GEOLOGICAL, GEOPHYSICAL, GEOTECHNICAL SERVICES AND INSTRUMENTS



# ULTRASONIC VELOCITY MEASURING SYSTEM FOR ROCK SAMPLE

# SonicViewer-SX



### <Abstract>

The SonicViewer-SX is an instrument for the ultrasonic wave velocity measurement of rock samples.

It is possible to read the P and S wave propagation with high accuracy, because it contains high voltage (500V) pulser and receiver which consist of 12 bit/ 50nsec A to D converter. It can calculate dynamic Poisson's ratio, dynamic elastic modulus and dynamic shear modulus by built in software. It's based on the Windows XP with color display, Hard disk drive, USB2.0 ports with higher quality and reliable field performance.

#### <Features>

- Propagation time can read from wave form of P and S with high accuracy.
- High resolution and high speed 12 bit/50nsec A to D converter available.
- Built in software available for calculate of dynamic
  Poisson's ratio, dynamic shear modulus etc.
- The measured data can be stored in large capacity of internal hard disk.
- A mouse can be used with this unit.
- High brightness, large screen (10.4 inch) XGA/TFT color display has been adopted.
- Signal stacking function improves the S/N ratio and widen its applicability.

## <Specifications>

#### Transmitter

Output voltage	: 500V		
Pulse width	: 6µsec±2µsec		
Receiver			
Input impedance	: 1MΩ		
Gain	: 1, 2, 5, 10, 20, 50, 100, 200		
Frequency range	: 10 – 1000 KHz		
Low pass filter	: 200 KHz		
A/D resolution	: 12 bit		
Sample rate	: 50, 100, 200, 500, 1000, 2000nsec		
Data length	: 1024		
●System			
CPU	:ULV Intel Celeron Processor 400MHz		
Internal HDD	: 80GB		
Memory	: 256MB		
Interface	: USB2.0 port $ imes$ 3 (Front 2, Rear 1)		
Display	: 10.4", XGA/TFT color LCD		
Power requirement	: DC12V (10.5V to 13.2V)		

: 330 x 270 x 220 mm

: 8kg

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Sonic Vi	ewer-SX		
Ven	1.03E 99/02/0	01	
P-wave ID.No.:	101		
S-wave ID.No.:	102		
Length :	5.01(cm)		
Density :	2.650(g/cm3)		
P-time :	9.20(uS)		
S-time :	19.15(uS)		
P-velocity :	5446(m/S)		
S-velocity :	2616(m/S)		
Poisson's ratio	(vd) = 0.3	350	
Shear modulus(G	id) = 1.88	ōe+O5 (kgf/cm2)	
Elastic coeffic	ient(Ed) = 5.00	De+05 (kgf/cm2)	
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10			10
15			
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<Example record>

# <Option>

Dimensions

Weight





Please note specifications are subject to change without notice for the improvement.

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