

“Surge Protection Is Our Business”



we “ARE” the standard

Protecting Electronic Infrastructure  
Around the World

Warranty


Unlimited, free replacement warranty for the life of the warranty. Never any proration. Always full replacement and you always receive the benefit of the latest technology available in the industry from ECS.



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Ft. Worth, Texas 76163

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Cascade  
Protection  
with  
SineTamer<sup>®</sup>  
in Variable  
Speed Drives  
in the  
Petroleum  
Industry is  
the New  
Standard.

Energy Control  
is a global  
company  
with over 24  
years of  
experience  
in the SPD  
and electrical  
power quality  
industry.

Some of our Petroleum and Petroleum related clients:



## BENEFITS

- Reduced downtime
- Reduced differed production
- Reduced inventory of replacement parts
- Improved profitability
- Reduced erratic information
- Radically reduced lightning related downtime
- Industry leading cascade protection
- Frequency Attenuating circuitry for protection of critical electronic equipment
- Insured proper operating environment for all electrical/electronic equipment
- Unprecedented 15, 20, 25 year Free replacement warranty – including lightning
- Medium voltage units up to 6900 volts

## CONCLUSION

For more than two decades, we have been providing solutions to power quality problems in all kinds of industries. through these endeavors, we have become extremely proficient at designing systems that maximize profitability in the petroleum production sector. contact us today to find out how we can put our designs to work for your petroleum production efforts.

## CASCADE PROTECTION WITH SINETAMER® IN VARIABLE SPEED DRIVE FOR ELECTRO- SUBMURGIBLE PUMPS.

Every year in a western Venezuelan oilfield, an interaction of electronic equipment within the electrical environment happens - to which every single oil field around the globe is also vulnerable. There are significant losses of oil production, due to damages found in electronic components mainly after severe electrical storms. The Variable Speed Drives which are feeding the electro-submurgible pumps are found to be most susceptible to failures of this nature. This also affects generators, transformers, breakers, wiring and grounding.

In the U.S. alone, a recent study by IBM showed that power quality problems cost U.S. businesses more than \$15 billion dollars a year. That's an average loss of \$125 million dollars a month or \$79,000 per company.

## REACT OR PRO-ACT?

Electronic Maintenance in most oil production scenarios is typically reactive, almost never proactive. Preventive maintenance has virtually dissipated. There are no "tests" to ascertain when or if a surge protector is going to fail or when a rectifier board in a VFD is going to "die". But it happens... and it happens always at the most inconvenient time.

Quite often we are caught in the reactive mode due to lack of information regarding specific downtime causes. Unfamiliarity in many cases has us "throwing" money at the issue in hopes that something will stick and solve the problem.

## REFINING AN EXISTING TECHNOLOGY

Energy Control Systems is a global company with over 24 years of experience in the SPD and electrical power quality industry. We are proud to offer the industry's most complete and capable line of high quality Surge Protection Devices (SPD's) for Industrial, Commercial and Telecommunication applications.

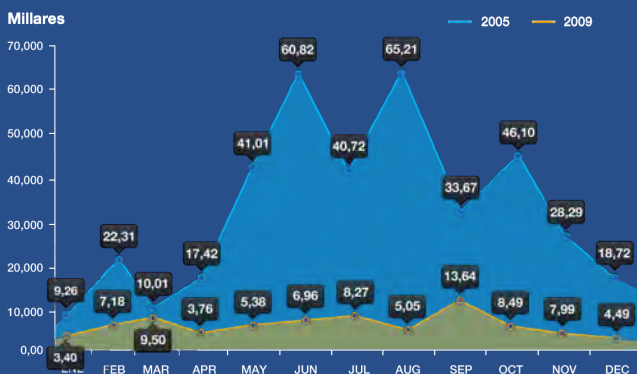
Our SineTamer® products are currently installed in almost 50 countries. Our factory is ISO 9001:2008 certified. Our laboratory is a certified UL 3rd party test facility. Our product offerings are from 5vdc-900vdc, 5 vac-6900 vac, telecom, data, video and custom design OEM products. Our current distributor network includes regions through out South America, Central America, Africa and ongoing negotiations in other Asia/Pacific and Middle Eastern regions.

