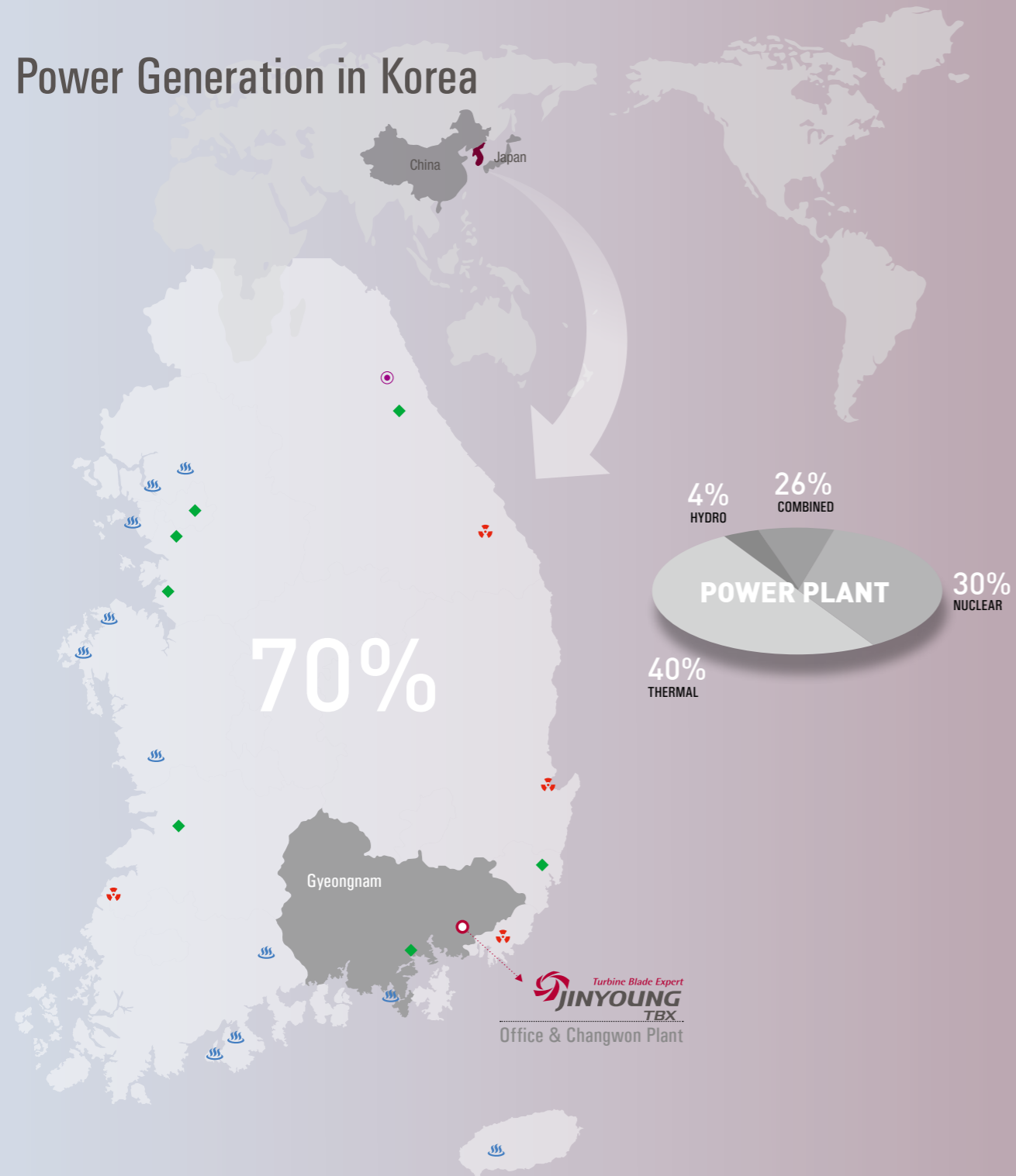


Power Generation in Korea



Turbine Blade Expert
JINYOUNG
 TBX
 Office & Changwon Plant

Turbine Blade Expert

터빈블레이드 전문기업 진영TBX(주)

汽轮 叶片
 ТУРБИНА ЛОПАТКА
 タービンブレード

Aubes de turbine
Schaufel Turbinenblatt
Turbinas Pala

Turbinas Palheta
 Turbina Pale
 Turbiny Lopatka

• Info

Add : 501 Nammyeon-ro, Seongsan-Gu, Changwon-Si, Kyungnam, 642-050
 Tel : +82-55-293-0477 / Fax : +82-55-255-4937
 E-mail : blade@tbx.co.kr

Since 1982



All of Turbine Blades...

- Power Generation
- Marine & Pump
- Aerospace
- Turbo Machinery

Turbine

Blade

Expert



장인정신으로 세계적인 기술을 빚어냅니다

진영TBX(주)의 기술은 옛선조들이 고려청자를 빚어내던 그 정성어린 장인정신으로
하나하나의 제품을 만들어가고 있습니다.
명품만을 인정해주던 장인정신이야말로 진영TBX(주) 기술의 바탕입니다.
그 기술로 이제 세계로 향합니다.

What's JIN YOUNG

JinYoung may seem like a small company from Far East Asia as there are so many changes in the global era, but we try our best to satisfy the customer's needs whenever and wherever possible.

