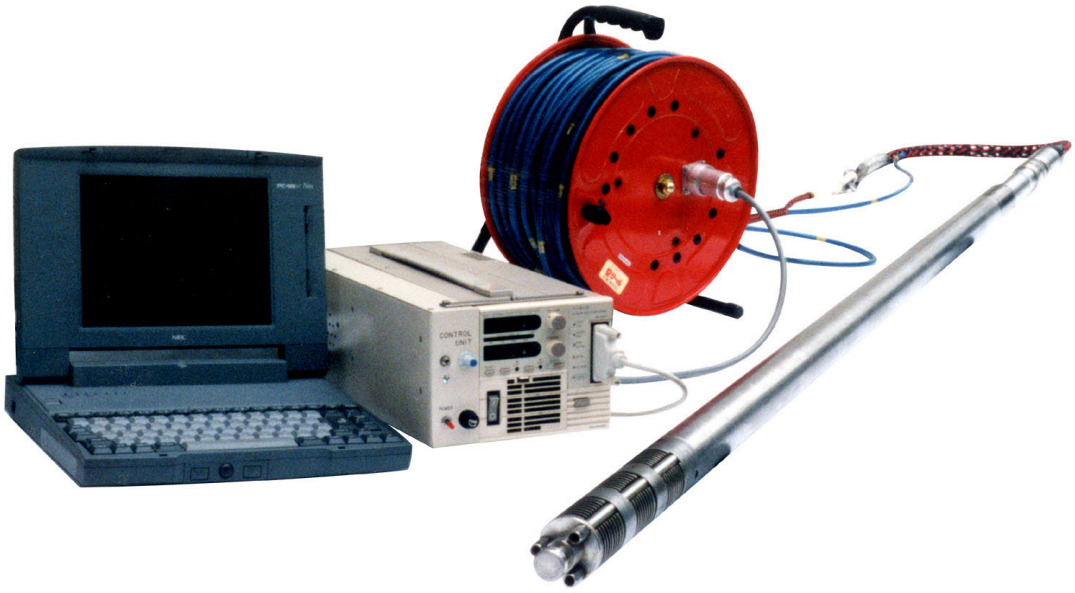
GEOLOGICAL, GEOPHYSICAL, GEOTECHNICAL SERVICES AND INSTRUMENTS

OYO

INNOVATIVE DOWNHOLE SEISMIC SOURCE

OWS



<Abstract>

OWS (OYO Wappa Source) is an innovative downhole seismic source with fully different principle from those the conventional ones had.

The source can transmit excited energy to the ground through fluid with higher efficiency. Getting larger seismic force from small electrical energy is focused for designing, which makes no damages to the borehole wall.

<Features>

- The simplest seismic source being suitable to a 100m scaled crosswell seismic survey. (depends on geological condition)
- Good reproducibility and high frequency source
- Efficient stacking with high speed excitation at every 10 seconds
- Efficient excitation without any damages to borehole wall
- Applicable to 66mm dia. hole and up to 300m in depth
- Simple structure for easy maintenance

＜Specifications＞

OWS probe, Model-1394B

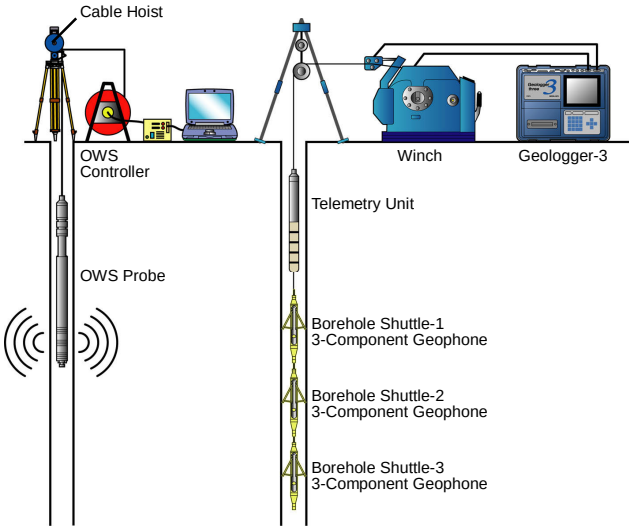
Outer dia.	: 50mm x 2340(L) mm
Weight	: 19kg
Operating temperature	: 0 to 60 deg C
Trigger	: Two type of trigger signals are available

