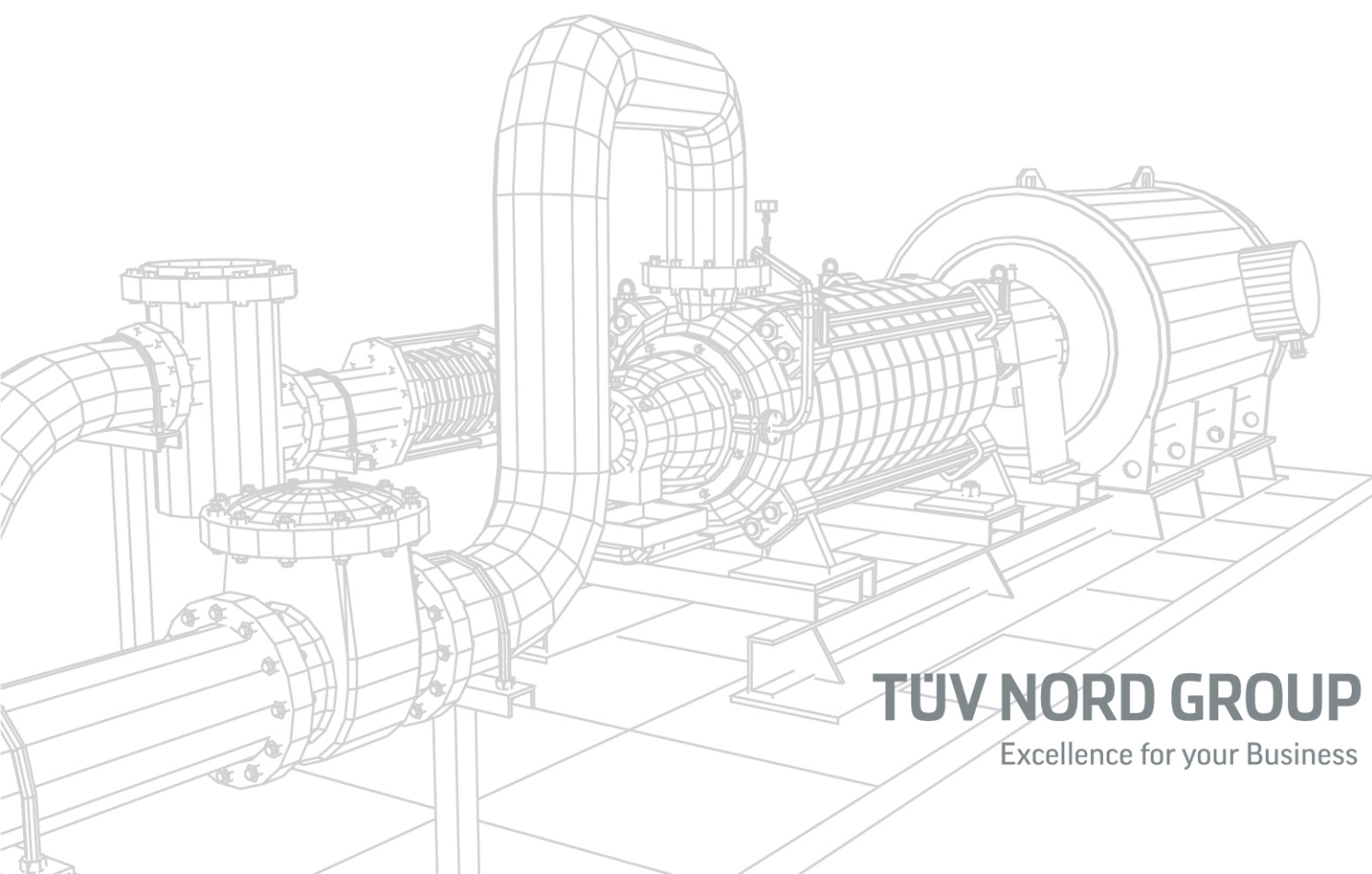


The **ONLY** & the **BEST** Choice

For ROTATING MACHINERY INSPECTION



TÜV NORD GROUP

Excellence for your Business

A

100

150

TÜV

1964

The **ONLY** & the **BEST** Choice

TÜV INCOK's outstanding expertise accumulated in the field of Rotating, is the result of experience over last 50 years, continuous innovation with TÜV NORD Group and sharing the responsibility on safety of the world. TÜV INCOK has earned the trust in customers, and been recognized its ability on performing both domestic and international projects successfully.