All the members at JinYoung aren't just technicians making simple products. With the global mindset, we're rather more like an artists striving technopia, which means that we're diligent artists with state-of-the-art technology and knowledge in turbine industry .

Also with the artisan mindset, the products from our hands aren't just simple outcome but an effort of wanting to satisfy our customers, wanting to earn the trust, and wanting to build the best in the world.

As human's creativity is infinite, JinYoung's turbine blade manufacturing technology and the satisfaction from the customers will be infinite as well.

We promise to provide you with the satisfaction with the best quality and accuracy through continuous R&D and production.

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Company Information

JIN(進) - Go Straight / YOUNG(泳) - Forever / TBX - Turbine Blade Expert

JinYoung's History



2012

Oct. 2012 Ministry of Employment and Labor Award
 Mar. 2012 Received Ministry of Strategy and Finance Award



2009 - 2011

Nov. 2010 Received Ministry of Knowledge Economy Award



Apr. 2009 New Start "JIN YOUNG TBX"

2007 - 2008

Jan. 2008 Received AS9100 (Rev. B) Certificate for Aerospace Turbine Blades by BSI UK
 Jul. 2007 Received Promising Export Firm certificate
 Jul. 2007 Prepared to Acquire AS9100(Rev.B) Certification for Aerospace Turbine Blade

2001 - 2006

Jun. 2006 Received INNO-BIZ certificate
 Apr. 2006 Established "JIN YOUNG R&D Institute" at the Masan Plant / Changwon Plant
 Apr. 2004 Received ERP System certificate
 Apr. 2003 Received Materials & Components Technology Certificate (MOCIE - Ministry of Commerce, Industry and Energy)
 Nov. 2002 Received ISO 9001 and KS A 9001 certification
 Aug. 2002 Received Turbine Blade Certification for Korean Power Plant Company



May. 2002 Opened new ultra modern Chang-won Facility
 Jul. 2001 Changed company name to JINYOUNG E.M. TECH Co. Ltd.

1982-1999

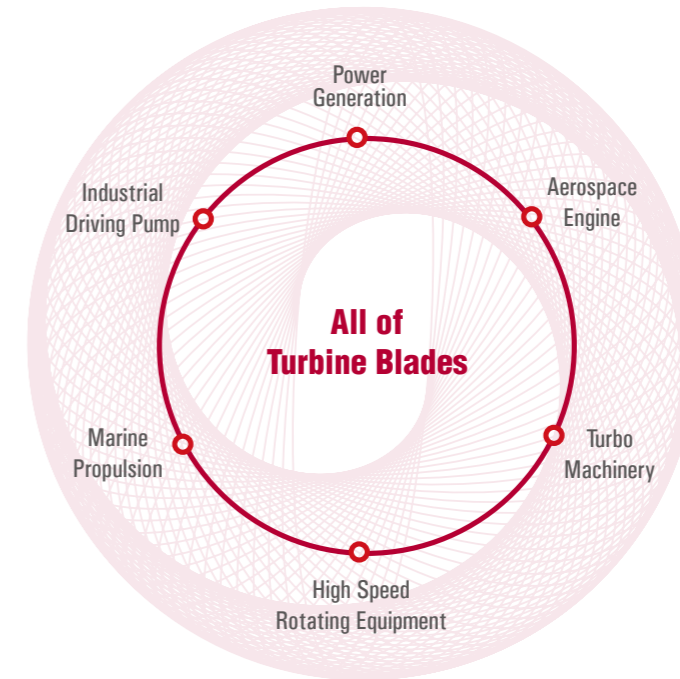
Aug. 1998 Increased manufacturing space to accommodate demand for production of gas turbine parts
 May. 1995 Received Industry "Technical Development Award" from Korea President (Y.S. KIM)
 Mar. 1990 Received Ministry of Commerce Award
 Dec. 1988 Increased manufacturing space to accommodate nuclear, thermal and gas turbine power equipment parts
 Mar. 1985 Recognized leading company from Korean Industrial Advancement Administration
 Mar. 1985 Received Government Approval for company status in industry
 Jan. 1982 Established "JIN YOUNG" Machinery company

POWER GENERATION



Application : All of Turbine System

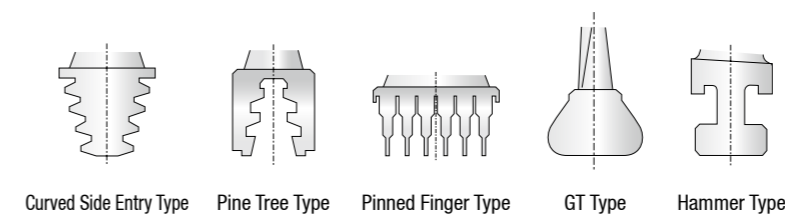
- **Item :** Blade / Bucket / Airfoil / Nozzle / Partition
- **Gas Turbine :** Compressor Blade / Vane / IGV / OGV
- **Steam Turbine**
 - Rotating / Moving / Rotor / Fan Blade
 - Stationary / Fixed / Stator Blade / Profile / Partition
 - Nozzle for diaphragm / Spacer
 - BFPT / FWPT / TRT
- **Turbo Machinery :** Impeller / Blisk / Diffuser



