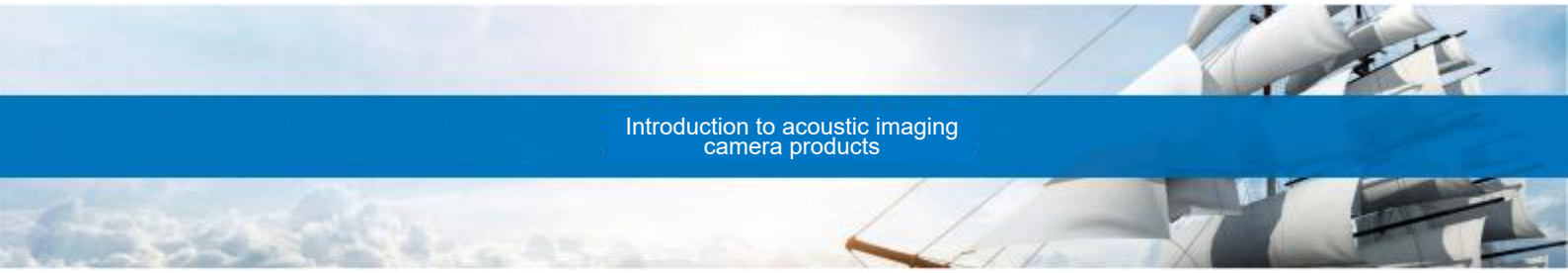


acoustic imaging series products

Beijing Garexon Technology Co., Ltd.



Introduction to acoustic imaging camera products

acoustic imaging camera principles

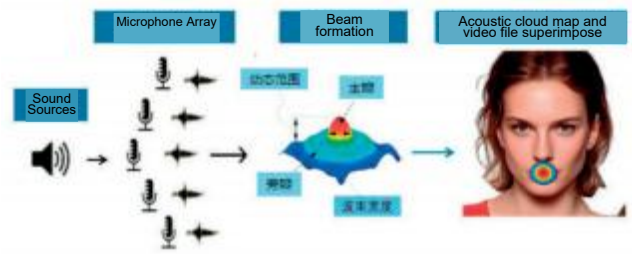
acoustic imaging camera, also known as the Acoustic Camera, uses an audio array

It uses acoustics.

Electronics and information-processing techniques, so that the sound images and arrays can be assembled

Like a video image of a head folded in a transparent way, converted to

It's visible. Image.



Product Overview

The VS128N series ultrasound imager, using a high-sensitivity 130 channel mic array, has been working on a series of microphones, which have been set up in the past few years.

partial discharge, which is primarily used to detect gas leaks with pressure and electrical insulation. **It's designed to make a difference.**

Light lamps, which are used for the detection of the weak light environment, and have external sensor functions.

In order to increase the durability of the equipment, the structure and circuit design take into account the need for blast protection.

So some models can be used in blast-proof environments. (Please ensure that the product purchased is of blast-proof type).



Industry applications



Electricity



Chemical, metallurgy

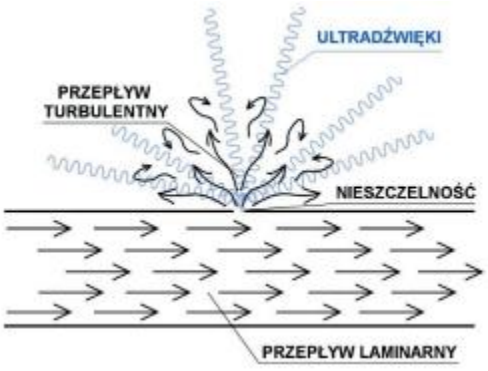


Manufacturing, processing



Oil, gas.

Gas leak



Gas leaks with a certain pressure differential (including vacuum leaks and high pressure leaks, etc.), leaks

A vortex is generated near the point, which causes ultrasound.

The frequency of the leaking ultrasound and the size of the leak hole, the pressure differential, etc., are relevant, usually at 20.

Between 40kHz.

Experiments have shown that the size of the leakage rate has a certain correlation with the level of sound pressure detected, if

Determines some variables (e.g., detection distance, pressure, transmission media, etc.) so that they can be heard

The pressure scale directly assesses the leakage rate.

partial discharge

partial discharge (partial Discharge, PD) refers to electroshock penetration occurring within a local area of an electrical device, insulation material or system.

In high voltage conditions, local electric field intensity increases due to defects in the insulation system, filth, bubbles, cracks, etc., leading to electroshock penetration.

partial discharge can cause local damage to the medium (especially organic media). If partial discharge is in place for a long time, it can cause insulation under certain conditions.

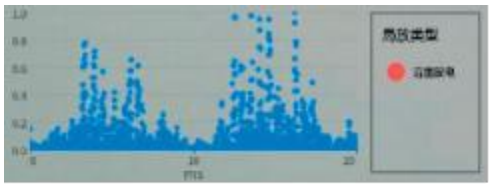
So, detecting and monitoring partial discharge is one of the important tasks of protecting electrical equipment and insulation systems.

Show partial discharge sound data as a dot map, a time in a horizontal axis, a discharge strength in a vertical axis, and get PRPD, which shows the size of the power supply.

The PRPD pattern of the different types of partial discharge is different, and local distribution can be determined by its characteristics.

The type of electricity.

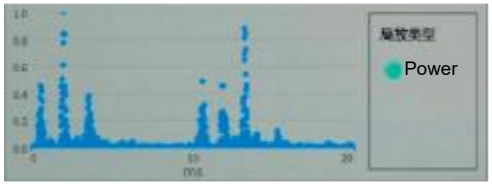
Common partial discharge type



The discharge along the line is the phenomenon of partial discharge near the surface of the medium.

