Tenrony: Fortifying the Power Foundation for Construction Sites, Ensuring Efficient Project Progress

From the rising of skyscrapers to the steady advancement of crisscrossing infrastructure projects, every construction site is a vibrant battlefield. On this battlefield, reliable power supply is as crucial as blood. It drives the operation of tower cranes, the roar of concrete mixers, and the sparking of electric welders. What's more, it is vital to whether the entire project can proceed as planned and be completed within the budget. Tenrony deeply understands the power needs of construction sites. With robust, durable, and adaptable transformer and substation solutions, it provides stable and efficient power support for various construction projects, becoming an indispensable power guarantee partner for construction sites.

Key Power Challenges Faced by Construction Sites

The environment of construction sites is complex and changeable, and power supply faces many unique and severe challenges.
Temporary power demand is a prominent feature of construction sites. A construction project usually takes several months or even years from

groundbreaking to completion and delivery. During this period, the formal power grid system has not yet been built, so temporary power supply must be relied on. Moreover, the power demand varies greatly in different construction stages. From the initial site leveling and foundation construction to the mid-term main structure construction, and then to the later decoration, the power load keeps changing. How to accurately match the temporary power demand has become a major problem.

Flexible deployment of mobile substations is also one of the challenges. The construction area of a construction site is not fixed. As the project progresses, the construction focus keeps shifting, and the power supply points also need to move accordingly. Traditional power equipment is difficult to meet this dynamic movement demand, which may lead to power supply interruption or inefficiency.

The **harsh environment** of construction sites is a great test for power equipment. The construction site is full of dust and mud. In summer, it is exposed to high temperatures, and in winter, it is freezing cold. There may also be extreme weather such as wind, rain, thunder, and lightning. These factors will accelerate the aging and damage of power equipment and affect its normal operation.

Safety requirements are particularly strict on construction sites. There are dense personnel and numerous mechanical equipment on the site. Any failure of power equipment may cause safety accidents such as electric shock and fire, threatening the lives of workers and the property safety of the project. Therefore, power equipment must have extremely high safety performance and meet strict safety standards.

In addition, **minimizing downtime** is the core demand of construction sites. Even a short power outage of a few hours may lead to construction stoppage, project delay, and then additional labor costs, equipment rental costs, etc., which will have a serious impact on the project budget.

Tenrony's Targeted Solutions

Facing these power challenges on construction sites, Tenrony has launched a series of practical solutions relying on professional technology and rich experience.

To meet **temporary power demand**, Tenrony provides special mobile substations. These mobile substations have a wide range of power, can be flexibly allocated according to the power demand of different construction stages, and quickly connected to the temporary power grid to provide stable power support for the construction site. Whether it is a small building renovation project or a large complex construction project, a suitable mobile substation can be found.

To cope with the **harsh construction environment**, Tenrony has designed robust and durable transformers. These transformers adopt high-quality materials and advanced manufacturing processes, have excellent dustproof, waterproof, and corrosion-resistant properties, can maintain stable operation in extreme

environments such as high temperature, low temperature, and humidity, greatly prolong the service life of the equipment, and reduce failures caused by environmental factors.

In terms of **safety functions**, Tenrony's transformers and substations are equipped with multiple protection devices, including overload protection, short-circuit protection, leakage protection, etc. They can quickly cut off the power supply when the equipment is abnormal to prevent accidents. At the same time, the shell of the equipment is made of high-strength materials, which has good insulation performance and mechanical protection ability, effectively protecting the safety of workers and equipment.

Considering the particularity of different construction projects, Tenrony also provides **customizable solutions**. The professional technical team will deeply understand the specific needs of the project, including power load, construction environment, safety standards, etc., and design the most suitable transformer and substation scheme according to this information. Personalized customization can be carried out in terms of equipment size, power, protection functions, installation methods, etc., to ensure that the solution can perfectly meet the requirements of specific projects.

Case Studies: Practical Effects of Tenrony's Solutions

Uninterrupted Power Guarantee for Large Construction Sites

A large commercial complex project is under construction in a certain city. The project covers a wide area and has a long construction period, involving the simultaneous operation of many large mechanical equipment, so the power demand is huge and unstable. In the critical construction stage of the project, a power outage will cause serious project delay and economic loss.

Tenrony has provided multiple high-power mobile substations for the project. These mobile substations are flexibly deployed according to the construction progress and power demand of the project, and their positions are adjusted at any time as the construction area changes. During the operation of the equipment, Tenrony's professional technicians conduct regular inspections and maintenance to ensure that the equipment is always in good working condition. In a sudden power grid failure, the urban power grid temporarily cut off the power supply, but Tenrony's mobile substation quickly switched to the backup power mode and continued to supply power to the key equipment on the construction site, ensuring the smooth progress of key processes such as concrete pouring and avoiding major losses caused by power outage. During the whole project period, thanks to Tenrony's mobile substation solution, the power supply of the commercial complex project has always been stable and reliable, ensuring the project proceeds as planned.

Safe Power Supply for Sensitive Construction Projects

In a high-rise building project near a hospital, the safety requirements are extremely strict. Because the hospital has extremely high requirements for the stability and safety of power supply, the construction power of the building project must not cause any interference to the normal power consumption of the hospital. At the same time, the power safety during the construction process is also crucial, and any safety accident that may affect the hospital environment must be avoided.
Tenrony has customized a special transformer solution for the special requirements of the project. The transformer in this scheme adopts advanced shielding technology, which effectively reduces electromagnetic interference and ensures that the construction power will not affect the precision medical equipment of the hospital. At the same time, the transformer is equipped with multiple safety protection devices, including overvoltage protection, overcurrent

protection, grounding protection, etc. Moreover, the design and installation of the equipment strictly follow the safety specifications around the hospital. During the whole construction process, Tenrony's transformer operated stably, without any safety accidents, and did not cause any interference to the normal operation of the hospital. The high-rise building project was successfully completed, and its power solution was highly recognized by the project party and the hospital.

Whether it is the high-intensity power demand of large construction sites or the strict safety requirements of sensitive construction projects, Tenrony can rely on professional transformer and substation solutions to provide reliable power guarantee for construction sites and help the projects complete smoothly. If your construction project also has power problems, you may wish to consider Tenrony's solutions to make power no longer an obstacle to project progress.