



# ***Company Profile***

 **UNISON** eTech Co., Ltd.

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**We've built an impressive track record providing specialist design, construction and plant services to a range of industries throughout the country.**

**Today main product lines solve challenges and provide solutions in many new markets relating to Seismic, Vibration and Plant components.**



# Location



**Seoul Office  
Overseas Business**

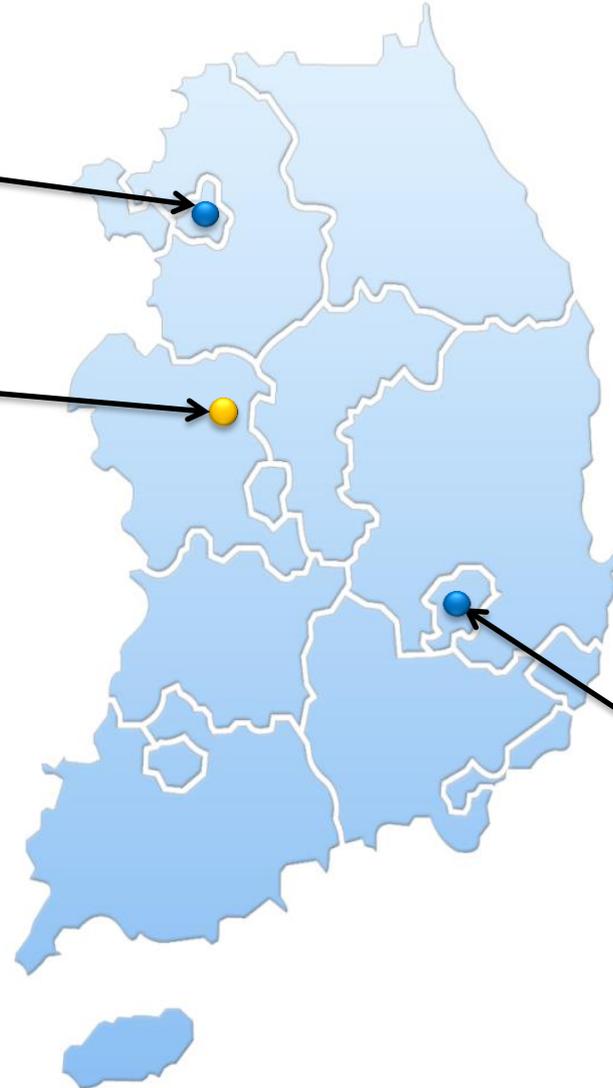
**Cheonan Head Office  
(UET & HKR)**



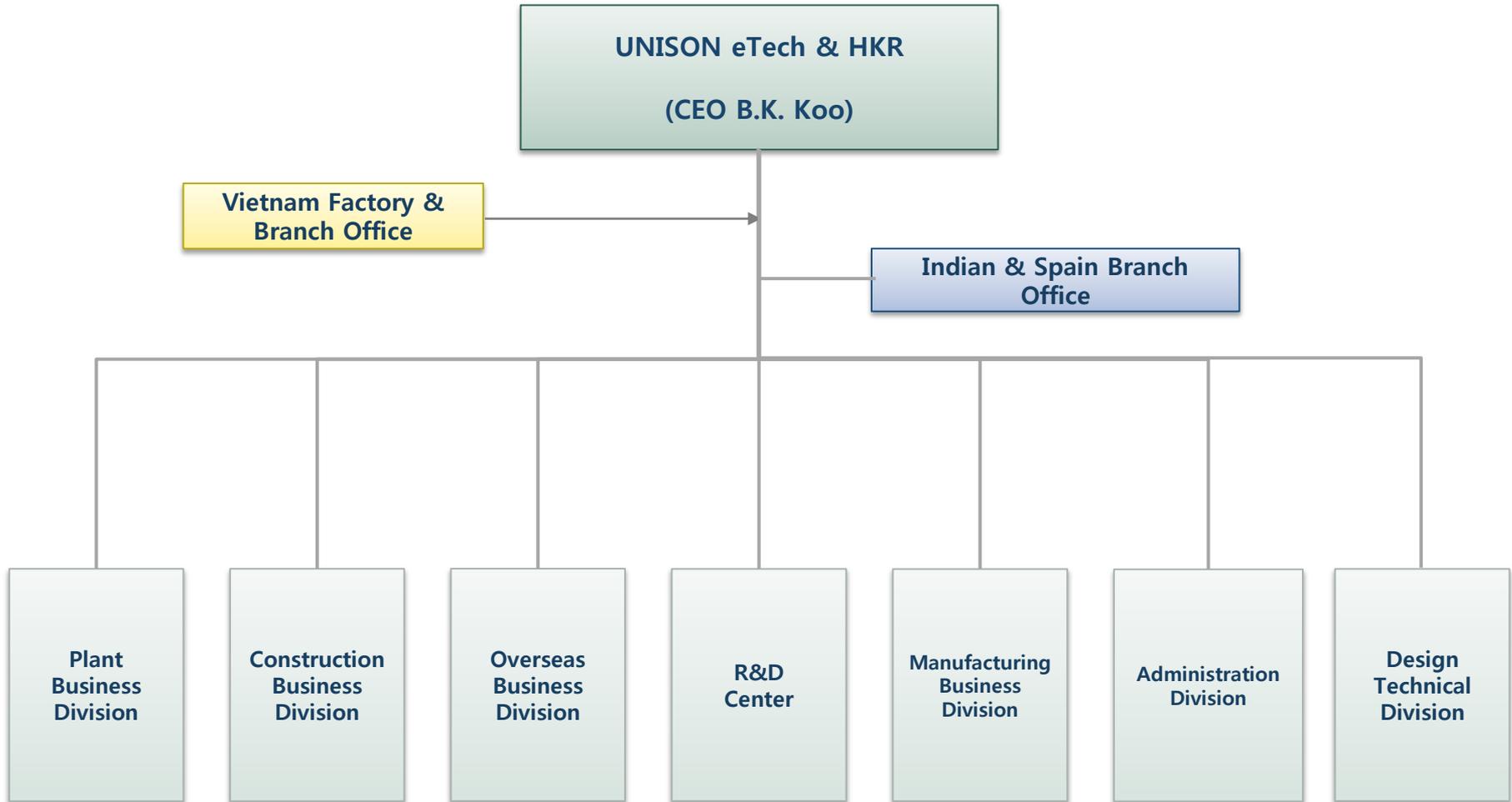
**Vietnam Branch Office**



**Daegu Office**



# Organization



# Company History



2018	Opening of the Global offices in India to cater to Indian & Middle East markets & in Spain to cater to Europe and African markets
2017	Signed an Global Partnership Agreement with Samsung C&T Corporation Qualified to supply parts for power plants to Russian nuclear power plants ROSATOM
2016	Obtaining OHSAS 18001:2007 Occupation Health & Safety Management
2015	Awarded of Sheik Jaber Al-Ahmad Al-Sabah Causeway Project(Main link and Doha link) in Kuwait (Bridge length: 36km and 12.43km each)
2013	Awarded Presidential prize for National Quality Control Circle competition
2011	Founded UNISON eTech Co., Ltd / Acquire share HKR Co.,LTD
2006	Obtained ISO14001 Certificate for all items
2003	Grand Prize for Korea Quality Award by Ministry of commerce, industry and Energy
2002	Obtained Reliability Mark for pot bearing, elastomeric bearing by Korean Agency for Technology and Standards
1997	NA, NPT STAMP certification by American Society of Mechanical Engineers KEPIC-MIN(Nuclear Energy Equipment) Quality Assurance Certification
1994	ISO9001 Certification (KSA-QA, All Categories)
1992	Best Small and Medium-Sized Company Presidential Award for Excellent K.S Company
1984	Founded UNISON Co., Ltd.



