

Robust and innovative technology designed to guard buried pipelines, communication lines and other assets, regardless of length

Detects potential theft, vandalism, sabotage and 3rd party damage and alerts authorities before damage occurs

Easily integrated into a full turnkey security solution, including perimeter intrusion protection, ground or air patrol and alarm monitoring and control

PipeGuard (patent pending) is an innovative, covert security system, designed to protect underground pipelines and other buried assets, from terrorism, theft, vandalism and third party damage.

Based on state-of-the-art advanced technologies, PipeGuard provides a unique intrusion detection system ideally suited for underground security applications at Communications Sites, Pipelines, Refineries, Border Service Agencies, Correctional Facilities, Government Facilities & Agencies, Research Laboratories, and many more.

THE PIPEGUARD CONCEPT

PipeGuard is a covert intrusion detection system designed to generate an alarm when a real and concrete threat is identified. PipeGuard does not change site aesthetics and the detection field is invisible, so attackers are unaware of PipeGuard's presence and cannot locate, avoid, or tamper with it.

PipeGuard combines geophones with advanced-technology recognition algorithm capabilities based on the analysis of seismic signals to effectively filter out false alarms. This intelligent signal processing provides a high Probability of Detection (Pd) and an extremely low False and Nuisance Alarm Rate (FAR/NAR).

PIPEGUARD'S TECHNOLOGY

- Sensing Units (SU) are installed at distances of 200 to 300 meters apart and are buried just below the surface. The SU's can be installed either directly over the pipe or within an offset of up to 10 meters. Enclosed in a self-contained, sealed anti-corrosion container, SU's are powered by a lithium battery pack designed to guarantee full operation for 5 years in wireless mode.
- Each SU is equipped with a unique ID address, which enables system operators to add and modify system parameters and perform remote software upgrades. Depending on the site's geographical characteristics, PipeGuard offers several methods to securely transfer the alarm message from the SU to the operator: wireless RF, wired, or a combination of both.
- RF communication is based on the spread-spectrum technology using UHF P - Band frequency with a very low grade power, which enables the system to comply with civilian or military constraints.

PipeGuard Pipeline Security System

- Reception of the raw seismic signal is achieved using several Geophones in a row, highly sensitive to the frequency domain that is typical to the act of digging.
- The location of the identified threat is derived from accurate measurements of the seismic signal at each sensor. This technique filters out signals that are outside a predefined range on both sides of the pipe, and therefore decreases the false alarm rate to a minimum.
- Using state-of-the-art communications, only validated alarms are transmitted to the control station
- The identification algorithm of the system guarantees a level of confidence of up to 99% within a 1-minute time frame.

FUELING SECURITY

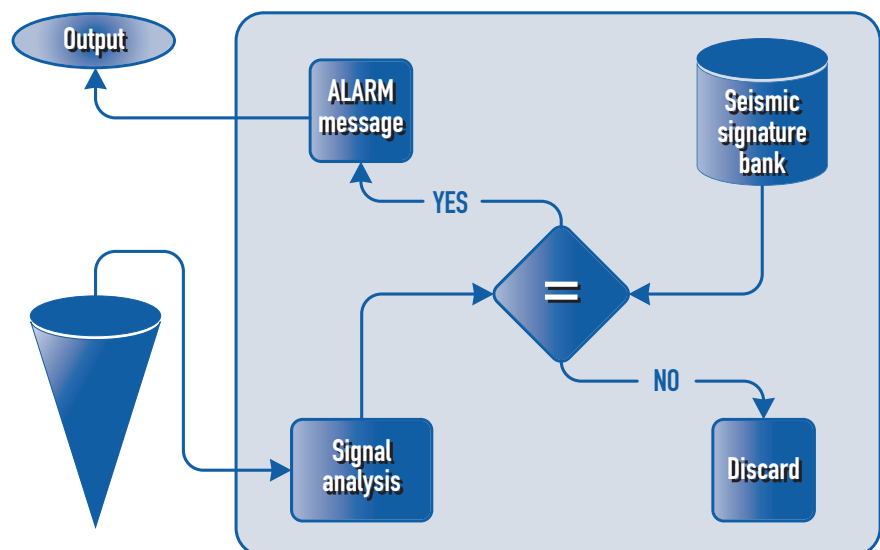
PipeGuard is suitable for securing all types of pipes or cables, from existing operational pipelines and communication lines, to newly constructed ones. This system is easily integrated into a full turnkey security solution, including perimeter intrusion protection, ground or air patrols and alarm monitoring and control.

- Robust and innovative technology designed to guard buried pipelines, and communication lines, regardless of length.
- Detects potential theft, vandalism, and sabotage and alerts authorities before damage occurs.

PIPEGUARD COMMAND & CONTROL

The command and control software displays alarm messages transmitted from the SU's. This appears as an overlay on a map or an aerial photo on the operator's system terminal. Messages sent from an SU with its unique ID address can automatically be displayed on any remote terminal. By presenting the alarm data in this mode, the system operator and intervention team all have access to the same information in real-time, which is essential for immediate intervention and damage prevention.

BASIC LOGIC FLOW OF A "SENSING UNIT"



ISO 9001:2000
CGSB Registered
Certificate 95711

INTERNATIONAL
Senstar-Stellar Corp.
119 John Cavanaugh Drive
Carp, ON K0A 1L0
Canada
Tel: (613) 839-5572
Fax: (613) 839-5830
info@senstarstellar.com

UNITED STATES
Magal-Senstar, Inc.
43180 Osgood Road
Fremont, CA 94539
Toll Free: +1 (800) 676-3300
Fax: +1 (510) 249-1540
mkt@magalsenstarinc.com

UNITED KINGDOM
Senstar-Stellar Limited
Orchard House
Evesham Road
Broadway
Worcs., U.K. WR12 7HU
Tel: + 44 (1386) 834433
Fax: + 44 (1386) 834477
senstaruk@senstarstellar.com

LATIN AMERICA
Senstar-Stellar Latin America,
Pradera No.214
Col. Pradera
Cuernavaca, Morelos
62170, Mexico
Tel: + 52 (777) 313 0288
Fax: + 52 (777) 317 0364
info@senstarstellar.com.mx

EUROPE
Senstar GmbH
Riedheimer Str. 8
88677 Markdorf Germany
Tel: + 49 7544-95910
Fax: + 49 7544-959129
info@senstar.de



Senstar-Stellar is
represented by dealers
in over 75 countries.

www.senstarstellar.com