

KOREA ENGINEERING CO., LTD.

Korea Engineering designs, engineers, installs, and services the best-in-class ignition systems for industrial boilers and gas turbines, supplying to major thermal plants with state-of-the-art products. We have expanded our product line to include Exciters, Cable Leads/Rods, Spark Plugs, and Pilot Burners, providing high-performance and cost-effective solutions for domestic and international customers.





KOREA ENGINEERING CO., LTD.

Company name	Korea Engineering Co., Ltd.	Address	156, Siheung-daero, Geumcheon-gu, Seoul, Republic of Korea
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Foundation date	August 27, 1997	Fax	+82. 2. 862. 8416
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History

- 1997.08. – Founded Korea Engineering and registered the factory
- 2005.10. – Established Research and Development department
- 2005.12. – Attained ISO 9001
- 2007.06. – Obtained New Excellent Product (NEP) [Igniter Spark Plug for Gas Turbine and Igniter Cable Lead]
- 2010.06. – Obtained Function Certification [Ignition System for Thermal Power Plant Turbine (D.C type)]
- 2010.06. – Obtained Function Certification by Ministry of SMEs and Startups [Ignition System for Thermal Power Plant Turbine]
- 2010.07. – Renewed New Excellent Product (NEP)
- 2014.12. – Extended and relocated Korea Engineering
- 2017.02. – Certified as 5 companies of power generation equipment qualified company [Manufacture Burner Igniter]
- 2017.04. – Converted to corporation
- 2018.04. – Attained CE Marking [Ignition System]
- 2018.12. – Registered Function Certification [Ignition reliability improved industrial Ignition System through the discharge frequency adjustment, self-detection, and duplexed Ignition System]
- 2019.01. – Obtained AEO (Authorized Economic Operator)

Major Performances in Domestic Market

Customer	Project
Korea Western Power Co., Ltd.	Pyungtaek (B.C Burner) #1~4 Ignition System, (Gas Turbine) #1~4 Ignition System
	Seoincheon (D.O Burner) #1~8 Ignition System
	Taeon (D.O Burner) #1~6 Ignition system, IGCC gasification plant ISUB Igniter and support
	Gunsan (Gas Burner) #1~2 Ignition System
Korea Midland Power Co., Ltd.	Boryung (D.O Burner) #1, 2, 8 Ignition System, (GAS Turbine) #1~8 Ignition System
	Jeju (B.C Burner) #2, 3 Ignition System, (Gas Turbine) #1, 2 Ignition System
	Incheon (Gas Turbine) #1~4 AC Ignition System, (Gas Turbine) #5, 6 Igniter Torch System
Korea Southern Power Co., Ltd.	Hadong (D.O Burner) #1~8 Ignition System
	Busan (Gas Turbine) #1~8 Ignition System
	Namjeju (D.O Burner) #1~8 Ignition System
Korea South-East Power Co., Ltd.	Yeosu (B.C Burner) #1~2 Ignition System
	Samcheonpo (D.O Burner) #3~6 Ignition System
	Youngdong (D.O Burner) #1~2 Ignition System
	Bundang (Gas Turbine) #1~8 Ignition System
	Youngheung (B.C Burner) #2, 3 Ignition System, (B.C Burner) #5, 6 Igniter Rod & Spark Plug
Korea East-West Power Co., Ltd.	Honam (D.O Burner) #1~2 Ignition System
	Donghae (D.O Burner) #1~2 Ignition System
	Ulsan (Gas Turbine) #1~6 Ignition System
	Ilsan (Gas Turbine) #1~6 Ignition System
	Dangjin (D.O Burner) #1~6 Ignition System
Korea District Heating Corp.	(Suwon branch) Ignition System 8set, (Chungju branch) Ignition System 6set
POSCO Energy (Incheon)	#5~9 Igniter Cable & Plug
GS Power Co., Ltd.	#1~3 Ignition System
SK Energy	Power team Ignition System, FCC Ignition System
Jeonbuk Energy Co., Ltd.	Ignition System 4set
Korea Gas Corporation	(Incheon branch) 1st factory SCV ignition system duplexing ignition system (Samcheok branch) Ignition System 2 set
DHI (Doosan Heavy Industry)	Sinboryung development headquarter Oil burner igniter
Head office of POSCO Construction	Ignition System 1set

