



HMS-620 AquaPulse™ Systems



Portable Low-Frequency Acoustic Sub-Bottom Systems

The HMS-620 AquaPulse™ system is an advanced technology, designed to generate controlled acoustic pulses for ultra-high-resolution surveys. Its high precision and reliability make it an indispensable tool for marine exploration.



The complete Single-Source AquaPulse™ System includes transceiver, shipping case, tow cable, hydrophone streamer, and source vehicle (suspended on display frame)

HMS-620 Single Source: 70-1700 Hz Spectrum

- Ideal for Small Boat or Inland Surveys

HMS-620D Dual Source: 70-1700 Hz Spectrum

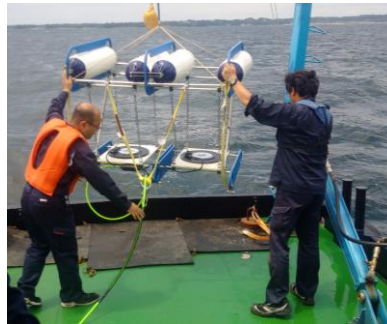
- Higher Source Level, Greater Penetration

HMS-620LF Low Frequency Source

- Wide 20 – 1700 Hz Energy Spectrum
- Ideal for Multi-Channel Reflection Surveys

APPLICATIONS

- Offshore Wind Turbine and Dam Site Surveys
- Cross River Surveys for Bridge Construction
- Subsurface Geological Structure Investigation
- Pipeline Construction Surveys
- Geotechnical Site Investigation
- Coastal Engineering
- Shallow Gas Hazard Surveys



HMS-620D Dual Source AquaPulse™ Vehicle



HMS-620LF Low Frequency AquaPulse™ Source Vehicle

FEATURES/BENEFITS

- Single and Dual Source Systems do not need heavy handling or deployment equipment
- **Wide-band 70 - 1700Hz** pulse provides bottom penetration through many sediment types
- **LF System Source Bandwidth 20Hz – 1700Hz**
- **Very stable and repeatable source pulse without the need for external timing controllers**
- Rugged, lightweight transducer platform provides stable operation in adverse sea-state conditions
 - Electro-mechanical acoustic source; **Contained Air Volume (no air compressor needed)**
- **Minimal Electric Power Requirements**
 - Selectable 110 or 220 VAC source of less than 1 KWatt for Single Source, or 2 KWatt for Dual or LF Source
 - Optional 24 VDC powered system available (two 12V batteries; no generator needed)
- Flexible portable transceiver unit optimizes system for a wide range of sediments
 - Low-noise pre-amp with high/low pass filters and gain control
 - User-selectable trigger or external trigger
 - **Multiple Sources can be synchronized to a common trigger without need for external timing control**
 - **Repeatable Shot-to-Shot Phase and Amplitude Wavelet Correlation > 0.96**
- Oil-filled single channel hydrophone streamer cable configuration enables exportation outside of USA
- Compatible with industry-standard data acquisition software & multi-channel streamers



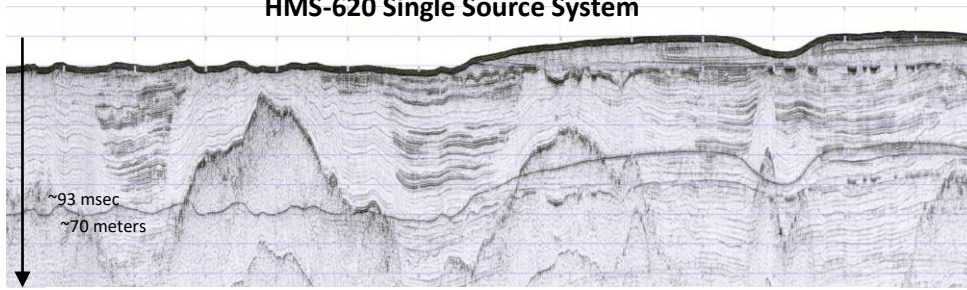
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HMS-620 AquaPulse™ Systems

HMS-620 AquaPulse™ Data Examples

HMS-620 Single Source System

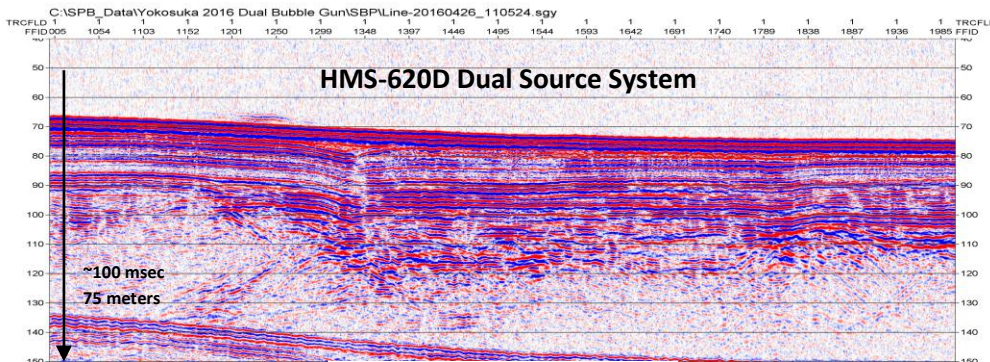


Data courtesy of the University of the Rhode Island Graduate School of Oceanography