Only one with many experiences

Since 1979 to present, TÜV INCOK has been performing inspections for one of the largest rotating equipment in the world as a designated inspection company. We are proud to share our experience in rotating equipment inspection that no other companies in Korea can match. As a result, TÜV INCOK has been recognized as No. 1 inspection company in Korea.

Overseas inspection experiences

TÜV INCOK has long partnership and many experience with well-known international rotating machinery manufacturer, such as GE, MAN TURBO, SIEMENS, and MHI.

Inspected world largest steel plant

TÜV INCOK has been the designated inspection service provider for the largest steel plant in the world, and therefore has many experience in large rotating machinery. We are the inspection company that you can rely on.

REFERENCE BY ITEM FOR ROTATING MACHINERY

It is not just the know-how and experience that TÜV INCOK accumulated over 50 years. It is rather the close trust with customers.

TÜV INCOK is the only inspection company in Korea who has experience in steam turbine, gas turbine, and centrifugal compressor, the main unit of refinery, petrochemical, steel, and power plant.

TÜV INCOK

EXPERIENCE

EXPERTS

WHY INCOK

FAST & EASY

HISTORY

Pump

| Company | Project | Specification | Vendor | Year |
|------------------------------|---|-------------------------------|-----------------------|------|
| SK E&C | NSRP COMPLEX PROJECT | 210m³/hr x 155.46m x 185KW | Young Poong Precision | 2015 |
| Daelim | Sohar Refinery Improvement Project | 107m³/hr x 347m x 200KW | ITT Goulds Pumps | 2015 |
| ADCO | Rumaitha/Shanyayel Facilities Phase III | 195m³/min x 244m x 209KW | Hyosung Goodsprings | 2015 |
| LS-Nikko Copper | Chile Plamen | 12m³/min x 150m x 75KW | Wilo | 2015 |
| POSCO | Gwangyang #5 Blast Furnace Revamping | 75.5m³/min x 20m x 1,100KW | Shin Shin Machinery | 2015 |
| | | 3,400m³/hr x 50m x 560KW | Dukji Industrial | 2015 |
| Boryeong LNG Terminal | Boryeong LNG Terminal Project | 13,500m³/hr x 59.5m x 3,000KW | Hyosung Goodsprings | 2015 |
| POSCO | Gwangyang LPG | 80m³/hr x 300m x 90KW | EBARA Corporation | 2015 |
| eTEC E&C | ETEC Seagull GE4 Cogeneration Plant | 710m³/hr x 255m x 720KW | Dongyang Chemical | 2015 |
| Daewoo E&C | Ras Djinet Electric Power Station in Algeria | 330m³/hr x 1,685m x 2,400KW | Hyundai Heavy Ind. | 2014 |