It started with a sudden, dot-like discharge, and then it could expand along the surface.

Long-shaped discharge path.

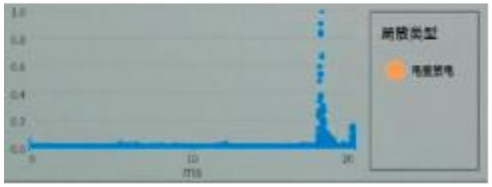


Suspended discharges usually occur in a vacuum or gas environment.

When the electrodes were charged,

There's no path or reference level power to discharge, and the level of the electrodes will increase.

There's a discharge on the surface of the electrodes.



电晕放电是一种高电压下发生的放电现象，常见于空气或气体环

It's the power field that's stronger than the gas. It usually happens.

High voltage guidance lines, the tip of the electrode.

acoustic imaging camera ' s Large Characteristics of 6

Test distance

Effective measurement range 0.5m-100m





Precision

Minimum detection of the 5-10dB failure point, earlier detection of the hazard





Smart Recognition

The type of discharge can be identified through PR PD mapping





Space scanning, rapid positioning

60 ", high-efficiency screening of failures or deficiencies





Visible, Recordable

Supporting photo, video, data export, better than traditional means.





Quantified testing, guiding decision-making

Real-time assessment of leakage rates and estimation of economic losses





The microphone.	
Number of microphones	130 Channel
Number of microphones	High sensitivity digital microphone
Measurement frequency	
Test acoustic pressure range	30dB- 120dB
Frequency range	2kHz-65kHz, range adjustable
Sample frequency	130kHZ
Measuring sensitivity	
Valid Test Distance	0.5m- 100m
Measuring precision	±1cm
Equipment	
Equipment weight	1.86kg
Total size of equipment	255*190*45mm
Protection level	IP56
Body material	Aluminium alloy + fallproof design
Show/Touch Screen	
Resolution	1024*600 (Colour)
Dimensions	10 Inch Capable Touch screen
Camera	800 pixels
Battery	
Batteries continue.	6h, single.
Charge duration	4h is full of electricity.
Data processing	
Data interface	TIF card/USB/Type-C
Internal storage capacity	128GB+8GB
Software functionality	
Assessment of leakage rates	Real-time assessment of leakage rates and showing corresponding economic losses
Photo function	You can take photos to record the location of the failure point.
Video function	Recordable video recording of information on the location of the failure point
Playback	Can view recorded failure point information
Cursor indicator function	Show the sound pressure level of the cursor
Smart Noise Reduction	Automatically filter sound signals outside the focus frame by opening focus frames
PRPD Map	partial discharge type assessed
FFT spectrum	Fast Fourier algorithm. Support for offline analysis.
Lighting	
1W patches	Easy to use in darker scenes

Audio series products (Supplified demand)

可根据不同行业的用户，将设备做成在线监测式、巡检挂载式等形态，并可开发针对性的应用软件，如车间巡检功能、

Line inspection functions, etc., can also integrate simple sensor applications such as thermal imaging, leak detection, noise analysis, etc.



Low temperature application: Fits below-257



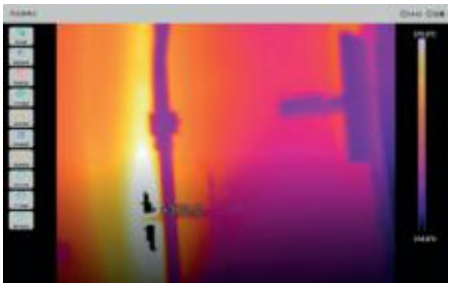
Mounted products: robotics, UAV and online monitoring applications



Single-handed application, lightweight



Single function, higher value.



Thermal imaging integration, multifunctional applications



Explosive-proof products, detection of flammable and explosive gases

Chemical industry applications



Nitrogen leak.



Carbon dioxide leakage



Oxygen leak.



Mixed gas leak



Nitrogen leak.



The acetylene leak.

Manufacturing applications cases





Compressed air leak





Mixed gas leak

Case of natural gas applications



Gas flange leak.



The gas instrument is leaking.

Cases of electricity applications



Main grid high-voltage towers.



Main grid high-voltage towers.



Main web transformer set



High pressure distribution cabinet.



Net transformer set



It's a pole tower.

Application of acoustic imaging camera for air-classified detection

Use active acoustic sources for air-container testing

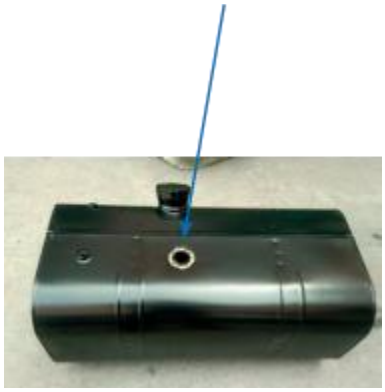


Place special multihedron acoustic sources on the test pair

I don't know. And then shut down/sealed the normal entrance and exit.

acoustic imaging camera for various seals/welds

Wait, the imaging point is the sealed weakness point.





Norma
l



Seam sealing problem: will cause leakage



Seam sealing: Confirm leak.



Seam sealing problem: will cause leakage



Seam sealing: Confirm leak.



Breathhole: It's smoking.



Console sealing problem:

It's not malfunctioning, but impact detection.



Welding problems:

It will cause a spill. Need to return to work



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