HMS-620 Source vehicle is compact and easy to deploy by hand

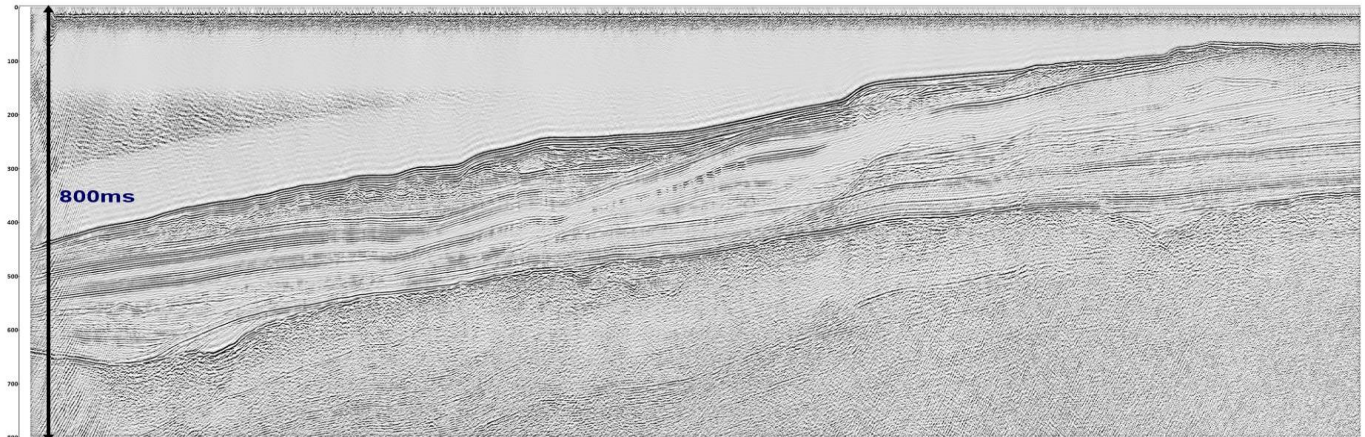
HMS-620D Dual Source System



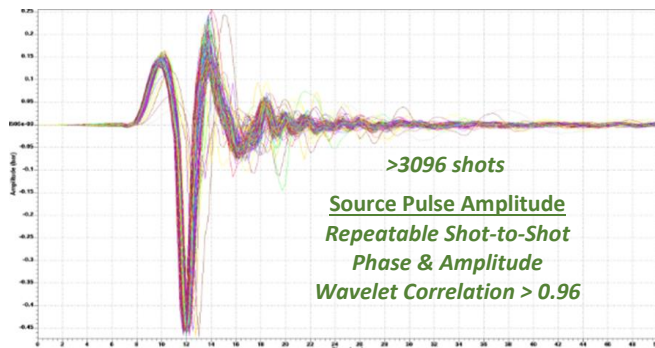
Data collected in Yokosuka Japan

All survey data was collected with FSI's single channel hydrophone streamer sub-system

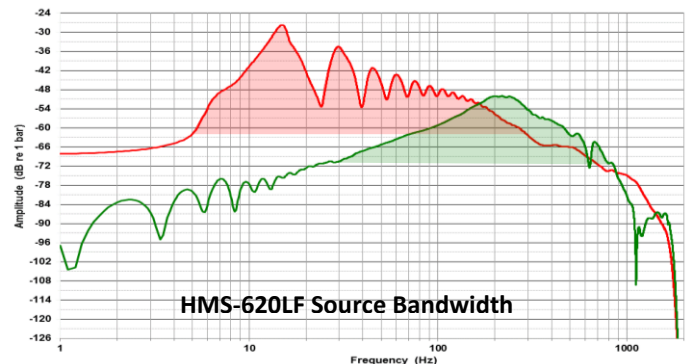
HMS-620LF Low Frequency Source System



Data courtesy of Luca Gasperini, CNR, Italy



Specifications Subject to Change without Notice
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(Bandwidth Data Acquired at 4 KHz Sample Rate)

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