| Daelim | Thai Bihn 2 Thermal Power Plant | 1,180m³/hr x 92m x 320KW | Hyundai Heavy Ind. | 2014 |
| Hyundai E&C | SARB4 | 3,700m³/hr x 85.5m x 1,060KW | Hyosung Goodsprings | 2014 |
| Samsung Engineering | BADRA CPF Phase 2 | 19.3m³/hr x 657m x 55KW | Hyosung Goodsprings | 2014 |
| KEPCO E&C | CIPREL Power Plant | 217m³/hr x 1,211m x 858KW | Hyosung Goodsprings | 2014 |
| Lotte E&C | R1 Project | 1,650m³/hr x 40m x 270KW | Young Poong Precision | 2013 |
| MHI | RABIGH PH-2 Project | 4,100m³/hr x 39m x 570KW | Hyosung Goodsprings | 2013 |
| Hanwha E&C | 5 Nitric Acid Plant | 3,000m³/hr x 50.2m x 560KW | Young Poong Precision | 2013 |
| POSCO | Gwangyang #4 Hot Rolling Mill Making Equipment | 2.33m³/min x 450m x 355KW | Chungwoo Hydro | 2013 |
| Daewoo E&C | JORF LASRAR Units 5&6 PJT(JORF) | 639.7m³/hr x 2,110m x 5,200KW | Hyundai Heavy Ind. | 2012 |
| Hyundai Steel | Continuous Casting Plant Scaffing Machine | 762m³/hr x 145m x 450KW | Young Poong Precision | 2012 |
| Daewoo E&C | SUR Independent Power PJT(PHOENIX) | 495m³/hr x 1,780m x 3400KW | Hyundai Heavy Ind. | 2012 |
| GS E&C | GSC VGOFCC Project | 170.3m³/hr x 341m x 330KW | ITT Goulds Pumps | 2012 |
| | | 153m³/hr x 167.82m x 750KW | Dongyang Chemical | 2012 |
| Hanwha E&C | YANBU2 POWER PLANT | 2,363m³/min x 256m x 150KW | Chungwoo Hydro | 2012 |
| Hanwha E&C | ORANGE Project | 2,900m³/hr x 103.1m x 1,200KW | Dongyang Chemical | 2012 |
| | | 1,213.4m³/hr x 90m x 550KW | Young Poong Precision | 2012 |
| Hanjin Heavy Ind. | Namyangju Byulnae Mass Energy Facility | 68.52m³/hr x 974.3m x 380KW | Chungwoo Hydro | 2012 |
| Hanjin Heavy Ind. | Uijeongbu Minrak #2 Mass Energy Facility | 1,300m³/hr x 115m x 600KW | Iljin Electric | 2012 |
| PHOENIX | SUR INDEPENDENT POWER PJT | 2,350m³/min x 42m x 348KW | Wilo | 2012 |
| Korea District Heating Corp. | Multifunctional Administrative City Mass Energy | 4,000m³/hr x 80m x 1,200KW | Shin Shin Machinery | 2012 |
| Hitachi Zosen | Ruwais Refinery Expansion Package | 3,528m³/hr x 75.5m x 889KW | Hyundai Heavy Ind. | 2011 |
| Korea District Heating Corp. | Goyang Samsung CHP Project | 126.5m³/hr x 1,210m x 650KW | Hyosung Goodsprings | 2011 |
| SK E&C | TAKREER RRE Project | 200m³/hr x 157.49m x 132KW | ITT Goulds Pumps | 2011 |
| TERNA S.A GEK GROUP | THIVA Combined Cycle Power Plant | 368.2m³/hr x 2,064m x 3,200KW | Torishima Pump | 2009 |

