

Innovation - Quality - Experience - Reliability

To partner with **Electronic News Impianti** means relying on experts with high knowledge of the products and their applications.



Company Profile

Electronic News Impianti Srl

SOLUTIONS PARTNER

elenewsimpianti.it

Visit our web site



**ELECTRONIC NEWS
IMPIANTI**



Temperature is our habitat

We carry out our work, our passion; we strongly believe in team work.

The satisfaction of our Customers is our prerogative; the attention to detail, the formula of our success.

SERVICES

DESIGN

ENGINEERING

SUPPLYING

INSTALLATION

START-UP

TEST

MAINTENANCE

THERMOCOUPLES & RTD'S

THERMOMETRIC THERMOWELLS

SKIN POINT - VERTICAL MULTIPOINT

MULTIPOINT TEMPERATURE
SYSTEM - FIXED/REPLACEABLE

HLS - HEAT LINEAR SENSOR

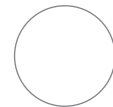
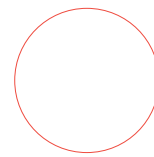
DTS - DISTRIBUTED TEMPERATURE SENSING

THERMOSPOT®

SYSTEM INTEGRATOR



PRODUCTS



ELECTRONIC NEWS IMPIANTI

Electronic News Impianti Srl is a flexible, dynamic company, operating in the field of thermometry and fire prevention. It comprises highly qualified figures with over 30 years of experience acquired in the Oil & Gas and Petrochemicals, energy and industry sector.

Our offer includes extremely flexible solutions, developed according to specific Customer requirements, and a complete range of services, including engineering, installation and maintenance, ensuring the Customer's satisfaction through a totally reliable and high quality turnkey service.

Thanks to our expertise we are often allowed to provide technical consultancies to improve the performance of commonly used technologies, so as to ensure an improvement of the production processes, the extension of the plants' life cycle and the consequent reduction of maintenance costs.

Electronic News Impianti operates in compliance with the Quality System laid down in the UNI EN ISO 9001:2015



CERTIFICATIONS

Quality in according to UNI EN ISO 9001:2015 rules.



THE MARKETS

Where our monitoring systems are applied.

CHEMICAL AND PETROCHEMICAL PLANTS

In the chemical and petrochemical industry high quality standards are required for the measuring instruments used in the processes. They must meet strict international regulations, such as PED, ATEX or SIL. We are able to offer a wide choice of products, on the basis of the different types of plants, that can be installed also in classified and potentially explosive areas. Our engineers have been fully trained in order to operate in any environment in which our intervention is requested, and thanks to many years of experience gained in the field, we are able to meet all the requirements of our Customers.

POWER PLANTS

The requests of measuring instruments are very different, just like their field of application. For hazard areas, in aggressive environments or in areas of high fire risk, our instruments can meet the strictest requirements. In Power Plants we put in place temperature monitoring and fire prevention systems on a turnkey basis, by adopting the best solution for each application. We often find ourselves offering both punctiform measuring instruments and continuous and distributed temperature reading systems, by integrating the various pieces of equipment with dedicated supervision applications, developed with software managed by us.

INDUSTRY

The numerous applications in the industry sector, make it necessary to have a wide variety of products, both standard or specific to the Customer or to the application. Being close to our customers is an essential part of our company philosophy. Our engineers often find themselves collaborating in close contact with the end-users, in order to meet their various requirements. Our purpose is to accompany Customers from the preparation of the technical specifications, supporting them in the installation and ensuring a relationship in time by means of multiyear maintenance contracts.

TEMPERATURE SENSORS



We are known in the field of thermometry for our high standards of quality, efficiency and reliability. We are able to offer standard products, as well as products on specific customer requirements.

Over time, our field experience has allowed us to offer solutions that are capable of solving any requirement submitted to us.

With our products we have made it possible for production processes to improve, by optimizing and extending the service life of the plants.

Thermocouples and RTD'S

We make any kind of thermocouple and thermoresistance from the simplest to the most complex one.

Thermowells

The choice of materials, increasingly resistant and long-lasting, combined with our experience in their processing, allows them to be used also with high pressures and temperatures.

MTS-FX & MTS-RP

The multi-point systems are able to measure temperature on a widespread basis.



