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 consists of 10 bit, 50nsec A to D converter.

In addition, input of the parameter of length and density of the rock sample previously, then it can calculate dynamic poisson's ratio and dynamic shear modulus by built in software.

#### <Features>

- Propagation time can read from wave form of P and S with high accuracy.
- High resolution and high speed 10 bit, 50nsec A to D converter available.
- Built in software available for calculate of dynamic poisson's ratio, dynamic shear modulus and dynamic elastic coefficient.
- Data storage feasible on HDD and 3.5" FDD.
- High brightness and large screen (10.4 inch) VGA LCD display has been adopted.
- Signal stacking function improves the S/N ratio and widen its applicability.

## <Specifications>

## Transmitter

Output voltage : 500VPulse width :  $6 \mu$  sec

#### Receiver

Input impedance :  $1M\Omega$ 

Gain : 1, 2, 5, 10, 20, 50, 100, 200

Frequency range : 10 – 1000KHz Low pass filter : 200KHz, 1000KHz

A/D resolution : 10 bit

Sample rate : 50, 100, 200, 500, 1000,

2000nsec

Data length : 1024

## System

Display : 10.4" LCD, 640 x 480 dots

Data storage : HDD, 3.5" FDD Power requirement : DC12V, 2A (max)

Dimensions : 330(W) x 280(D) x 220(H) mm

Weight : 7 kg

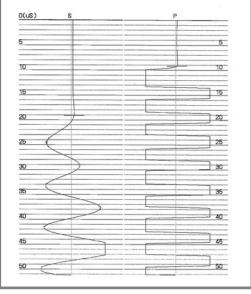
## <Example record>

#### OYO

Sonic Viewer-SX Ver 1.03E 99/02/01

P-wave ID.No.: 101
S-wave ID.No.: 102
Length : 5.01(cm)
Density : 2.5650(g/cm3)
P-time : 9.20(uS)
S-time : 19.15(uS)
P-velocity : 5446(m/S)
Poisson's ratio(vd) = 0.3

Poisson's ratio(vd) = 0.350 Shear modulus(Gd) = 1.85e405 (kgf/cm2) Elastic coefficient(Ed) = 5.00e405 (kgf/cm2)



## <Option>



AC adapter

Input voltage : AC 85-120V Output power : DC12V, 14A





Transducers

P-wave transducer: 200KHz

500khZ

S-wave transducer: 100KHz

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



Instruments Division
 43 Miyukigaoka, Tsukuba, Ibaraki, 305-0841 Japan
 Phone: +81-(0)298-51-5078, Fax: +81-(0)298-51-7290

e-mail: prosight@oyonet.oyo.co.jp

Head Office
 2-6 Kudankita, 4-chome, Chiyoda-ku, Tokyo 102-0073 Japan





JQA-2772