## REFINING AN EXISTING TECHNOLOGY

Our over twenty years of hands on, real world field experience can be seen in the simplicity, functionality, and user friendly design of all our products. Simply stated these are the finest, highest quality, best performing surge suppression products available in the world. We offer Fourth Generation Protection for Critical electrical equipment. Variable Frequency Drives, Electro-submersible pumps (ESP), PCP applications (progressive cavity pumps), electronic actuator valves, flow meters, Programmable Logic controllers, Well monitors and tank sensors.

## CASE STUDY OF PETROLEUM PRODUCTION.

Petroleum Company: Downtime/Differed Production before Implementation of Cascade/Frequency attenuating topology.



Total Differed Barrels Eliminated - 679,652  
 Revenue created from those barrels - \$49,350,540  
 Percentage of savings directly related to this protection concept - 65% Or over \$32,500,000 over three years.

	2005	2006	2007	2008
Yearly Total	393,488	261,385	160,384	79,073
Monthly Average	32,791	21,782	13,385	7,907
Daily Average	1,078	716	439	263
Additional Barrels Pumped		233,114	233,114	314,425

## Summation: We make Company's More Profitable.

Lightning is not the only issue. It is not IEC v. IEEE. It is the right topology in the right location installed properly. The 20th century's protection technology is not sufficient anymore. Surge protection can produce increased profitability and can be more than mere electrical room ornamentation.

We consistently and effectively improve the profitability, reliability and operation performance of all electrical and electronic equipment by reducing downtime and failures of these systems through effective elimination of destructive voltage transients with the coordinated installation of SineTamer® systems. Reductions in electronic maintenance have been documented to attain 80% in many locations, installations and situations.

## THE INGREDIENTS TO OUR SUCCESS.

### Let Through Voltage

Accurately produced and published – as you would expect to receive when installed in your refinery. The number one reason to invest in TVSS is to get the best possible let through voltage – in order to get the best environment for your electronic systems. We unashamedly publish exactly how our units perform under installed conditions. No gimmicks such as testing without connecting wires or at the lugs. We are always honest, fair and accurate. Our global team possesses more combined real world working knowledge and dedicated customer support than any other.

### Frequency Attenuation Network™ – in all modalities

This the cornerstone of what we offer. Ring-wave transients as identified and described in the ANSI standard C62.41.2-2002 are without a doubt the most disruptive, annoying and damaging entities to microprocessor based systems found everywhere and in almost everything. These ring-wave type transients – low/high frequency events – impinging on the fundamental frequency, create havoc in microprocessor based equipment. In doing so, they create circuit board stress and contribute to software confusion as they can often occur at zero crossings of the sine wave.

### Discrete – all mode – component design

In 3 phase Wye systems we provide surge dissipating component arrays in every possible wire configuration – L/N, L/N, N/G and L/L. In doing this we can effectively disperse and spread any incoming surge throughout the entire SineTamer® network, rather than on one or two sets of components.

### High Dielectric Encapsulant

The usage of our carbon/petroleum based resin is vitally instrumental in preserving the longevity and performance level of our hybrid network circuit board. Its usage now allows you to have more compact circuit designs, resulting in reduced lead lengths and increased performance. It also allows for closer mounting to service panels. Our compact enclosures can be closer to the protected equipment. It also allows for dispersal of a portion of the transient energy as heat throughout the entire circuit board rather than a small component.

The effective implementations of SineTamer® frequency attenuation network systems provide the electrical “environment” for these types of systems. The random lockups, resets, and re-programs can now be understood and virtually eliminated with SineTamer® products.