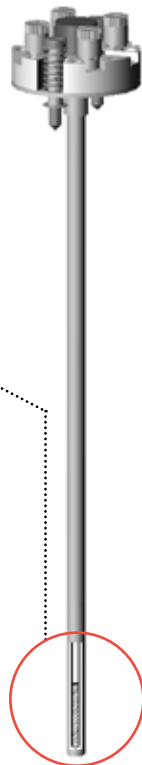
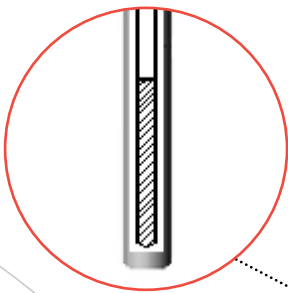
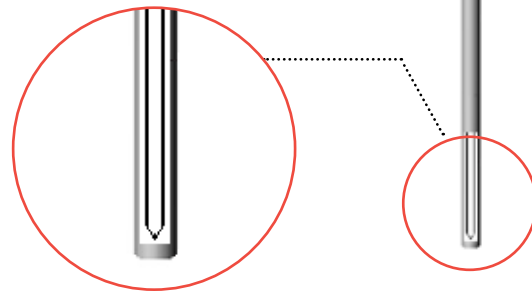
THERMOCOUPLES & RTD'S

Thermocouples

We are able to make any type of thermocouple, from the simplest to the most complex one.

We use modern welding methods and thanks to a continuous search for special materials, we have lengthened the operational use of the measuring instruments themselves. Our broad portfolio of products includes different solutions to suit the various applications.

Our products are submitted to numerous tests, which are carried out both internally and in certified laboratories, to ensure that they meet all the relevant safety requirements.



Thermoresistances RTD

As well as for the thermocouples, we have reached a high constructive quality also for the thermoresistances, meeting the precision standard IEC 60751 class A.

The RTD are very accurate and they are characterized by their long-term stability.



THERMOWELLS

The choice of increasingly resistant and long-lasting materials, combined with our experience in their processing, have led to important results.

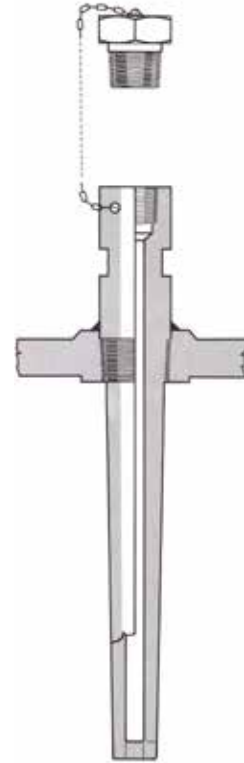
In spite of the fields of application in which they are submitted to very high pressures and extremely high temperatures, their performances meet our customers' requirements.

The thermowell protects the sensor from mechanical and chemical damages and from thermal shocks caused by the process, increasing sensor durability.

The tangible advantages of using appropriate thermowells, can be noticed in the cost reduction for the maintenance of the fitting, in the optimization of life cycle costs thanks to the possibility of replacing the components while the plant is operating, in the improvement of the quality of the products and in the greater safety of the plant.

They can be supplied with threaded, weld-on, compression fitted or flange mounted connections to the process; they can be obtained from a tube or from a solid bar; there is the possibility to choose from a wide selection of metallic or ceramic materials.

We carry out vibration calculations according to the ASME PTC 19.3 regulations, we check the seal at high pressures by means of tests with penetrating liquids and X-ray verifications.



MULTI-POINT TEMPERATURE SYSTEM

In the petrochemical industry, there is an increasing need for a highly accurate determination of temperature profiles, thus reducing plant downtime as much as possible.

Thanks to the know-how of our team of experts, we have developed two different typologies of multi-point systems: the MTS-FX and the MTS-RP.

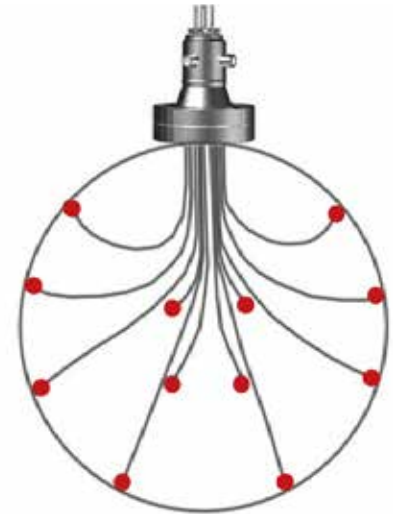
The MTS-FX is a system formed by a variable number of thermocouples, which are welded directly to the process coupling flange or to the sealing disc inside the chamber, or a mechanical seal is created by means of a double-lock joint. This solution has the advantage of ensuring a quicker response time, but in case of breakage of one or more thermocouples it is not possible to replace them.

