High Energy/Tension Ignitors
B.C.E. produces a wide range of industrial electric ignitors suitable for the light up of large industrial burners. The most powerful ignitors are based on high-energy systems developed over decades of experience in applications requiring safe and reliable operation, such as power generation plants and steam generating utilities.

The High Energy ignition systems are insuring a number of robust intermittent sparks realised by the energy accumulated by a capacitor, providing more powerful ignition capacity than high tension arc electrodes.

The HE series of BCE ignitors includes gas electric ignitors, light oil electric ignitors, without or with premixed air, suitable for continuous operation, as well as the direct spark ignitor for light up of heavy oil.

Usually the igniters are an integral part of the supply of burners or combustion systems but we can also provide the single pilot igniter as a part of new combustion system as well as revamping of existing systems.

The ignitors can be supplied with in-built flame scanners or ionisation flame rods, with automatic retraction drivers and with power supply units for installation in any environment and hazardous area.

High Energy Electric Ignitor has been capable to withstanding to every temperature which could be present inside wind box and which can be up to 350 °C, and the discharge head itself must withstand to the very high radiation temperature close to the burner flame. The B.C.E. unit is suitable for a maximum surface temperature of 750 °C at the discharge head.

The ignitor consists of three main parts, namely:

- Control Box, in which the power for the discharge is generated
- High Voltage Armoured Cable, used to carry this power to the ignitor itself
- The Special Ignitor End, at which the discharge occurs across a semi conductor gap

We can provide ignitors for a wide range of application and for any kind of industrial process as industrial boilers for steam/power generation which burners where installed on boilers front wall or at boilers corners (tangential combustion), refinery or industrial furnace, thermal oxidizers and process heaters and so on.
PILOT DATA

- Materials: carbon steel, stainless steel
- Fuel: natural gas, refinery gas, LPG, propane, diesel oil
- Combustion air: up to 550 °C
- Premixing air: instrument/service air @ ambient temperature
- Gas pressure: 0.4 - 0.5 barg
- Premixing air pressure: 0.4 - 0.5 barg
- Liquid fuel pressure: 8 barg (min)
- Electrical construction: IP 65, Eexd IIB, Eexd IIC

PILOT BURNER TYPE

Any pilot igniter could be support flame detection if required.

Here below are listed our igniter models:

- **HE 168**  Is designed for intermittent use and is suitable for flame detection if required. It's normally used in the large part of our installation and where no particular characteristics are required.
- **HE 568**  As for HE 168 this pilot is designed for intermittent use, it can accept flame detection and we can provide either explosion proof execution or a system suitable for safe area; the principal difference is that such system is premixed type which is important to guarantee the flame stability in some cases.
- **Special**  We also provide a wide range of special ignitors different from our typical supply designed basing on Client’s specific requirements or for particular uses and plants where are required dimensions, materials or operating mode different from the above mentioned igniters.
- **HT 468**  If required we could also provide High Tension Ignitor which is self—aspirated type and therefore premixed type. The ignition power is provided by an electrical arc between electrodes (there is only transformer inside the Control Box supplied).

TYPICAL BCE SUPPLY

- Pilot igniter (High energy, high tension, premixed or non-premixed type with ionization rod)
- Control box for safe or hazardous area complete with flame amplifier where required
- High voltage armored cable
- Flexible hoses for fuel gas / fuel oil to pilot igniter, premixing air where is required, cooling air
- Flame detection system
- Piping and instrumentations trains
SOME REFERENCE

BONO ENERGIA - CCC (Abu Dhabi)  
3 units, mod. HE 168 A
DEMONT - Fenice Mirafiori (Italy)  
2 units, mod. HE 568 premixed type
ANSALDO BOILER - Petkim Petrokim Turky (Turkey)  
48 units, mod. Special for coal steam boiler
TORBAT SUGAR FACTORY (Iran)  
10 units, mod. HT 468

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