TESI GROUP

Ignition Systems

Lighting up innovation

ABOUT TESI GROUP

With over 40 years of expertise, TESI designs, manufactures and distributes products and accessories for the **energy, oil & gas, petrochemical** and **chemical** industries.

Our production is divided into three main business areas:

- **Heat Shrinkable Products**
  for corrosion protection of pipes.
- **Pipeline Equipment**
  for pipelines' construction projects.
- **Ignition systems** for industrial burners.

Continuous **research and development** of new solutions, **full cooperation** with customers, **efficiency** and **precision** in execution are the strengths that have enabled the company to succeed in these four decades.

The great flexibility of the structure and the **ability to deeply understand customers needs** make TESI a reliable partner providing superior solutions all over the world.

IGNITION DIVISION

TESI leads sector of **industrial ignition**, proposing to customers **the widest range** of solutions available in this market.

Solutions designed and manufactured by TESI, assure **reliable ignition in most severe condition** granting huge savings of money to our customers.

TESI igniters portfolio, list 5 standard **High Energy power packs** able to provide always the most appropriate ignition solution for our customers.

TESI **High Energy electrodes** are available in 3 different outer diameters in order to allow our customer to find more easy the integration of **TESI igniter** even in small burners or very special applications without the real need to make changes on the burner's original design.

TESI spark plug range provides necessary tools for **all kind of needs** coming by the **combustion process**.

Temperature, corrosion, pressure, duration.

TESI main focus is to provide **special execution igniters**, proposing to our customers tailor made solutions, designed in order to achieve goals of **efficiency, reliability** and **safety.**

TESI partner you
with flexible solutions
for complex applications.

HIGH ENERGY DEVICES (H.E.)

TESI range of High Energy ignition devices is based on 5 different **High Energy powerpacks** able to deliver **from 36 Joules per second till 240 Joules per second**, providing always the most appropriate solution able to ignite **all kind** of gases, including heavy oils and other liquid fuels. TESI HE devices are also used to **replace** pilot torches and **directly ignite** main burners.

Spark generation is **not affected** by the presence of dirt or humidity on the electrodes fitted inside the burner. This because TESI spark plugs are properly sealed by semiconductor with **the most innovative materials** from aerospace industry.

TESI High Energy electrodes are available in 3 different outer diameters (12mm,14mm,17mm) in order to allow our customer to find **more easy** the **integration** of them even in small size burners or very special and difficult applications without the real need to make changes on the burner's original design.

Main features of High Energy devices

- Not affected by dirt or deposits onto electrodes coming by the burning process.
- Not affected by humidity or liquids (100% waterproof).
- Very reliable and long lasting.
- Maintenance free.
- High adaptability in all kind of burners even replacing old traditional ignition devices.
- Increase efficiency of the plant.
- Safer than traditional ignition devices.

IGNITERS FOR FLARES

TESI proposes a very innovative solution based on High Energy technology suitable to **ignite all kind of flares**, ground flares, tall flares and off shore flares.

Focus in flare market is that flares never shut down as they are serving **many processes** in the plants.

Shutting down a flare means always a huge loss of money.

TESI designes igniters suitable for flares focused on the following criteria:

- **Ignition unit** specifically designed to provide a good spark at very long distances till 500 mt.
- **Ignition cable** is designed to resist to high temperature and severe environmental conditions.
- **Ignition circuit special housing** filled with resin, 100% waterproof.
- **Easy and fast connection**, without any particular tool use, of ignition cable and ignition electrode, allow operators to make a safe and easy maintenance.
- High temperature and 100% waterproof **High Energy electrode** design grants always the best spark performance.

HIGH VOLTAGE DEVICES (H.V.)

High Voltage ignition power units represent **the most cost effective** ignition solution available in our range.

High Voltage igniters generate an electric arc delivering the output current from an **ignition transformer** (6 or 8 kV) to the **ignition electrodes**, or **spark plug**, that is often a simple rod wire insulated by ceramic insulator.

They are suitable to ignite mainly **gas fuels**. TESI provides a wide range of HV ignition devices and spark plugs, also suitable for **explosion-proof areas**.

PILOT TORCHES

TESI designes and manufactures a wide range of **gas fired igniters** (pilot torches).

Key factors of TESI pilots are **high reliability, low maintenance, compact design, flexibility** and **easy installation.**

TESI pilot range also proposes versions integrating the High Energy technology, providing to our customers the most important tools to achieve goals in terms of **efficiency** and **reliability** of their burners.