Fan & Blower

| Company | Project | Specification | Vendor | Year |
|---------------------|--------------------------------------|--------------------------------------|---------------------|------|
| SK E&C | NSRP Complex Project | 8,344m³/min x 335mmAq x 920KW | Suewon Poongryuk | 2015 |
| POSCO | Gwangyang #5 Blast Furnace Revamping | 20,400m³/hr x 1,100mmAq x 1,250KW | Shin Pung | 2015 |
| Brazil CSP | CSP Brazil Iron and Steel Plant | 15,000m³/min x 450mmAq x 1,250KW | Tongyang Plant | 2015 |
| POSCO | Pohang 2 ZRM | 400m³/min x 800mmAq x 375KW | Dong-A Fan & Blower | 2015 |
| eTEC E&C | ETEC Seagull GE4 Cogeneration Plant | 15,607m³/min x 1,115.6mmAq x 3,850KW | Tongyang Plant | 2015 |
| POSCO | Replacement of Gwangyang 2 POL | 9,000m³/min x 400mmAq x 1,000KW | Dong-A Fan & Blower | 2015 |
| SNNC | #2 Fe-Ni Environmental Facility | 6,800m³/min x 400mmAq x 700KW | Suewon Poongryuk | 2014 |
| POSCO E&C | Pohang STS #1 Rolling Mill Revamping | 4,500m³/min x 200mmAq x 390KW | Samwon E&B | 2014 |
| SNNC | SNNC #2 Plant Revamping | 10,000m³/min x 450mmAq x 1,150KW | Suewon Poongryuk | 2014 |
| SNNC | Gwangyang SNNC Fe-Ni Plant | 3,110m³/min x 340mmAq x 280KW | Suewon Poongryuk | 2014 |
| | | 1,750m³/min x 1,130mmAq x 500KW | Dong-A Fan & Blower | 2013 |
| POSCO | Gwangyang #4 Hot Rolling Mill | 11,500m³/min x 715mmAq x 2,100KW | Suewon Poongryuk | 2013 |
| Hyundai Engineering | UGCC Utilities & Offsites | 2,338m³/min x 596mmAq x 420KW | Tongyang Plant | 2013 |
| POSCO | Pohang #1 Steel Making | 5,000m³/min x 650mmAq x 800KW | Yujin Fan | 2013 |
| POSCO | Pohang #3 FINEX | 8,750m³/min x 650mmAq x 1,350KW | Tongyang Plant | 2013 |
| POSCO | Pohang High Purity Fe-Si Plant | 4,170m³/min x 580mmAq x 650KW | Shin Pung | 2013 |
| Hyundai Steel | #2 Fe-Ni Environmental Facility | 6,800m³/min x 400mmq x 700KW | Suewon Poongryuk | 2013 |
| POSCO | Gwangyang Fe-Powder Bag Filter | 2,160m³/min x 530mmAq x 350KW | Tongyang Plant | 2013 |
| POSCO | Pohang #1 Steel Making Bag Filter | 5,000m³/min x 650mmAq x 800KW | Yujin Fan | 2013 |
| KRAKATAU-POSCO | PT. K-P CCP | 3,000m³/min x 204mmAq x 160KW | Dong-A Fan & Blower | 2012 |
| POSCO | Pohang #1-5 Cokes P-CAR Bag Filter | 2,200m³/min x 715mmAq x 400KW | Tongyang Plant | 2012 |
| Hyundai Engineering | PVTEX – PET PJT | 1,400m³/min x 730mmAq x 300KW | Dong-A Fan & Blower | 2012 |
| POSCO | Gwangyang Cokes ECS Bag Filter | 5,000m³/min x 560mmAq x 750KW | Tongyang Plant | 2012 |
| Hyundai Steel | Hyundai Hysco Furnace Facility (CGL) | 1,268m³/min x 660mmAq x 230KW | Samwon E&B | 2012 |
| POSCO | Pohang Steel Mill Limeburner #1, 2 | 1,000m³/min x 450mmAq x 1,150KW | Suewon Poongryuk | 2012 |
| POSCO Plantec | PIG Casting Machine of No.1 BF | 6,400m³/min x 415mmAq x 670KW | Tongyang Plant | 2012 |
| Samsung Engineering | TAKREER RRE Utilities & Offsites | 3,620m³/min x 830mmAq x 770KW | Tongyang Plant | 2011 |
| POSCO | Gwangyang Fe-Mn Plant | 6,500m³/min x 600mmAq x 950KW | Tongyang Plant | 2011 |
| SeAH CSS | Rolling Mill Revamping | 2,667m³/min x 505mmAq x 350KW | Tongyang Plant | 2011 |
| Poshmetal | Gwangyang Fe-Mn Plant | 7,200m³/min x 600mmAq x 1,050KW | Tongyang Plant | 2011 |

TÜV INCOK

EXPERIENCE

EXPERTS

WHY INCOK

FAST & EASY

HISTORY

Steam & Gas Turbine

| Company | Project | Specification | Vendor | Year |
|------------------------------|----------------------------|---------------|----------------------------|------|
| Daelim | POCHEON LNG Power Plant | 272MW | Doosan Heavy Ind. | 2012 |
| Hanwha E&C | YANBU 2 Power Plant | 270MW | Doosan Heavy Ind. | 2012 |
| Hanwha E&C | Saudi Arabia Power Plant | 100MW | Doosan Heavy Ind. | 2011 |
| Hanwha E&C | MARAFIQ STG Units #5 & #6 | 275MW | Doosan Heavy Ind. | 2010 |
| Korea District Heating Corp. | Goyang Samsung CHP Project | 27MW | HITACHI | 2009 |
| Korea District Heating Corp. | Pangyo CHP Project | 68MW | Mitsui Eng. & Shipbuilding | 2008 |
| Korea District Heating Corp. | Paju CHP Project | 188MW | MHI | 2007 |
| POSCO | Pohang #3 FINEX | 600MW | Kawasaki Heavy Ind. | 2001 |

