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SUBSTATIONS



## Substations

In APFELBAUM INDUSTRIAL INC. we know it is difficult to have both high RELIABILITY and economical substations.

For this reason, we help you to choose among our large selection of substations the one to fit the requirements of your industry. At the same time we offer you the best deal of the market and the post-sale service.

We have transmission and distribution substations from 400, 230 Kv. down to 13.8 Kv. Automatic & digital tap changers, SCR Drives, Transformers, MCC's, and Switchgears.

Our top of the line products are custom made and 100% automatic to help you make the best investment. The Automation facilitates the local and remote monitoring, money saving in maintenance, besides it decreases technical loses, and are sized in compliance with your requirements and the relation benefit-cost to maximize the ROI.

In energy-generating plants, substations are the doors to the power network transmitting and distributing electric energy to users. Even though substations are only small parts within the complex electrical infrastructure, it is basically its design and specific functionality what defines the reliability of the energy generated.

Today's energy generation business requires solutions that proportionate optimized availability, maximization of reliability and functionality, and cost reduction over the useful life of the systems.

To achieve everything previously mentioned, Apfelbaum maintains a permanent process of consulting with the client in order to identify the optimal solutions for substations in terms of design, cost and reliability.

## Our scope of products include:

Power transformers in different sizes with automatic tap changers, customized cooling and digital multifunction systems.

SF6 Vacuum and air circuit Breakers. Its installation is quick and easy, the field job is limited to remove the packing and anchor the breaker to the foundation. Using an SF6 container, the circuit breaker tanks and bushings are filled according to the operation's pressure, the control and power terminals are connected, making the circuit breaker ready for its final Inspection and field test by the user.

Now a days, the Vacuum circuit breaker module is forsure one of the most innovative & competitive products of its type. This product is available for voltage from 13.8 Kv. up to 34.5 Kv for your substations.

Air circuit breakers can be used as general protection breakers ( for plants, complex use, electric lines) and as protection breaker for electrical machinery (generators, motors, transformers, capacitors). The circuit breakers vary from 600A to 13.8 Kv.

Station Lighting arresters type Zn O are adaptable to any environment regardless temperature or current condition. These are designed to support freezing down to –50° C and ice, as well as hot temperatures up to +50° C, its design is adequate to support earthquakes and dusty environments. Their metal discs are well known for its high energy capacity, and excellent characteristics over its useful life.

We also have other types, we have silicon and polymer lighting arresters. These are easier to install because of its light volume, in addition it has the ability to support seismic zones.

We count with a wide variety of switches like air break switches, center switches, disconnect switches, double jaw, cut-out switches, ground switches. These are versatile enough to comply with the electrical industry's requirements in disconnect switches with voltages from 13.8 Kv up to 400 Kv.

We supply double jaw switches, which reach 38 Kv to 362 Kv, 600 to 2000 Amperes in capacity. Besides having aluminum jaws, these are carefully manufactured in order to comply with ANSI Standards. These are adequate for the by-pass applications and magnetic switch breakers.

## **OPGW Cables**

OPGW proportionate a new telecom- munications line utilizing optic fiber inside aluminum and stainless steel tubes which go within the OPWG cable on air transmission lines.

OPGW cable combines the ground cable of the air transmission lines with the optic fibers that make communication possible. Optic fibers are designed to resist short circuits, lightning and strong winds. For this rea- son this cable complies with the specifications, electrical and mechanical standards equivalent to the conventional ground cable.

Dielectric Applications High Capacity CATV network (WAN) Construction from 2 to 144 fibers single mode & multi mode

**Telecommunication Systems:** 

- Power Cables Specialty Cables
- Multiplexers
- Communication nodes
- RTU's
- Real Time Software



## MCC

Automatic Switchgears and MCC's through PLC's

- Communication nodes and multi- plexers
- RTU's
- I/O Modules
- . ĤMI
- Hardware: Terminals, connectors and joints
- SF6 Terminations
- Thermo contractile Terminations

Our stainless steel Motor Control Center is the only one with 100 % of Al. A solution for feeder installation starters, controllers, relay, and their determined logistics. We offer to the industry hermetic MCC NEMA 4X and 100 % corrosion resistant manufactured on 304-316 stainless steel in all of its parts. This product is designed to comply with chemical, petrochemical, water treatment plants, of-shore's demands.