- **Compact design and flexibility**: dimensions and shape can be customized to match Client's request.
- **Easy and fast maintenance**: ignition and flame ionization devices can be easily disassembled without removing the complete pilot from the burner wall.
- **High Voltage** or **High Energy Igniter** version pilots are available, offering always the best solution to ignite burners.
- TESI pilots are provided in **forced** or **self-induced draft** combustion air supply versions, upon customer's need.

IGNITION CABLES

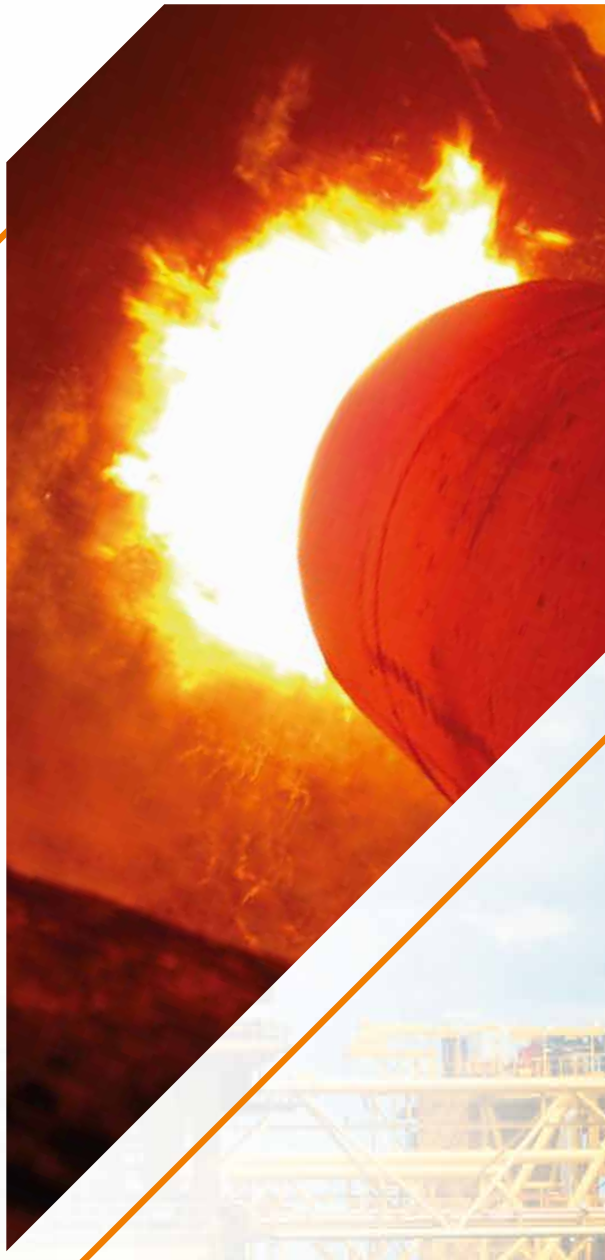
TESI designes and manufactures a wide range of ignition cables suitable for the application in petrochemical plants, and other **severe environmental conditions**.

Mainly, ignition cable need to **grant reliable service and performance** at high voltage, high temperature, corrosion, mechanical stress.

TESI ignition cables are available in robust **armoured design** in order to grant long lasting and top efficiency.

All TESI cables are available with **on demand length**.

For an easy and fast connection, TESI cable range provides also **quick couplings** version.



Your best partner to ignite any Combustion Process.

IGNITION ACCESSORIES

TESI proposes a range of accessories suitable to be used in combination with TESI ignition devices in order to **increase reliability, efficiency** and **flexibility**.

Pneumatic retraction devices with coaxial or side mounted actuators. In order to prevent spark tips damage from flames and corrosive atmospheres (for example in sulfur burners), TESI developed a smart and compact retractable device that can be easily mounted on standard ignition rods.

This device allows retraction of the spark tip in a protected area of the combustion chamber, once sparking is finished. On request, **HAZARDOUS AREA executions** are available.

Special **ignition electrodes with flexible portion** are available in order to make them suitable for tilting burners.

Available on demand **special execution flanges** and **adjustable sliding couplings** to ease positioning of igniters inside the burner.

Wide Selection of **spark push buttons** and **safety interlock switches** to make more user friendly and safe ignition operations.

Available on demand **Special design ceramic insulators**.

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