Compressor

| Company | Project | Specification | Vendor | Year |
|------------------------------|--|--------------------------------------|---------------------|------|
| STAR Refinery | Aegean Refinery Project (ARP) | 11,446m³/hr x 10.103kg/cm² x 1,567KW | Hanwha Techwin | 2016 |
| POSCO | Gwangyang Continuous Casting Plant | 7,000Nm³/hr x 8.0Kg/cm² x 1,250KW | Seah E&T | 2016 |
| Samsung Engineering | SOCAR Ammonia and Urea Complex Project | 1,530Nm³/hr x 9.3Kg/cm² x 300KW | CompAir | 2015 |
| Samsung Engineering | SEMV | 5,150Nm³/hr x 8.0Kgf/cm² x 587.5KW | Hanwha Techwin | 2014 |
| Hyundai E&C | SARB4 | 4,447.4Nm³/hr x 8.6bar.g x 553KW | Hanwha Techwin | 2014 |
| Brazil CSP | CSP Brazil Iron and Steel Plant | 8,000Nm³/hr x 8.0Kg/cm² x 1,150KW | Hanwha Techwin | 2014 |
| POSCO Engineering | KUMHO KPA | 4,592Nm³/hr x 2.69Kgf/cm² x 1,629KW | Hanwha Techwin | 2014 |
| SNNC | #2 Fe-Ni Plant | 8,600m³/hr x 8.0kg/cm² x 1,100KW | Hanwha Techwin | 2014 |
| POSCO | Pohang #2 Plate Mill UST Roller Table | 33.3Nm³/min x 7.0Kg/cm² x 225KW | AIRPLUS | 2013 |
| POSCO | Indonesia Continuous Casting Plant | 208.3Nm³/min x 7.0Kg/cm² x 1,866KW | Seah E&T | 2013 |
| Samsung Engineering | SMPW-1 | 3,429.6Nm³/hr x 8.0Kgf/cm² x 150KW | Kwangshin Machinery | 2012 |
| POSCO | Pohang #4 Sintering Plant Revamping | 9,800m³/hr x 7.8kg/cm² x 1,200KW | Hanwha Techwin | 2012 |
| Korea District Heating Corp. | Goyang Samsung CHP Project | 9,741Nm³/hr x 29.0Kg/cm² x 699KW | Kwangshin Machinery | 2011 |
| POSCO | Steel Mill Making Plant | 3400Nm³/Hr x 2.0Kg/cm² x 2400kW | EBARA Corporation | 2001 |

* Full reference available upon your request.

The Leading Service Provider, Giving Customer Satisfaction

Since establishment in 1964, TÜV INCOK has been working steadily to secure excellent inspectors. TÜV INCOK has the largest number of top inspectors in Rotating machinery in Korea.

We value the quality of service.

TÜV INCOK has 100 own inspectors who are managed and monitored by TÜV NORD Group.

Our experts performs and supervise inspection to ensure steady quality and competitiveness.



Speciality in Rotating Field

TÜV INCOK inspectors have wide range of experience in the Rotating field. More than 90% of inspectors have over 10 years of experience in the field of major Rotating Machinery such as fan, blower, pump, compressor, and etc.



Speed and Quality

TÜV INCOK values customer's time. Timely service without compromise quality of service is our promise to customers.

Inspection quality is guaranteed. We review detailed procedures of approved drawing, inspection items, and performance result that manufacturers submitted.