The MTS-RP is a system formed by a variable number of thermocouples, each with an external protection sheath (a thermowell), which is welded directly to the process coupling flange or to the sealing disc inside the chamber. With this solution it is possible to replace the single elements also with the plant in operation and to ensure greater seal reliability at high pressures.

Depending on the working pressure, the outlet of the reactor thermocouples can be made with traditional sealing systems, that is with locking joints, through welding using the Laser method or TIG, or, in the presence of very high pressures, with a chamber seal system, devised to contain the process gas in case of the breakage of one or more thermocouples, ensuring a high safety level to the plant and to the personnel assigned to maintenance.

The configuration and the dimensions of the chamber depend on the number of thermocouples fitted. Above a certain volume, the chamber must be PED certified. Usually these complexes are made according to specific Customer requirements, depending on the dimensions of the reactors in which they are to be installed and their positioning.

Electronic News Impianti is able to offer a complete service which includes consultancy, the project management, the supervision of the installation, the installation, the start-up and maintenance.



LINEAR SYSTEMS



These systems arise from the need to increase the safety of plants, of the assigned personnel and to ensure prompt interventions wherever there are high risks of overtemperatures or fires.

The theme of prevention is increasingly becoming the focus of production plants. For this reason, our work is not limited only to the supply of products, but we propose a complete offer, which over time makes us a trusted partner with whom one can collaborate and find each time the ideal solution.

Over time the need to monitor temperature in a distributed way has increased. The advantage of the systems that meet these

Over time the need to monitor temperature in a distributed way has increased. The advantage of the systems that meet these characteristics are the possibility of viewing the thermal profile in real time and the prevention of overtemperatures and fires.

Thanks to high performances we are able to optimize production efficiency and extend the service life of plants, by providing useful information on the state of the monitored equipment.



LONG DISTANCE

These systems permits the temperature monitoring also at long distances.

● Heat Linear Sensor - HLS

The HLS measures the highest temperature in the section concerned. The HLS-Low Temperature is an excellent fire prevention system, the HLS-High Temperature is an efficient system to monitor process temperature.

● Distributed Temperature Sensing - DTS

By using optic fibres we are able to trace thermal profiles over long distances with extreme accuracy. These systems are particularly suitable to detect micro leaks.

HEAT LINEAR SENSOR - HLS

The linear heat sensor, is a technology that is capable of monitoring temperatures in a continuous and distributed manner, along all its length.

The linear heat sensor consists of two K type alloy conductors, insulated by a negative thermal coefficient mineral oxide which, when temperature increases in any point along its length, decreases its resistance simulating a virtual hot joint. That will be the point the relative temperature of which will be displayed.

With the help of dedicated instruments that are necessary to linearize the signal, the temperature that will be read will be the highest of the segment concerned. It is moreover possible to establish and programme two different action thresholds, a pre-alarm and an alarm, and to set periodically a continuity test to ensure its integrity.

Complete with the electronics, the HLS becomes an intelligent and dynamic system, with multiple fields of application, for the control of temperatures in production processes as well as in the field of overtemperature or fire prevention.

It requires no power supply, it is considered a passive element according to the NFPA 504.2 regulations, and for this reason it can be installed in classified and potentially explosive areas. It is immune to magnetic fields, easy to install, and mechanically very resistant.

Operating temperatures:

HLS-LT: from -20°C to $+130^{\circ}\text{C}$
(hot-spot not exceeding 300°C)

HLS-HT: from -20°C to $+400^{\circ}\text{C}$
(hot-spot not exceeding 900°C)



APPLICATIONS



REACTORS

Temperatures monitoring of the external surface reactor and generation of alarms on over temperature or in case of presence of abnormal thermal-trends compared to the standard thermal cycling caused by the failure of the refractory material.