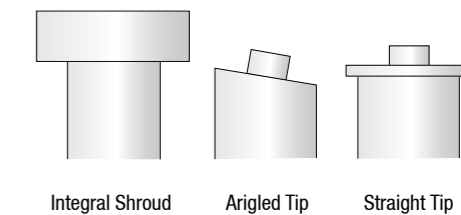
Jin Young's Capability in LSB >>

CLASS	DOVETAIL TYPE (Finger/Side entry)	ACTIVE LENGTH (Vane)	MATERIAL
Fossil 180MW	Pinned Finger	40.1"(1.018mm)	Titanium
Fossil 200MW	Pinned Finger	29.8"(755.7mm)	12Cr Steel
Fossil 250MW	Pinned Finger	33.5"(850.9mm)	12Cr Steel
Fossil 500MW	Pinned Finger	33.5"(850.9mm)	12Cr Steel
Fossil 550MW	Pinned Finger	33.5"(850.9mm)	12Cr Steel
Fossil 800MW	Curved Side entry	40.1"(1.018mm)	Titanium
Nuclear 1000MW	Pinned Finger	43.0"(1.092mm)	12Cr Steel
Nuclear 1350MW	Pinned Finger	52.0"(1.320mm)	12Cr Steel

▪ Dovetail of Turbine Blade



▪ Shroud of Turbine Blade

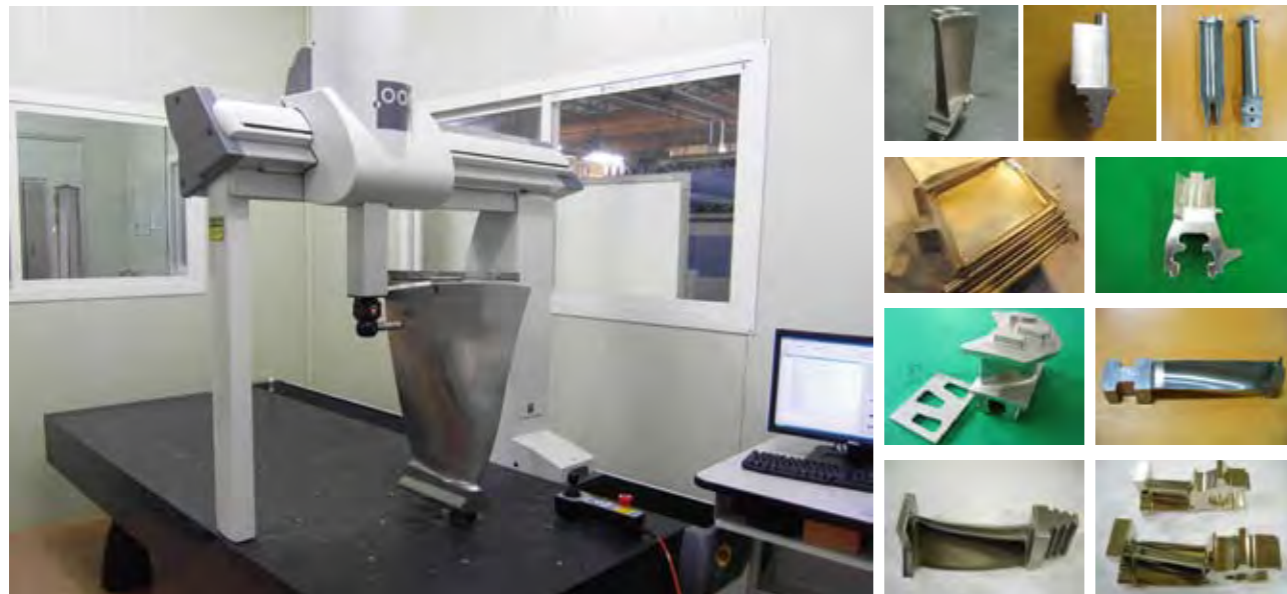


POWER GENERATION



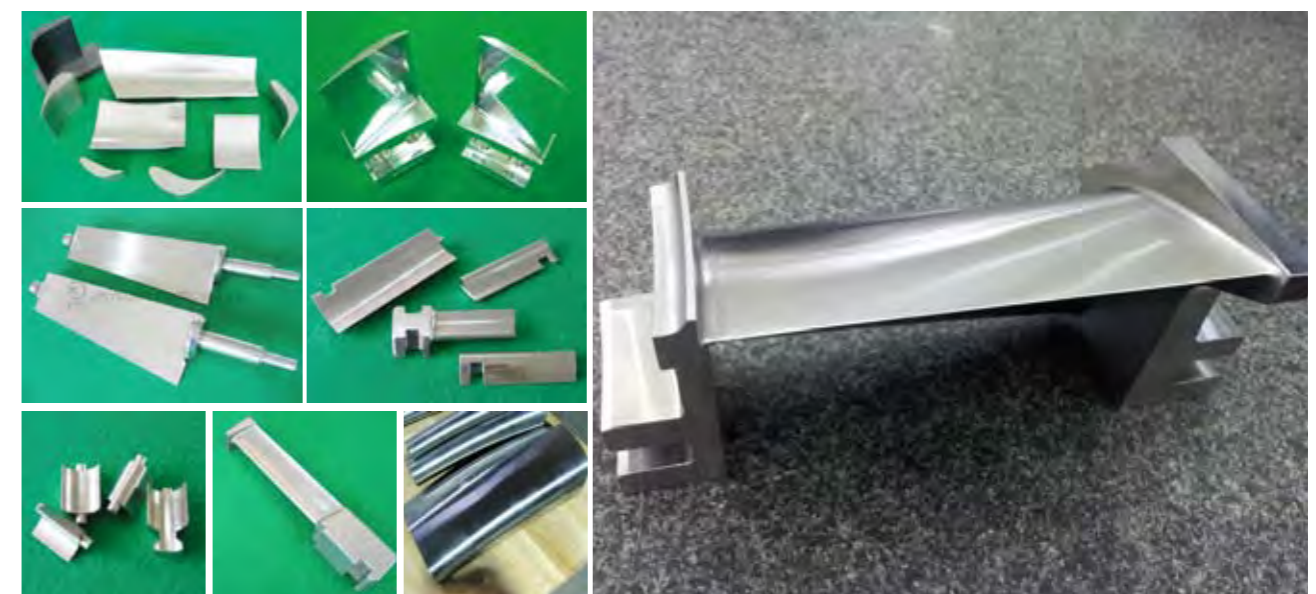
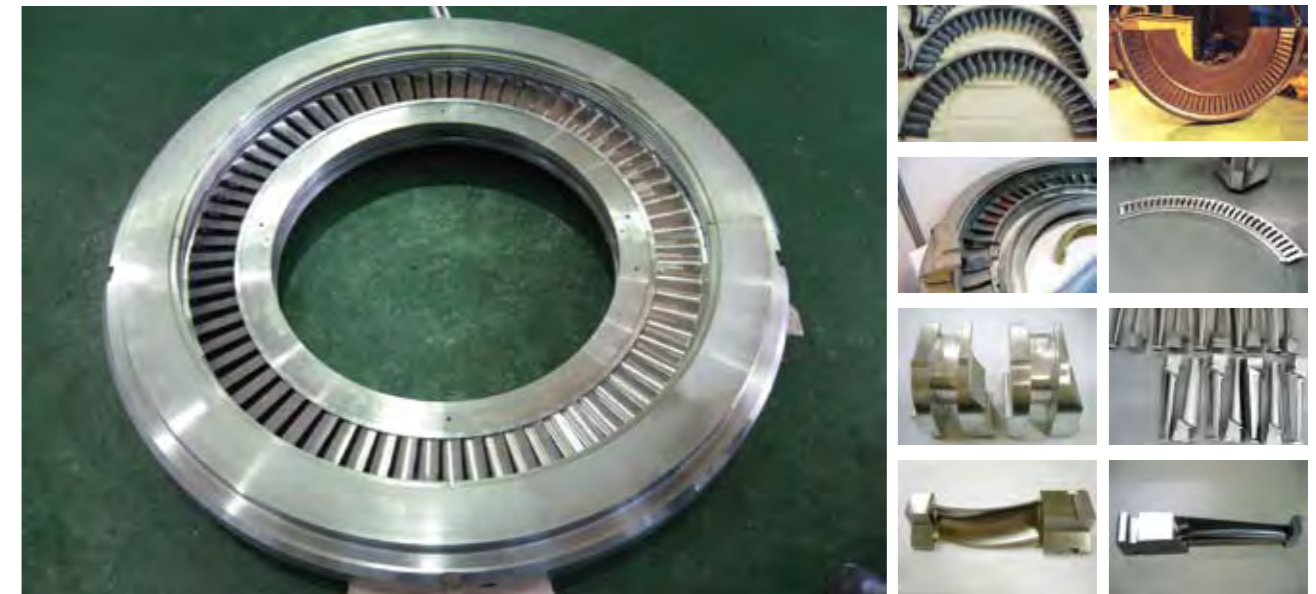
▪ For Rotor

- Moving / Rotor / Rotating Blade
- Airfoil / Bucket / Fan



▪ For Diaphragm

- Stationary / Fixed / Stator Blade
- Nozzle / Vane / Spacer / Partition
- IGV / OGV / Profile