Closer to the Site

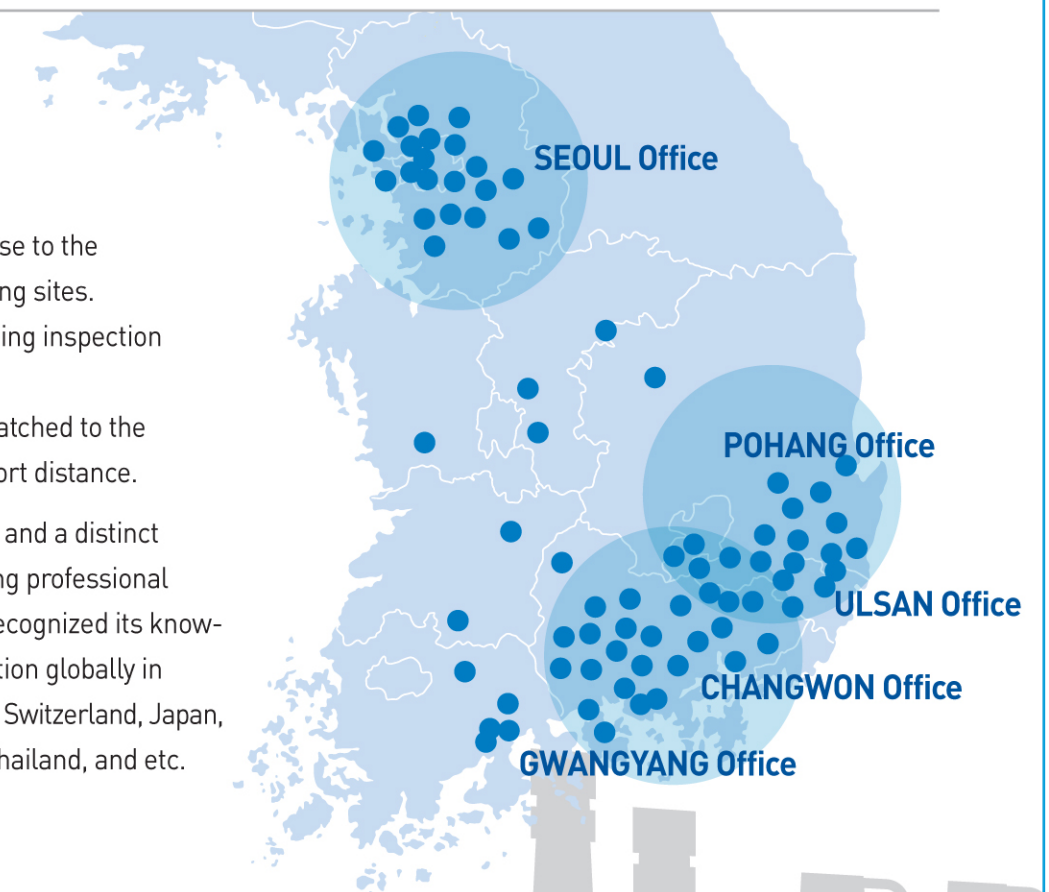
- 70 Inspectors with rotating machinery experience
- 22 Rotating special Item experts
- 5 Regional Offices

Our regional offices are close to the customer and manufacturing sites.

We provide fast and promising inspection services closer to you.

Our inspectors will be dispatched to the inspection location with short distance.

With inspection technology and a distinct competitive edge in securing professional personnel, TÜV INCOK is recognized its know-hows and performs inspection globally in Germany, France, Italy, U.K, Switzerland, Japan, China, UAE, Iran, Turkey, Thailand, and etc.



A

Credit Rate

Out of all companies in Korea, only less than 0.5% receives credit rate A. On top of our proven technology, we are offering you the trust based partnership.

TÜV INCOK is the most reliable partner that you are looking for.



100

Our own inspector

More than 90% of TÜV INCOK inspectors have over 10 years of experience in the field of major Rotating Machinery such as fan, blower, pump, compressor, and etc.



150

70 countries 150 offices



TÜV

Our Value

With TÜV INCOCK, your product can be inspected based on the international standard. We are member of TÜV NORD Group and our quality of inspection is well managed under TÜV NORD Group, the leading global inspection company.



1964

Established in

Being the pioneer of inspection company in Korea for over 50 years means more than the period itself. For last 50years, TÜV INCOK took responsibility in safety of every industrial facilities in Korea.



Known Before Inspection



We analyze inspection result since 1994

Data Analysis

We prevent risks and problems even before the inspection. We have (collected) data on inspection results since 1994 for each item and manufacturer TÜV INCOK's inspection experience.

The analysis of the data for each item is assessed and reviewed by our inspector prior to the inspection service.