Major Performances in International Market

Year	Country	Customer	Project
2018	Indonesia	Cirebon Electric Power	1 X 660 MW Cirebon Project / Spark Plug
2018	Saudi Arabia	Hyundai Heavy Industry Co., Ltd.	SSPP / Igniter Spark Plug
2018	Mongolia	Thermal Power Plant – 2	Sample for Test / Ignition System
2018	Pakistan	FFBL Power Company Limited	FPCL 118 MW Coal Power Plant
2018	Chile	PIEM PJT, SK E&C Co., Ltd.	Sample for Test / Cable Lead
2017	Mexico	Ingenieria, Control	Ignition System for Gas Turbine
2017	Iran	PalaMachine	Spark Plug Assembly
2016	Saudi Arabia	Hyundai Heavy Industry Co., Ltd.	SSPP/ Igniter Spark Plug
2016	Vietnam	Doosan Heavy Industry Co., Ltd.	VT4 Oil Burner Igniter
2016	Saudi Arabia	Hyundai Heavy Industry Co., Ltd.	JSTPP / Igniter Rod, Spark Plug

Igniter Exciter

(Output voltage supply device)

Electronic Switch System Applied

Due to high dependency in discharge tube, the existing products need the periodical discharge tube replacement because of short shelf life of discharge tube and unstable output voltage. The discharge tube is not economical due to high dependency in import, the care is needed because the radioactive substances are contained. Our company adopted the electronic switch system that performs the same function with discharge tube to resolve these issues. Through this system, we can secure at least 10 years shelf life increase by providing the stable output voltage and frequency.

Self-detection Function and Spark Display Light (Spark indicator)

This product can release signals in a power-free contact format with 'self-detection function' when the sparks are normally emitted. The spark indicator is displayed through LED, if the sparks occur normally, flickering repeats. In case of malfunction, lighting is maintained. The status of spark occurrence can be checked through these two functions.

High Energy Type

The shelf life of ignition system of other company is easily reduced because high voltage over DC3kV is emitted. It also causes the problems such as spark failure due to the insulation destruction generated from cable, connection, and rod. To ease these issues, we used DC2.2kV which is relatively low, elevated the spark energy by increasing the capacity of condenser and applied High Energy Type.

Spark Rate Selection Type

Spark rate of existing products occurs the single time product (3 sparks per second), this product adopted 6 sparks per second basically used. We arranged to increase up to 24 sparks per second for the assured ignition success under adverse conditions such as cold start-up. In addition, we adopted the selection type which can select the spark rate within 1-24 sparks per second according to user's request, our products have the function which can ignite with various fuels.



Igniter Spark Plug

(Output voltage generation device)

Seal Improvement

In the past when spark plug sealing technology was short, there were frequent cases in which the product performances are lowered due to condensation, cable damage, and other debris penetration. Our company has improved the performance of products, in case of long term used products through perfect sealing under the pressure of 20kg/cm².

Inducing Voltage by Low Resistance Conductor (Semi-conductor) Coating

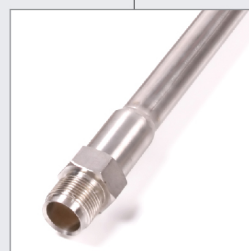
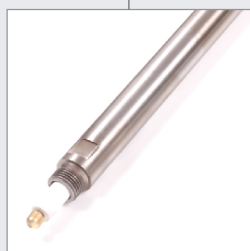
Existing Air Gap Type product had the spark issues on the part where insulation is destructed when the output voltage of Igniter Exciter is delivered to Igniter Spark Plug. To solve this, we applied the type to induce voltage despite of the insulation destruction through low resistance conductor coating in the Igniter Spark Plug end.

Various Connection Types Applied

We can manufacture the customized Igniter Spark Plug by checking the site and referring the actual products.