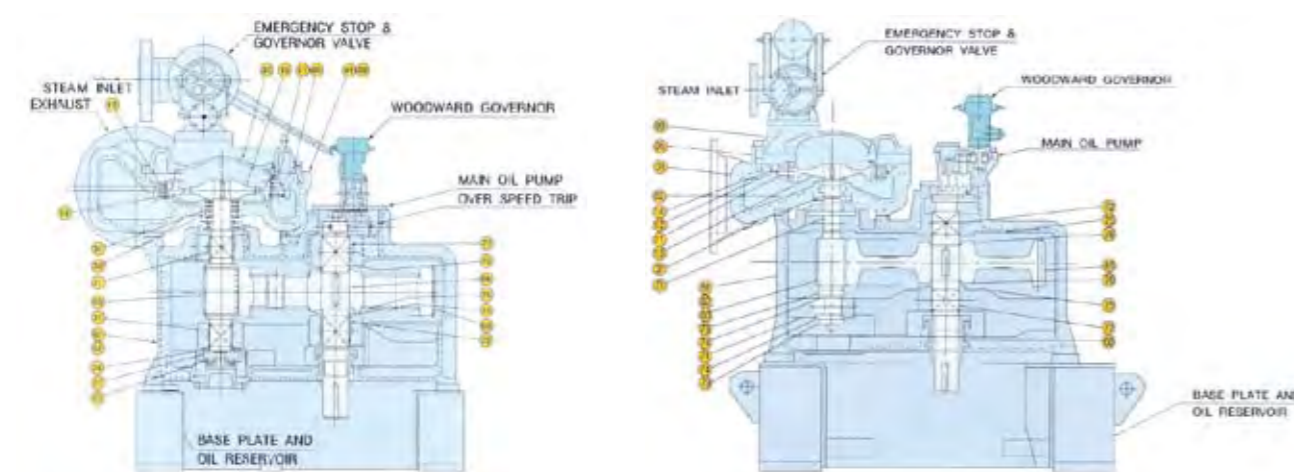
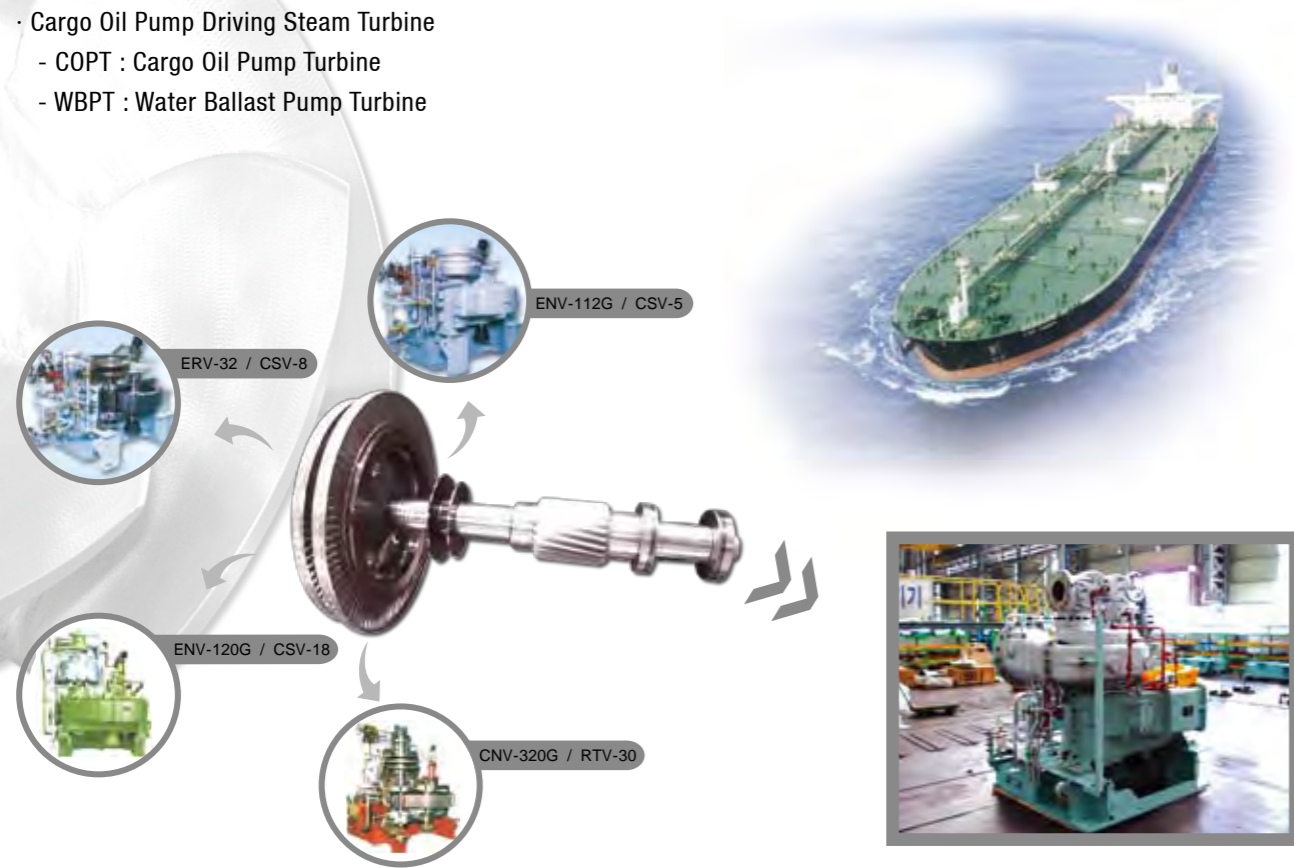
MARINE & PUMP