## Variable Spring Hanger

Prevents thermal expansion of the pipe from the general operating load & pipe movement



## Constant Spring Hanger

A device not only sustaining the static load, but also absorbing the thermal movements



## Cold Support

Utilized on pipe work that requires thermal insulation to minimize loss of process energy



## Damper

Thermal expansion and blade deflection should be considered first for preventing deformation by high temperature



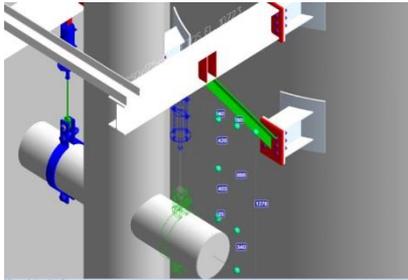
## Metallic Expansion Joint

According to operated pressure of a device, this model is manufactured with or without the shrink ring.



## Cross Over Pipe

Suitable flexibility to work in different thermal Movement condition between turbine and casing



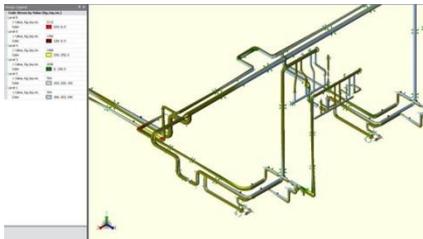
## Engineering

Provide differentiated service in CAE analysis of machinery, piping and design manufacturing for many years



## Field Inspection Service

Offer a wide range of service relate to plant facilities as routine maintenance, technical support through technical standard and regular plan



## Repair & Installation

Support reverse engineering, product fabrication and field repair

# Seismic Products



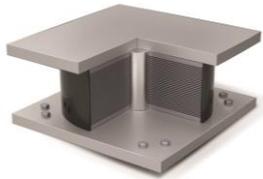
## Rubber Bearing

A bearing carries vertical load by contact stresses and accommodates rotation by deformation of the elastomer



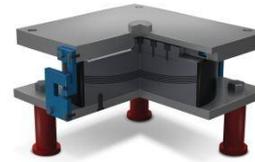
## Pot Bearing

Device for resisting horizontal and vertical load caused by the earthquake



## LRB (Lead Rubber Bearing)

Device can decrease seismic wave themselves and move with direction of earthquake



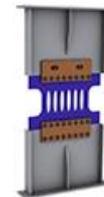
## Spherical Elastomeric Bearing

A spherical laminated steel & rubber plate which accommodate rotation and provide vibration & noise reduction.



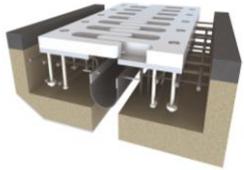
## High Damping Rubber Bearing

Dissipate energy up to 16% damping due to high damping rubber compound



## Safe Damper

hybrid type energy absorbing device that dissipates energy through plastic deformation of shear type friction damper



## Finger Type Expansion Joint

Consists of thick steel finger plates which are bolted to a steel edge profile using conventional anchoring



## Rail Type Expansion Joint

Device can accept creep and shrinkage displacement caused by temperature change



## Waterproof Finger Joint

Improved durability of bridges by completely eliminating the problem of waterproofing material damage caused by accumulated foreign matter



## Spherical Elastomeric Bearing

Minimizes internal structure change or thick increase to have high Sound Absorption of over 85%



## Mold Production

Mold is a frame to produce segment and PC products

# Test Equipment I



2,000kN Tester



	Load	Stroke	Speed
<b>Vertical</b>	2,000kN	±100mm	±100mm/sec
<b>Horizontal</b>	500kN	±200mm	±200mm/sec

30,000kN Tester



	Load	Stroke	Speed
<b>Vertical</b>	30,000kN	±200 mm	±100mm/sec
<b>Horizontal</b>	5,000kN	±1000mm	±20mm/sec

