For immediate release!

Press release contacts:

Technical contact:
Angela Summers
P: 281-922-8324 x14
E: asummers@SIS-TECH.com

Company contact:
Shauna Ponton
P: 281-922-8324 x43
E: sponton@SIS-TECH.com

HIPS Applications Benefit from SIS-TECH's Diamond-SIS™ Non-Programmable Electronic Logic Solver

HOUSTON, TEXAS (August 2006) – SIS-TECH, a premier provider of safety instrumented system products, training, consultation, and engineering services, has expanded its Diamond-SIS™ non-programmable electronic logic solver to address the high-availability requirements of High Integrity Protection Systems (HIPS).

Diamond-SIS is a cost effective, stand-alone, logic solver that is easy to test, simple to maintain, while providing the high-availability required of HIPS applications. It has been certified by Factory Mutual (FM) as fit for use in HIPS applications up to and including Safety Integrity Level three (SIL 3).

Jim LeMarr P.E., I/E and Controls Manager with Valero Energy Corporation says, "We use SIS-TECH's Diamond-SIS logic solvers because they can be implemented to interface with legacy single loop controls and hardwired annunciator panels thereby supporting remote control and data acquisition without introducing new and unfamiliar hardware into older process unit settings. We especially like that Diamond-SIS is a mix of proven relay logic design, key proprietary components, qualified systems engineering, while permitting some customization opportunities to meet our packaging and interface requirements."

Using a 2oo3 (two out of three) voting scheme, SIS-TECH's HIPS solutions provide users with a fault tolerant, non-programmable electronic logic solver that is physically and functionally independent from both the basic process control system (BPCS) and the safety instrumented system (SIS).

Bryan Zachary, SIS-TECH's product director says, "With its 2oo3 voting architecture, on-line diagnostics and testing capabilities, SIS-TECH's HIPS solution meets the fault tolerance and average probability of failure on demand that is required of any HIPS application and easily exceeds the performance of traditional relief device solutions."

Dr. Angela Summers, world-renowned SIS expert and SIS-TECH's founder and president says, "Relief devices, such as rupture disk and relief valves, do not rely on the BPCS or SIS, thus relief devices provide an independent protection layer. Because SIS-TECH's HIPS solution is completely independent from the

BPCS and SIS, it too qualifies as an independent protection layer, thereby eliminating the common cause issues that plaque the placement of multiple HIPS in a single safety system logic solver."

Each SIS-TECH HIPS solution supports analog or digital sensor (input) signals. Its two field-adjustable setpoints allow shutdown to be executed for high and low input signals. Process variables and system-generated alarms can be remotely displayed using optional serial or hardwired communication capabilities.

Its 5 Amp rated relay output can de-energize multiple final elements, including motor control circuits and/or solenoid-operated valves.

Process startup (or re-start) is aided through local or remote manual reset capabilities. The capability to connect the HIPS unit to a local and/or remote manual emergency shutdown (ESD) button is also available.

The system can be powered from 24VDC, 110VAC, or 240VAC and it is available with redundant power supplies and/or an uninterruptible power supply (UPS).

SIS-TECH's HIPS solutions are constructed for installation in Class 1, Division II areas and it has an operational temperature rating of –22F to 167F (–30C to +75C).

ABOUT HIPS:

For some applications, the use of a pressure relief device is impractical or infeasible. Examples of applications suitable for the Diamond-SIS include:

- The pressure relief device is routed to a relief system (relief valves or header) that is not adequately sized to mitigate a single or multiple relief scenario.
- Pipeline protection where piping has been under-specified by design to reduce cost or to accommodate physical limitations, and relief devices are not adequate or cannot be routed to a safe location.
- Pipeline protection where existing manifolds and piping is used to connect to higher pressure wells and where submersible pumps are used to raise the pipeline pressure to reach long distance collection points or to increase production rates.
- Pipeline protection where the existing pipeline is de-rated as a result of corrosion or erosion.
- Exothermic reactions that can "run away" (develop pressure) at rates faster than the relief device is capable of reducing pressure.
- Polymerization or depositing of materials during normal operation that historically have resulted in partial or complete relief device blockage.
- Reactive process chemicals that when they are relieved into common headers may interact with other materials in the header, thus plugging the header and rendering the relief device useless.

In such applications, the use of a pressure relief device provides questionable risk reduction resulting in a need to utilize other overpressure protection methods to achieve the necessary risk reduction.

In order to use an SIS as a means of providing vessel overpressure protection, all of the following conditions must exist:

a) The vessel is not exclusively in air, water, or steam service.
b) The decision to utilize HIPS for vessel overpressure protection is the responsibility of the user.
c) The user must ensure the maximum allowable working pressure (MAWP) of the vessel is higher than the highest pressure that can be *reasonably* achieved by the process.
d) The HIPS must be designed and managed to be:

> 1) Independent of the potential initiating causes for overpressure;
> 2) As reliable as the pressure relief device it is "replacing;" and
> 3) Capable of detecting unacceptable process condition and achieving a safe state of the process within one-half the available process safety time.

To learn more about high integrity protection systems visit http://www.sis-tech.com/technical_resources.html and read SIS-TECH's paper titled "High Integrity Pressure Protection Systems." This paper is included in the *Instrument Engineers Handbook*, Volume 3, Chapter 2, Section 6.

ABOUT SIS-TECH:
SIS-TECH, founded in 1999 by Dr. Angela Summers, is comprised of an engineering entity, SIS-TECH Solutions LP, and a product entity, SIS-TECH Applications LP.

SIS-TECH's slogan, "We're proven-in-use®" is the result of its extensive list of alliance customers ranging from large corporations to small specialty manufacturers in the refining, chemical, petrochemical, gas processing, and production industries.

SIS-TECH Solutions LP focuses on providing cost competitive engineered solutions that are designed in accordance with international safety standards such as IEC 61511/ISA 84.01-2004.

SIS-TECH's consultants apply risk based assessments to design complete lifecycle solutions that meet or exceed the intent of the latest international good engineering practices as well as incorporating the client's operability and reliability goals.

SIS-TECH's engineered solution offerings include, Compliance Programs, Risk Analysis, Alarm Management, Design, Verification, Programming, Commissioning, Validation, Training, Proof Test Supervision, and Hot Cutover Assistance.

SIS-TECH Applications LP commercializes technology based on the unique designs developed by SIS-TECH Solutions' consultants and engineers.

SIS-TECH products use field-proven components to achieve the high reliability and integrity required of today's instrumented system application, while providing cost effective, proven performance.

SIS-TECH products use field-proven components to achieve the functionality required for applications such as Burner Management Systems (BMS), High Integrity Protection Systems (HIPS), Automated Testing Packages, and Diagnostic Packages.

To learn more about SIS-TECH, visit http://www.SIS-TECH.com/sis_tech_home.html