전체 조립된 모습

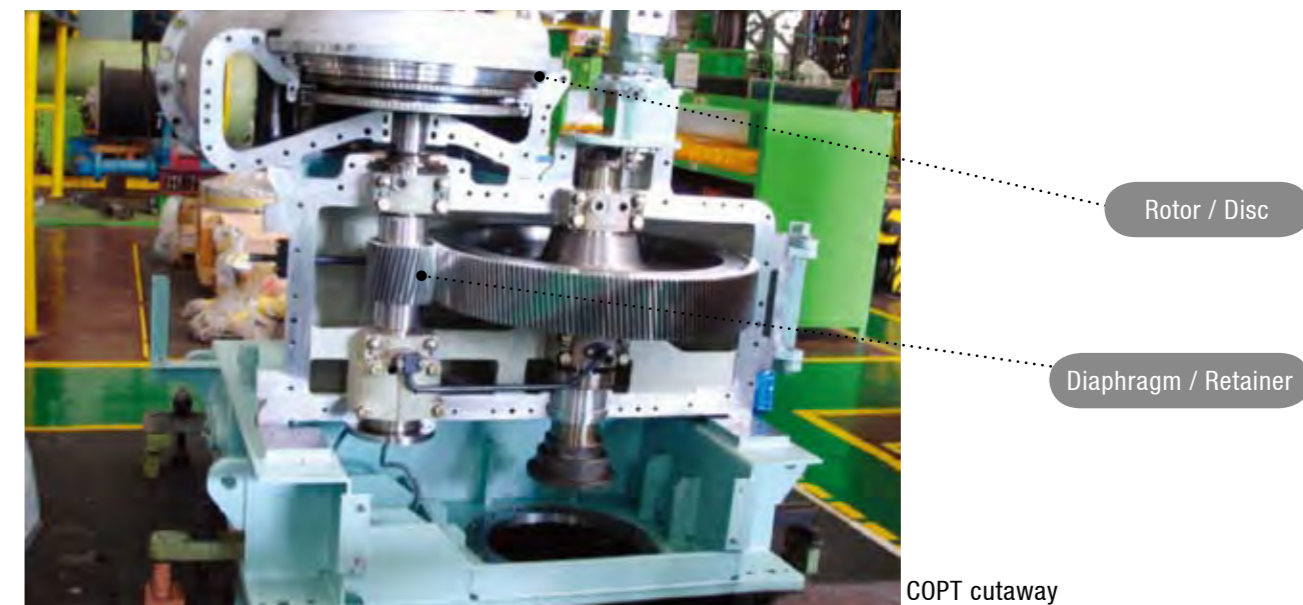
▪ Cargo Handling System

- Cargo Oil Pump Driving Steam Turbine
- COPT : Cargo Oil Pump Turbine
- WBPT : Water Ballast Pump Turbine



