vane

Main institute	Chunji Corporation
Participants	-
Project period	01.11.2013 - 31.10.2016 (3 years)
Project scale	USD 0.5 Million





Vielen Dank für Ihre Aufmerksamkeit

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