Qualified
Qualified inspector



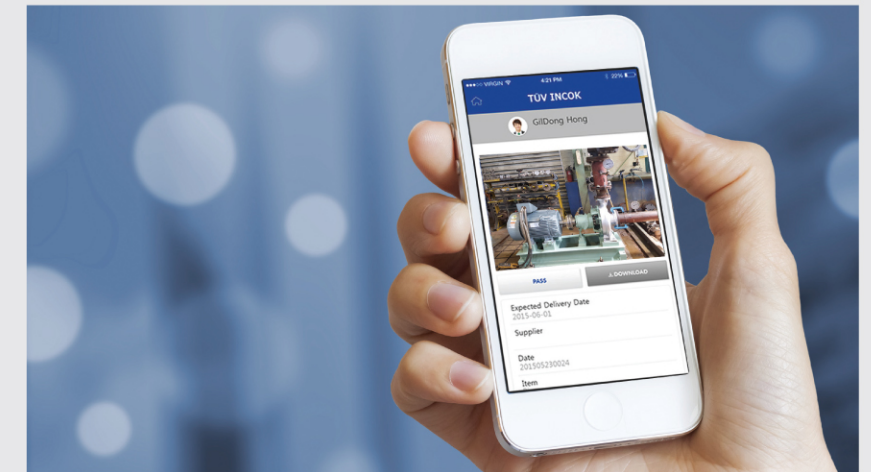
People
More than 100 own inspector



in Service
More than 90% of inspections
are performed by TÜV INCOK's
own inspector



Know At the Inspection



Receive flash report through your mobile phone as soon as the inspection is finished.

You can check flash report quick and easy through mobile app. The inspection result will be sent to you right after our inspector perform inspection through mobile flash report. You will also receive through your e-mail in PDF.

Ensure Quality

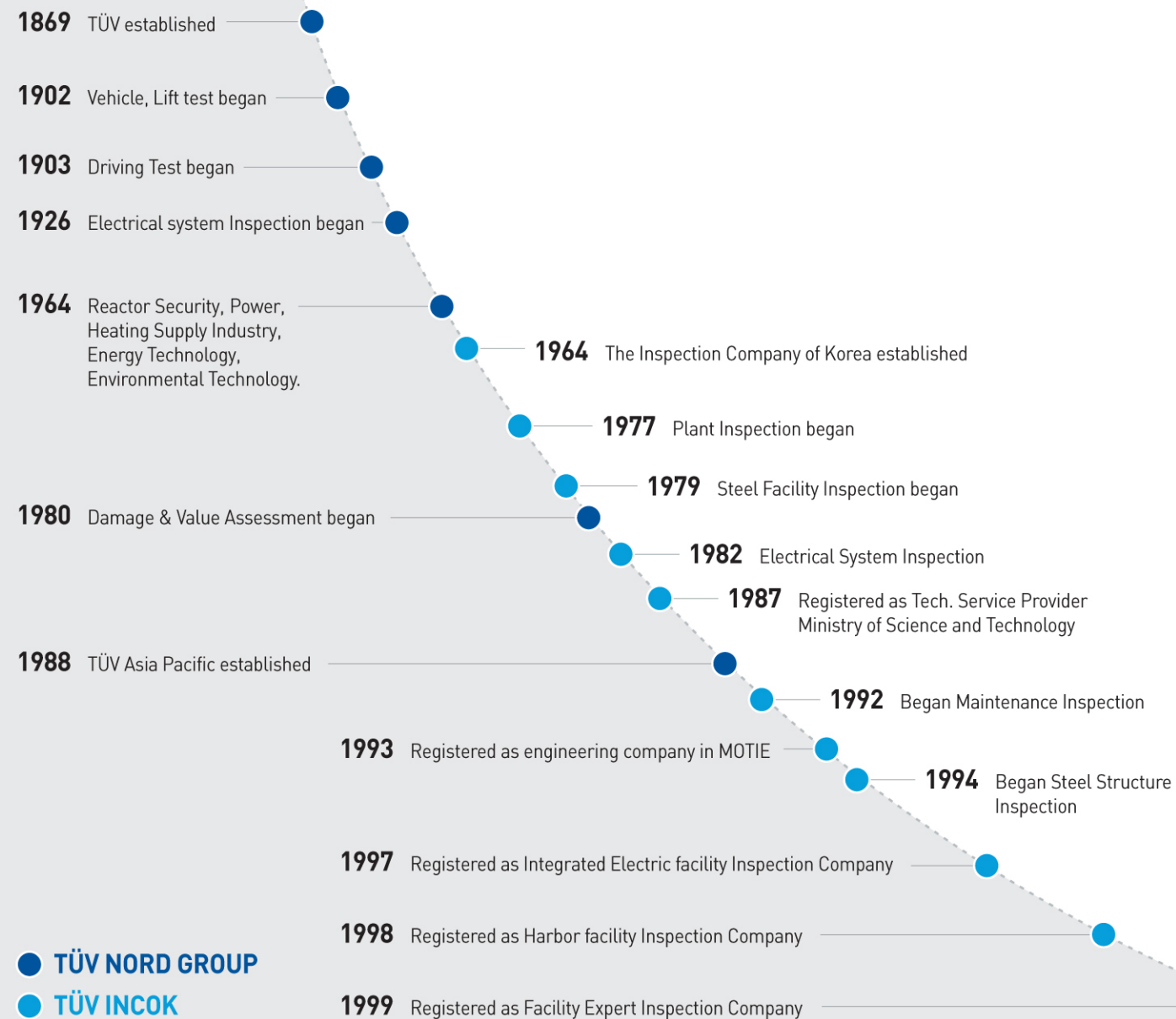
With Qualified Inspector,
We ensure quality in time