JinYoung's products

▪ COPT / WBPT



▪ COPT / WBPT System Assembly



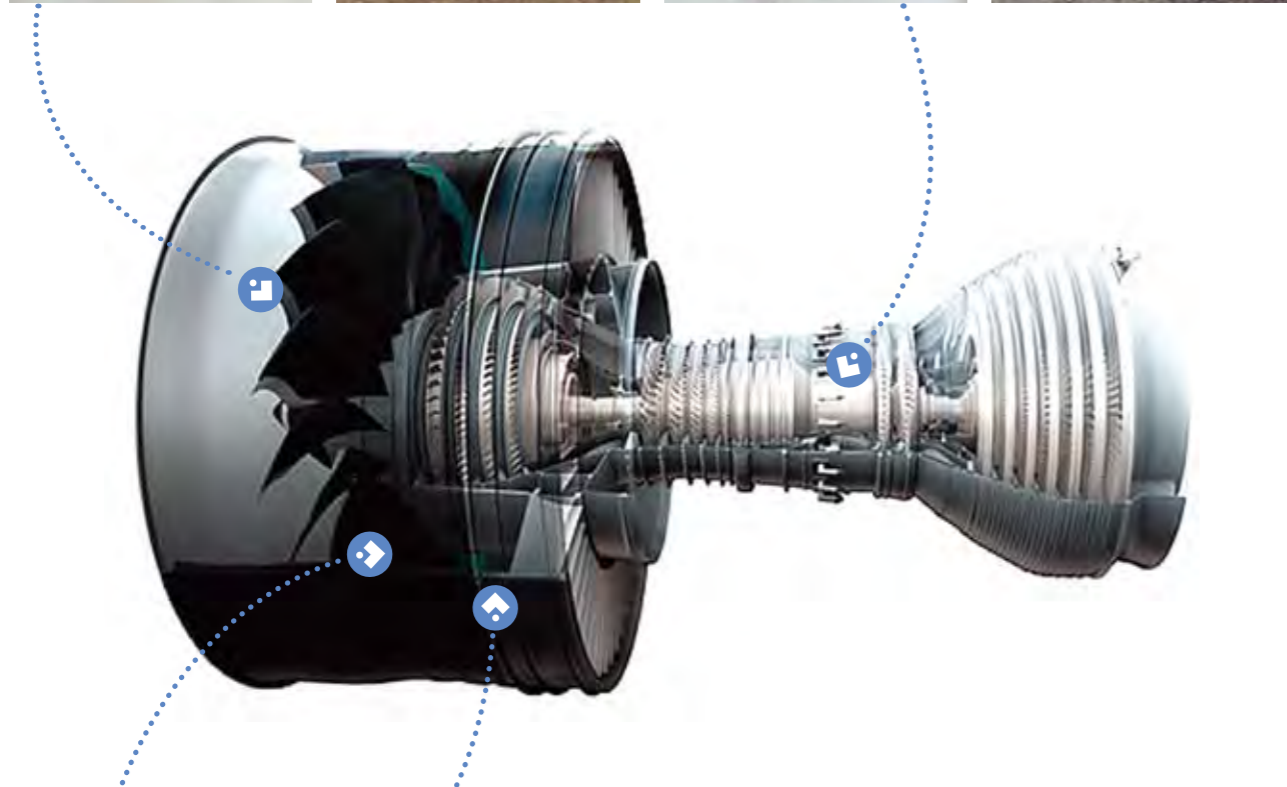
AEROSPACE & TURBO



Turbine Blade Expert
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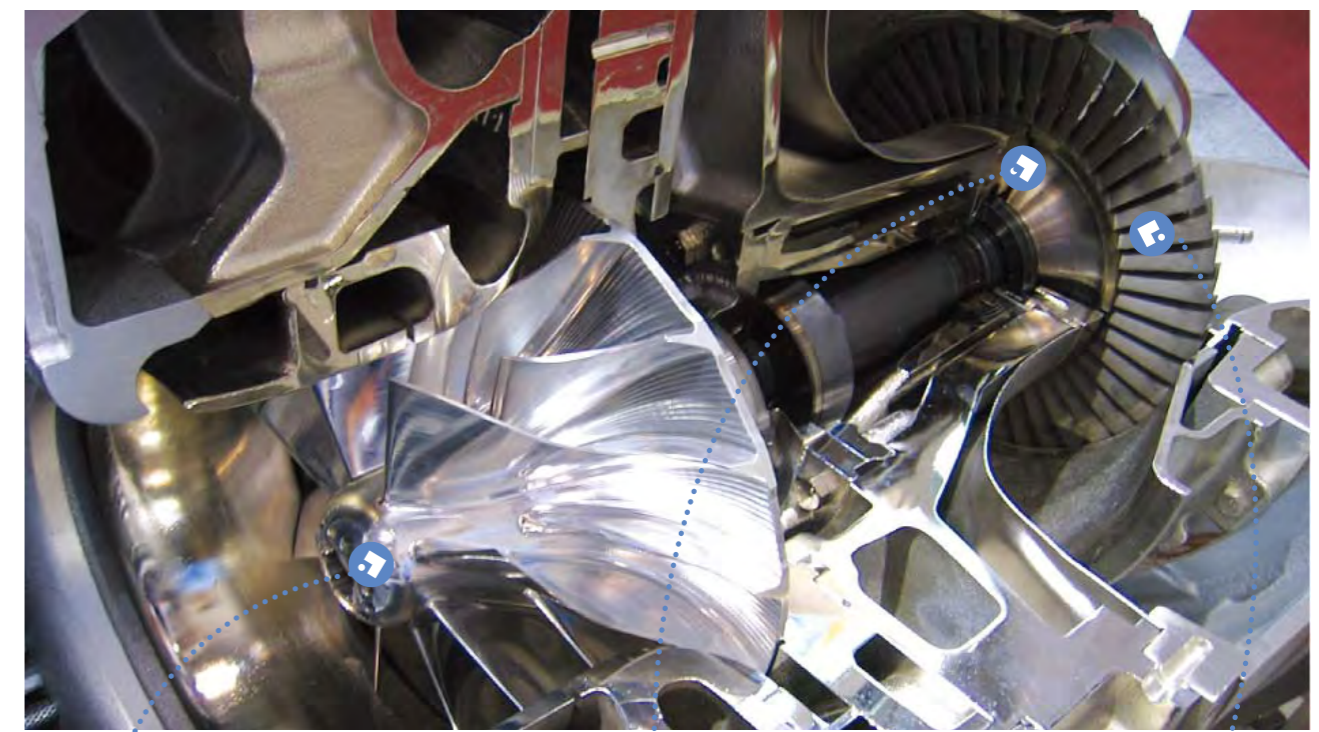
Infinite Technology for Turbine Blade

Blades for Aerospace Engine



Turbo Machinery

- Impeller
- Blisk / Diffuser
- Blade



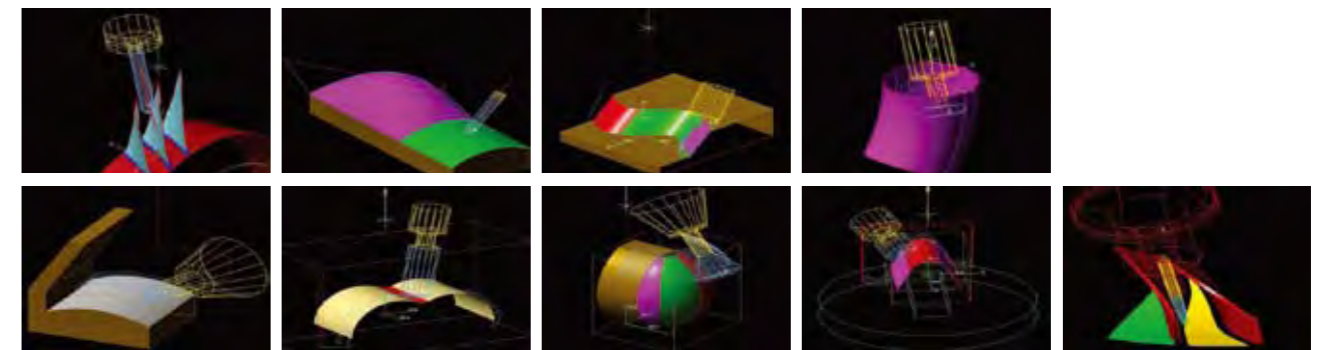
CAD / CAM / CAE



5축가공 / 5Axis-Machining

주요 5축 가공방법(9 Solutions)

- Fixed Cutter Axis Machining
- Radial Through Line & Curve Machining
- Same Cutter Axis Machining
- Thru Point Machining
- Interpolate Surface Parameter Machining
- Normal Machining
- Tilt with Lead & Lag Machining
- Tanto with Cutter Machining
- Parallel to Cutter Axis Machining



역설계 & 재생 (Reverse Engineering)

· Before VS After



고속가공 (High Speed Machining)