Heat Resisting Alloy Steel Used

It is proved tip end part directly exposed to high temperature flame for a long time is the most important factor that reduces the life cycle of spark plug. To compensate this, we designed to extend the life cycle of Igniter Spark Plug by using Inconel with excellent high temperature anti-corrosion.



Igniter Cable Lead

(Output voltage delivery device)

Teflon Coating

If the sparks occur, fine remaining currents occur in the body. At this time, if the contact resistance is generated due to the contact between flexible and other facility, it causes the problem to generate spark in the relevant part. The Teflon coating is added to prevent the insulation destruction, so it can prevent spark and protect flexible at the same time.

Various Connection Type

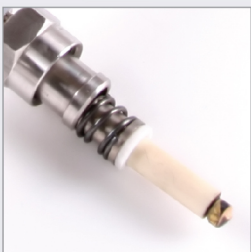
Igniter Cable Lead delivers the voltage from Igniter Exciter to Igniter Spark Plug. It can be manufactured with various wire connections. The mainly sold connection types include Surface Contact Press type, Pin connection system, Jack connection, and MS-connection. It can be ordered according to user's convenience.

High Voltage Cable

Our products have heat resistance up to 250 degrees, use the cable with very high specification compared to the features of products which use DC2kV.



HE Cable



Flexible Assy'y



Igniter Exciter Redundancy Controller

Duplexing of Ignition Exciter

It is a device that monitors the abnormal signal of power free contact type of ignition exciter, and auto switches the master operation into slave, so reliabilities such as accurate signal detection and rapid switch speed are important in this device.

Auto-switch Function with Self-diagnosis Feature of Igniter Exciter

As a device to monitor the abnormal signals in the power free contact form of Igniter Exciter and auto-switch the Master operation into slave, the reliability including the accurate signal identification and swift switching procedure is important.

Order of Operations

The operations such as auto, master, and slave is possible by simple button selection, with easy troubleshooting and maintenance.

Display Function

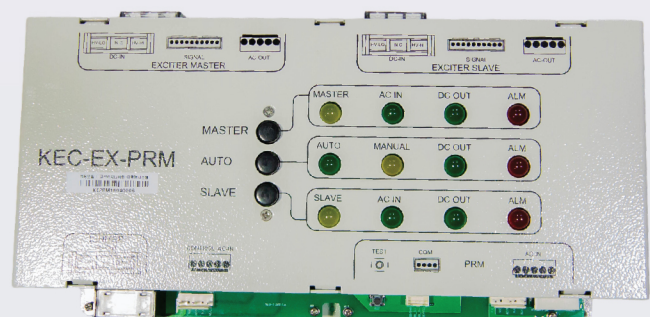
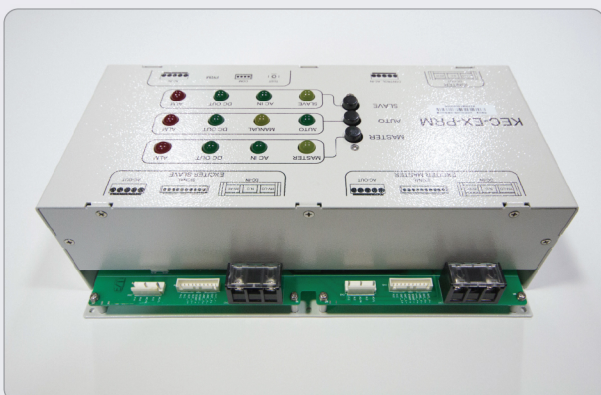
Because LED lamp that can identify currently operating location and flow is mounted, the status of operation can be checked externally.

Self-test Function

The power of duplexing controller can be utilized as operation power of ignition system, simple operation test is possible by simple button operation. However, it applies only when duplexing controller permanent power is used.

By-pass Function

Igniter Exciter Redundancy Controller is a device in which accessories are added in the existing Ignition System. Although maintenance points are increased, it doesn't influence to the operation of Ignition System despite of failures with by-pass function.





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