FLOATING ROOF TANKS

The seal, for the continuous mechanical movement vertically and for the corrosive agents contained in the product, usually hydrocarbons, it suffers a deterioration in time that causes the emission of vapors released by the stocked product. The Heat Linear Sensor system, for its technical/constructive and functional characteristics, is a system of absolute reliability able to offer big advantages. Not only that, but through the continuous monitoring of the temperature near the seal, you can provide valuable information to the operator about the wear of the seal, allowing to intervene prior to the occurrence of a critical situation.



ELECTRIC BOARDS

The Linear Sensor is mounted into the perimeter of the room and directly into the electric boards. The advantage is the possibility to set a pre-alarm and an alarm to prevent the risk of fire.

SHIPS

In the boat the engine-room must be protected and monitored 24 a day. A problem occurring on the engine could generate enormous damages to the boat and consequently to the company itself. Our Linear Sensor can control all the temperatures distributed inside the engine and in all the mechanical gear/device to prevent any over-heating problem.



DISTRIBUTED TEMPERATURE SENSING - DTS

The measurement principle is based on the optical detection of backscattered light induced by spontaneous Raman processes involving inelastic scattering, and is based on techniques exploiting optical time domain reflectometry (OTDR).

The opto-electronic interrogation unit sends pulses along the sensing fiber, where the pulse duration determines the spatial resolution of measurement, and the back-scattered Raman radiation, carrying information on fiber temperature, is photo- detected with high temporal resolution.

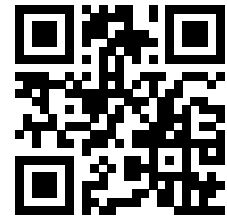
The system performs multiple scans of the fiber and a large number of averages while ensuring fast acquisition of the order of few seconds. The system consists of an opto-electronic interrogation unit and the fiber-optic cable that can contain multiple singlemode and multi-mode fiber, and accompanying accessories such as electrical panels, extension cables, protection boxes.

The sensing element is the optical fiber itself, which is inserted inside properly designed cabling, allowing for an efficient interaction with the surrounding environment and enhancing the fast detection of temperature profiles along the structures to be monitored.

In addition, the used cable typically allows for an easy installation, and no active electronic components along the measurement area are required. Along the cable, the measurement is inherently immune to electromagnetic field interference (EMI), as well as to fiber cable deformations, and is insensitive to moisture and/or corrosion, as well as being fully compatible with the current ATEX regulations.



**WATCH THE VIDEO
DTS**



Elenewsimpianti.ti



APPLICATIONS



PIPELINES

Leakage Detection

To detect oil leakage the sensor must be installed under the pipeline, (often underground) and when a leakage of oil is occurring the system will detect a change in temperature's level in that specific area. Usually there are permanent differences between temperatures of oil and underground but due to season's cycle and different environmental areas crossed by pipeline, it's necessary to fit the sensor to the environment as well as possible to clean our detection from potential fake-alarms.

COAL CONVEYOR

Auto-combustion of coal: Often the coal coming from the boat has high temperatures inside and sometime it start an auto-combustion process. For this reason it's very important to detect temperatures and hot-spot along the coal conveyor, before that coal arrive to the hopper. Mechanical friction: Mechanical gears of a coal conveyor are subjected to overheating process due to mechanical friction aggravated by the "packing effect" of the coal posed around the gear that doesn't let go away the heat generated by mechanical friction.



TUNNELS

In many countries tunnel's safety is under national regulations; in many European countries fiber optic technology has been selected as one of the best solution for fire detection. Our DTS system is able to detect all the temperatures distributed along the tunnels. It's possible to know in real time all the temperatures meter by meter and to receive alarms in case of hot-spot everywhere along the tunnel and moreover we always know where is located the hot-spot. For this reason DTS solution is used for medium/long tunnel because we need to know where is the heat-source in an accurate way.

DRILLING

Drilling activities in Oil & Gas market need to know the vertical thermal profile of the underground at different depths. The best solution to get such information is to use a DTS fiber optic system based on RAMAN effect. DTS detects all the distributed temperatures, meter by meter, up top 10 Km and more, with a spatial resolution of 1 meter, with a temperature resolution of 0.1 °C.. We are available to develop customize DTS system in relation with drilling's needs and moreover in relationship with environmental condition during drilling activities: on-field system with appropriate power unit and other potable tools.