MANUFACTURING TECHNOLOGY

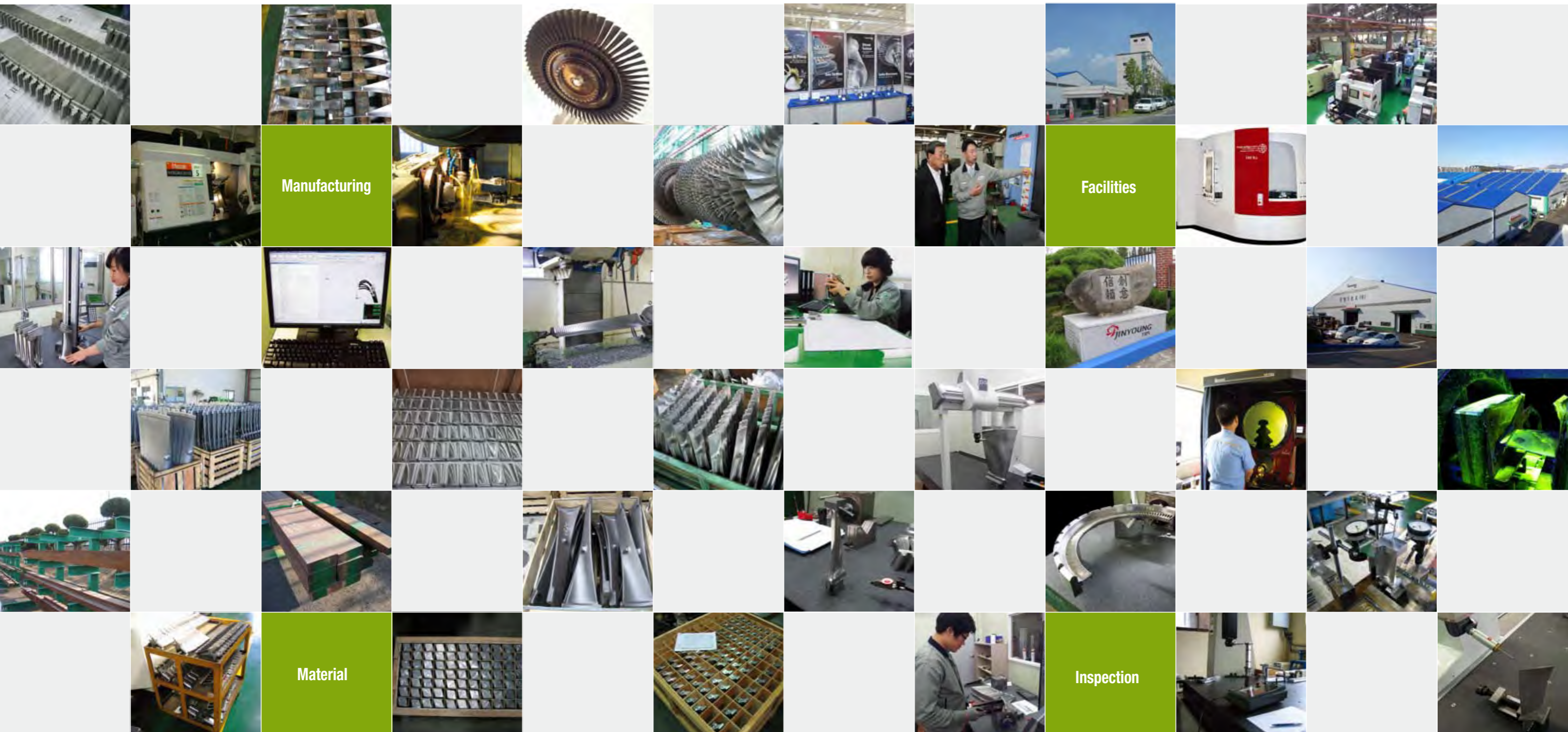


Turbine Blade Expert
JINYOUNG
TBX

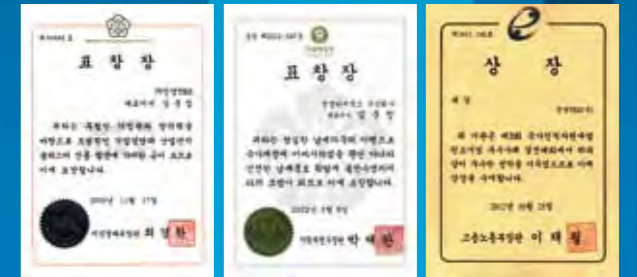
Infinite Technology for Turbine Blade

“ Our Sprit to Turbine Blade Manufacturing ”

Our all people know well the nowadays global competition environment.
We hope to express our artisan sprit to your business as long term and good relationship.
We would like to do our best any kind of work as Korea's No.1 Turbine Blade Manufacturing Company.



Global Cooperation



JinYoung's Merit in Turbine Blade

- Sample Parts to Mass Production
- The Power of Various Machine Tools - About 200 EA
: 5-Axis MCT, CNC Grinding, CNC Lathe (Turning),
: EDM, Wire Cutting Machine and so on
- The Successful Experience in Domestic & Overseas Projects with 20 years
- The Abundance Know-How of Artisans
- High Class Manufacturing Technology
- Continuous Service from Artisan
- Non-Union
- Latest CAD/CAM/CAE System
- Customer's Confidence & Long Term Relationship as a good partner



QUALIFIED TECHNICAL ASSURANCE

All products of JinYoung are built under ISO 9001(AS 9100) quality system.