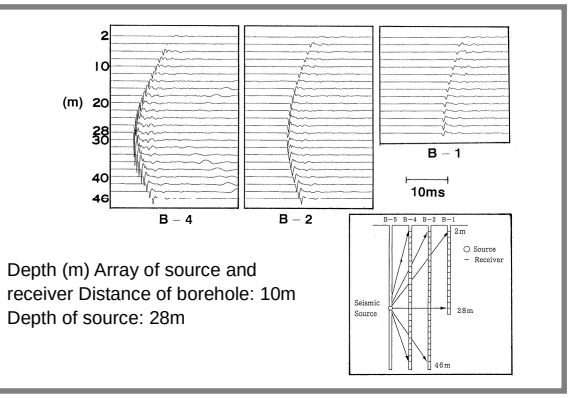
1) Analog signal from geophone inside the source
2) Signal conditioned pulse signal (TTL level)

OWS controller Model-1395A

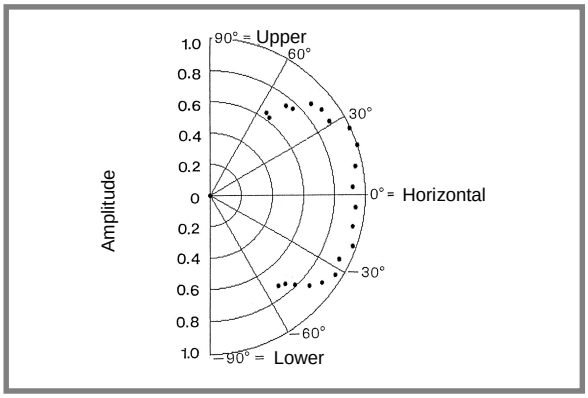
Power requirement	: AC 100V±10%
Operating temperature	: 0 to 40 deg C
Dimensions	: 295(W) x 140(H) x 450(D) mm
Weight	: 12kg

＜Crosswell Seismic Survey＞

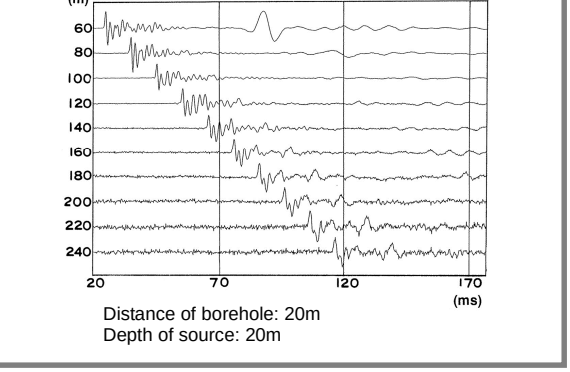




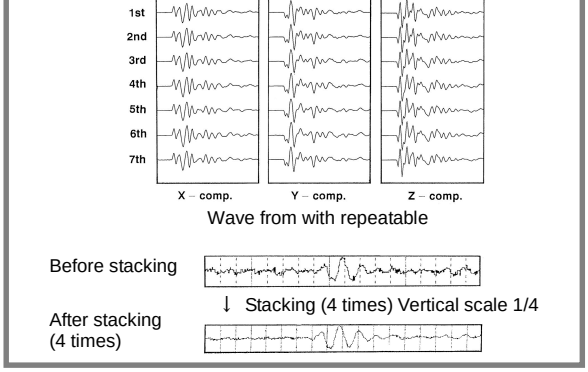
Crosshole measurement use with hydrophone



Radiation pattern of OWS
Distance of borehole: about 6m Geology: Tertiary conglomerate



Example of record by Borehole shuttle
Maximum distance between source and receiver: 220m with non stack
Geology: Tertiary mudstone



Repeatability of wave form
It is available for effective stacking with good repeatable wave and stable trigger signal from OWS