THERMOSPOT®



ThermoSpot® is a thermographic fire detection system capable of integrating up to 16 thermal cameras and various other points and systems such as HLS linear heat sensors.

With the user interface it can manage plant layout pages, various live signal acquisition pages, alarm pages and discriminate areas of interest (ROI).

The thermal camera is a temperature sensor with thermal image for applications regarding process control, fire prevention and for the monitoring of conditions, to offer complete visual temperature monitoring.

The use of thermal cameras integrates perfectly with HLS Heat Linear systems and together they provide a very high safety level to the monitored plants.



The thermal cameras produce images of exceptional quality at 327,680 pixel and low noise levels, capable of highlighting temperatures of only 50 mK. This will enable operators to easily trace temperature changes.

Very useful in the continuous monitoring of temperature and in generating alarms, they help in avoiding unplanned unavailability, interruption of services and damages to electrical and mechanical equipment. Compact and easy to install, they can uninterruptedly monitor electrical cabinets, production and process areas, data centres, power production and distribution plants, public transport companies, storage companies and warehouses of any kind.



APPLICATIONS



FUEL STORES

The storage of combustibles and fuels is notoriously dangerous because the product itself is highly flammable. Corrosion, leakages or human error can have explosive and sometimes catastrophic consequences. The automatic monitoring of the changes in temperature in fuel stores by means of thermal cameras can prevent disasters, meet the controls required by insurance companies and improve the safety of workers and of the public.

WAREHOUSES

Although warehouses are equipped with alarms and fire-fighting systems, once the fire has started spreading, material damages are practically certain. The thermal cameras can identify the hottest points before these can generate a combustion and provide a prompt response to avoid a complete fire outbreak, before the structures and goods are damaged or safety is compromised.



WASTE DEPOSIT

In the same manner as the applications for combustible stores, wastes can be potentially flammable when they are stacked. Spontaneous combustion, the development of heat due to pressure, spontaneous chemical reactions among wastes disposed of and methane gas formations, are all potential fire risks. The thermal cameras can help prevent fires, by identifying the hot points that can generate a combustion.