Based on the data, our inspectors communicate with manufacturers on what to carefully prepare before the inspection, to reduce fail rate and save your time without compromising quality of course.

Our inspection services verify that your machinery and equipment are manufactured in compliance with all specified requirements.



HISTORY PROVES OUR VALUE



100% Owned by
TÜV NORD Group

TÜV INCOK with TÜV NORD Group open new paradigm to inspection .

Driving forward with innovations and new developments is an important focus of TÜV NORD GROUP.

New and innovative services open up new areas of the market, create a competitive advantage and help to overcome global challenges. Innovations are vital for the growth of TÜV NORD GROUP.

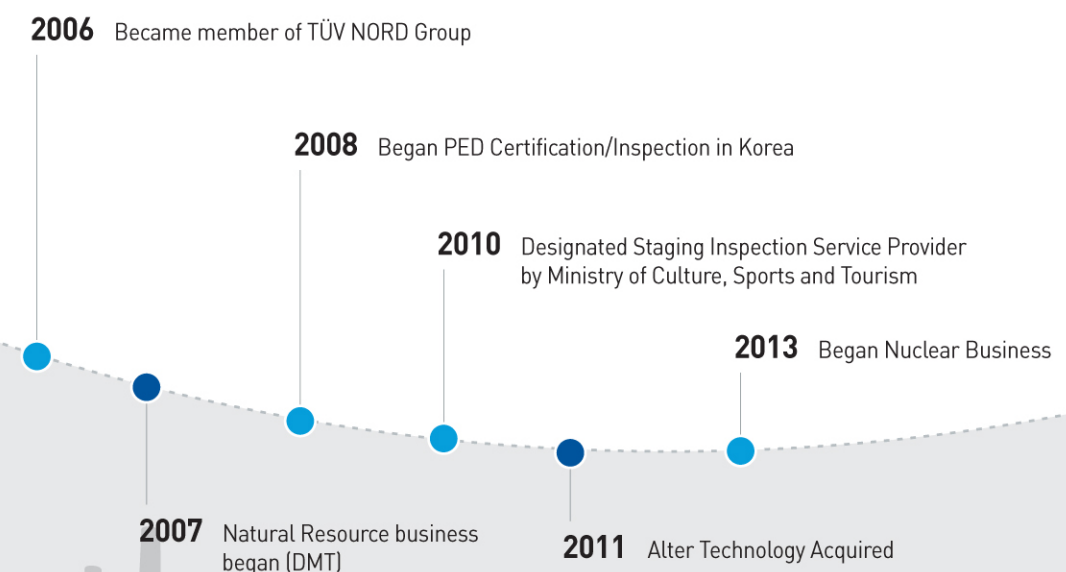
THE DIGITAL TRANSFORMATION FROM TODAY TO TOMORROW

As the focus on Industry 4.0 increases, so must the security of plant and machinery and their regulation, control and monitoring systems. Industry 4.0 is turning manufacturing facilities into complex cyber-physical systems that interconnect mechanical objects with embedded software over the Internet.

TÜV NORD has developed an innovative system that simulates and evaluates damage in pipelines.

It is used to better plan and to replace defective sections of pipeline more cost effectively.

We provide quality inspection services to our customers, earning a reliable reputation in wide range of areas. We will continue our efforts to satisfy the changing needs of our customers through both continuous training and applying state-of-the-art technologies.



Making our world safer
TÜV INCOK

TÜV NORD INCOK

The Inspection Company of Korea

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