Thermal Chamber



Max Capacity	
Control Range	-30 °C ~ +70 °C
Size	5 × 4 × 3.7 m <sup>3</sup>



## Modal Testing Tower



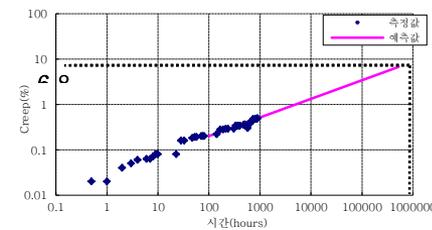
Specification	Application
5 <sup>th</sup> Floor 30 m (= 5 <sup>th</sup> x 6 m) 6m X 6m	Research on the vibration control method of high rise building caused by various loads like wind and seismic load

## DMTS(Material Dynamic Property Tester)



Force Range	±150N(Dynamic) ±1500N(Static)
Freq. Range	0.0001~100Hz
Temperature	-150 °C ~ +500 °C

## Creep Tester



# Test Equipment III



## Plant Component Quality Test



Paint Thickness Test



Standard Test



Load Setting Test



Variable Spring Hanger Performance Test



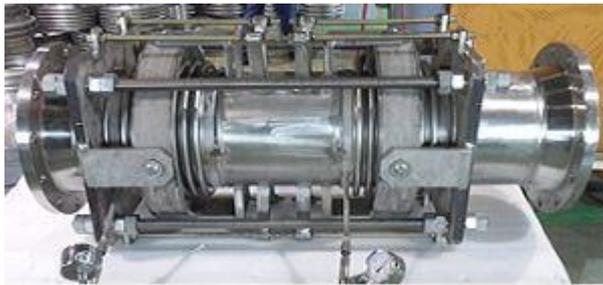
Constant Spring Hanger Performance Test



Constant Spring Hanger Monitoring



## Taketoyo Thermal Power Plant unit5 Project



**Type of Vessel: LNG FSRU**

**Client : DSME**

**Name of the Vessel: MOL FSRU Challenger**

**Item : Expansion Bellows for LNG Carrier**



## Taketoyo Thermal Power Plant unit5 Project



**Country : Japan**

**Client : MHPS**

**Project : Taketoyo Thermal Power Plant unit5**

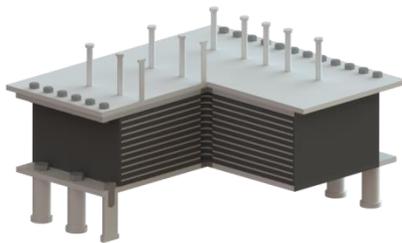
**Period: 2018. Aug**

**Item : Reinforced Rubber Expansion joint**

# Major Experiences III



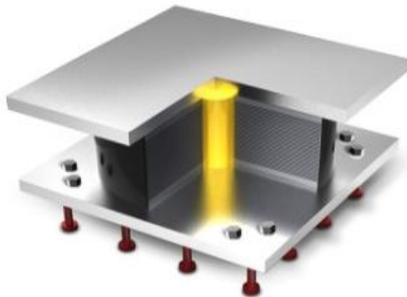
## Sheikh Jaber-Al Ahmad-Al Sabah Causeway project (Main & Doha link) RA140, RA214



**Country : Kuwait**  
**Client : MPW(Ministry of Public Works)**  
**Contractor : Hyundai E&C, CGCC & GS E&C**  
**Period: 2015 - Present**  
**Item : Elastomeric Bearing**



## Banegas Bridge Construction Project



**Country : Bolivia**  
**Client : Bolivia government**  
**Contractor : Hyundai E&C**  
**Buyer : BNG Consultant**  
**Period: 2014 - 2015**  
**Item: LRB**

# Major Customer



## Domestic



## Overseas



## End-User





## Plant Pipe Support



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## Construction



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## Plant Expansion Joint



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