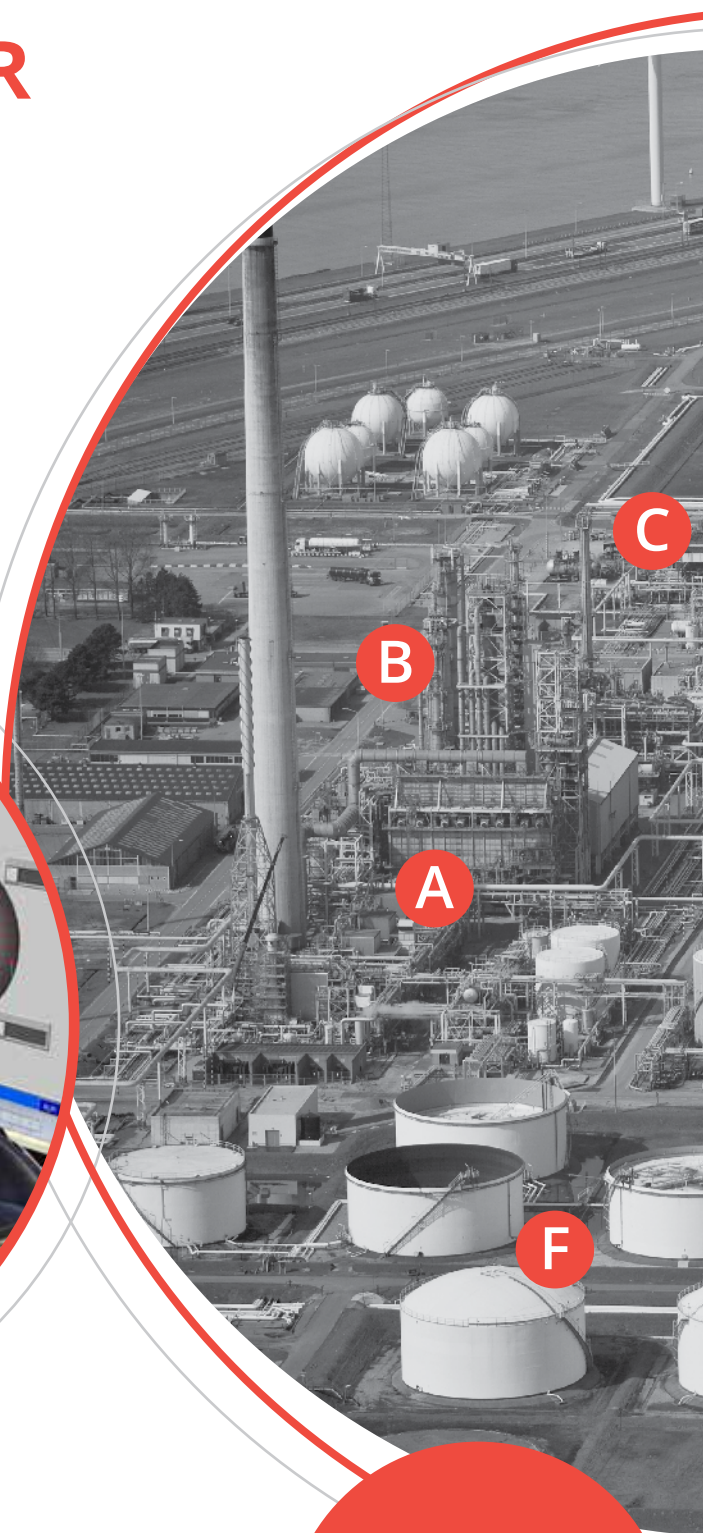
LADLES

The ladles for the smelting of steel have a limited life span. With wear or the cracks to the refractory linings caused by thermal shocks, the outer surface of the ladle can be exposed to excessive temperatures. If the problem is not promptly detected, the ladle may disintegrate, pouring the molten metal and thus putting at risk the life of the personnel and damaging precious equipment. The thermal cameras monitor the ladles in real time and give warning of the risk of breakage before this occurs.



SYSTEM INTEGRATOR

We have developed a dialogue platform with all our products and systems. The object is to offer to all our customers an unique, dynamic and open structure able to include and manage different instruments.



**ALL UNDER
CONTROL**

Our software will be the instrument with which you can make the most of the supervision of all monitored systems and to ensure maximum efficiency and safety.

**100%
SAFE
PLANT**



A

TC SKIN POINT
Furnaces

B

TC VERTICAL MULTI-POINT
Distillation columns

C

MULTI-POINT TEMPERATURE SYSTEM
Reactors

D

TC SPECIAL TYPE B or R
Syngas Reactors

E

THERMOSPOT®
Syngas Reactors

F

HEAT LINEAR SENSOR
Syngas Reactors - Tanks - Loading Stations

G

FIBER OPTIC SENSOR - DTS
Piping - Tanks

TOOLS

Electronic News Impianti has a broad range of field instruments for the transmission and linearization of signals coming from the various sensors and/or systems. Our instruments have very high performances in terms of reliability, quality and safety.

Our product portfolio includes:

- Temperature head transmitters to be fitted directly into the termination heads of the thermoelements
- Modular type temperature transmitters on DIN guide for front panel mounting
- Field temperature transmitters for direct connection in process areas
- Temperature transmitters for explosive areas (Ex)
- Field temperature indicators for classified areas
- Intrinsic safety multi-channel acquisition systems

CERTIFIED SAFETY

The instruments we use have obtained international approvals such as ATEX, SIL, IECEx and use various communication protocols such as HART, MODBUS, TCP/IP.





PREVENTION at FIRST SITE

REFERENCES

We guarantee safety at the plants of large, leading companies in the sector in the world.

Oven the years we have been chosen by:

CUSTOMER	SITE	DESCRIPTION
Enel Produzione S.p.A.	Power Plants Italian territory	Supplying and maintenance of monitoring temperature and fire prevention systems, thermocouples, thermoresistances, thermowells and related spare parts.
A2A Energiefuture S.p.A.	Monfalcone (Gorizia) Italy	Supplying of continuous thermocouple linear sensor for monitoring temperature and fire prevention Turbine Plant Gr. 1-2
Eni Refining & Marketing S.p.A.	Livorno - Italy	Supplying of thermocouples and thermometric thermowells
Eni Refining & Marketing S.p.A.	Livorno - Italy	Supplying of skin-point thermocouples, multiple thermocouples and thermometric thermowells
A2A Energiefuture S.p.A.	Monfalcone (Gorizia) Italy	Supplying and installation of fire prevention system areas: Turbine, Boiler, Transport and Coal Milling
Dixit GmbH	Alstom Power Saudi Arabia	Supplying of continuous thermocouple linear sensor with instrumentation for Boilers - end user Alstom Power Shoiba Plant - Saudi Arabia
A2A Energiefuture S.p.A.	Monfalcone (Gorizia) Italy	Supplying of spare parts for fire prevention system areas: Mills, Coal Silos, Turbine
Raffineria di Gela S.p.A.	Gela (Caltanissetta) Italy	Supplying and installation for adjustment of monitoring and fire prevention system tanks park
Sarlux / Saras S.r.l.	Sarroch (Cagliari) Italy	Verification and restoration of functionality monitoring temperature systems of skin reactor I301-R1/I302-R1/I303-R1 IGCC Plant
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Supplying of thermocouples for IGAS reactor
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Supplying of thermocouples, thermoresistances, thermometric thermowells and thermocouples for IGAS reactor
Versalis S.p.A.	Mantova - Italy	Supplying of thermocouples and thermometric thermowells
Viscolube S.r.l.	Pieve Fissiraga (Lodi) Italy	Supplying and installation of distributed control temperature of reactors Hydrofishing Plant
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Reconditioning of thermocouples for IGAS reactor
Enel Produzione S.p.A.	Power Plants Italian territory	Supplying and maintenance of monitoring temperature and fire prevention systems, thermocouples, thermoresistances, thermowells and related spare parts.
A2A Energiefuture S.p.A.	Monfalcone (Gorizia) Italy	Supplying of spare parts for fire prevention system Gr. 2-1

CUSTOMER	SITE	DESCRIPTION
Enipower S.p.A.	Ravenna - Italy	Supplying of thermocouples of exhaust turbine TG
Lukoil / Isab S.r.l.	Priolo G. (Siracusa) Italy	Supplying of spare parts of continuous thermocouple linear sensors for gasifier IGCC
Raffineria di Gela S.p.A.	Gela (Caltanissetta) Italy	Supplying of thermocouples, thermoresistances and thermometric thermowells
A2A Energiefuture S.p.A.	Monfalcone (Gorizia) Italy	Supplying and installation of fire prevention system for Corner Burner Boiler Gr. 1-2
A2A Energiefuture S.p.A.	S.Filippo del Mela (Messina) Italy	Supplying and maintenance of fire prevention system areas Boilers and Ash Gr. 5-6
Eni Refining & Marketing S.p.A.	Livorno - Italy	Supplying of thermocouples and thermometric thermowells
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Supplying of thermometric assembly for distributed control temperature of reactor
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Supplying of thermometric assembly for distributed control temperature of reactor
Pioneers Technical Co. Ltd.	Alstom Power Saudi Arabia	Supplying of continuous thermocouple linear sensor with instrumentation for Boilers - end user Alstom Power Shoiba Plant - Saudi Arabia
Raffineria di Gela S.p.A.	Gela (Caltanissetta) Italy	Supplying of thermometric assembly for distributed temperature control for reactor 307 R2000
Raffineria di Gela S.p.A.	Gela (Caltanissetta) Italy	Supplying and installation of monitoring and fire prevention system tanks park
Soiltec GmbH	Alstom Power Saudi Arabia	Supplying of continuous thermocouple linear sensor with instrumentation for Boilers - end user Alstom Power Shoiba Plant - Saudi Arabia
Sonim S.r.l.	Sannazzaro de B. (Pavia) Italy	Supplying and installation supervision of thermometric assembly for distributed temperature control for sulfur recovery plant
Sonim S.r.l.	Sannazzaro de B. (Pavia) Italy	Supplying of optical pyrometer for sulfur recovery plant
Eni Refining & Marketing S.p.A.	Sannazzaro de B. (Pavia) Italy	Supplying and installation supervision of skin-point thermocouples for furnace B1301
Shahig Company	Alstom Power Saudi Arabia	Supplying of continuous thermocouple linear sensor for Boilers - end user Alstom Power Shoiba Plant - Saudi Arabia



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**ELECTRONIC NEWS
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COMPANY PROFILE

Electronic News Impianti Srl

Company Profile V1.0/2019