SONAR COUNTER-MEASURES

TRANSPONDERS

- Sonobuoys and sonobuoy systems
- With component activating or deployment means
- With plurality of sonobuoys
- With plurality of transponders

ACOUSTIC IMAGE CONVERSION

- Acoustic holography
- Liquid or deformable surface holography
- With memory means

BEAM STABILIZATION OR COMPENSATION

TESTING, MONITORING, OR CALIBRATING

SEISMIC PROSPECTING

- Offshore prospecting
- Transducer position control
- Hydromechanical
- Fluid variation
- Transducer cable location determination
- Multiple hydrophone cable systems
- Signal processing
- Transducer output weighting
- Reverberation removal
- Well logging
- Threshold set system
- Time interval measurement
- Amplitude measurement
- Peak amplitude
- Amplitude comparison
- Of noncompressional acoustic wave energy
- Frequency dependent determination
- Depth recording or control
- Received signal cycle discrimination
- Borehole or casing condition
- Land-refraction type
- Land-reflection type
- Signal analysis and/or correction
- Random signal correlation
- Received correlation
- Transmitted correlation
- Standard correlation
- Filters

- Comb filters
- Adaptive filters
- Inverse filters
- Amplitude
- Phase
- Frequency
- Timing correction
- Dynamic timing correction
- Normal moveout
- For dip
- For weathering layer
- Timing mark generation
- Particular source-receiver array
- Vertical receiver or source array
- By receiver pattern arrangement
- Compositing system
- Special digital system
- Beam steering
- Array weighting
- With preliminary signal processing
- Optical processing
- Gain control
- Analog/digital compatible systems
- Digital
- Display systems
- Well logging type
- Color
- CRT
- 3-D
- Synthetic seismograms and models
- Format conversion
- Shear wave
- Telemetry
- Radio wave
- Multiplex
- Time
- Frequency

WELLBORE TELEMETERING

- Through drill string or casing
- Through well fluids
- Rotary valve control
- Linear valve control

BOREHOLE TESTING

ECHO SYSTEMS

- Side scanning or contour mapping sonar systems
- Speed determination
CLASS 367 COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEMS AND DEVICES

90 ..By doppler effect 126 ..Addition or subtraction
91 ...Vehicle mounted system for determining vehicle speed 127 ..With time interval measuring means
92 ...Parametric sonar 128 ..With electromagnetic wave
93 ...Presence or movement only 129 ..With plurality of transducers
94 ...By doppler effect 130 ..With towing
95 ...Returned signal used for control 131 UNDERWATER SYSTEM
96 ...External device 132 .Analog speech communication
97 ...Receiver system 133 .Remote control
98 ...Automatic gain or threshold control 134 .Telemetering
99 ...Distance or direction finding 135 RECEIVER CIRCUITRY
100 ...With correlation or matched filtering 136 .Responsive to intruder energy
101 ...Frequency modulation 137 TRANSMITTER SYSTEMS
102 ...Linear modulation (e.g., sawtooth) 138 .With beam forming, shaping, steering, or scanning
103 ...With beam steering, scanning, or focussing 139 ...Animal control
104 ...By transducer movement 140 SIGNAL TRANSDUCERS
105 ...Transducer switching or gating 141 .Underwater type
106 ...With towing 142 ...Exclusive-type transmitter
107 ...With indicator 143 ...Hydraulically driven vibrator
144 ...Air guns
108 ...Digital readout 145 ...Explosives
109 ...Rotating lamp 146 ...Implosion devices
10 ...Color display 147 ...Spark discharge devices
111 ...Luminous array 148 ...Electrically driven underwater bells or sirens
112 ...Alarm 149 ...Exclusive-type receiver
113 ...Cathode-ray tube 150 ...With modifying lens
114 ...Meter 151 ...With reflector
115 ...Permanent record 152 ...With impedance matching means
116 ...Audible or tactile 153 ...Plural transducer array
117 ...With beam steering, scanning, or focussing 154 ...Line array
120 ...By transducer movement 155 ...Piezoelectric
121 ...By electrical means 156 ...Magnetostrictive
122 ...Transducer switching or gating 157 ...Piezoelectric
123 ...With phase shifter or delay means 158 ...Head and tail mass
124 ...By combining or comparing signals 159 ...Elongated cylindrical element
125 ...Phase comparison and/or correlation 160 ...Bending type
161 ...With resonant or damping structure
162 ...With diaphragm
163 ...Single element having a plurality of electrodes
164 ...Specific support structure
165 ...Liquid filled
166 ...Pressure compensating means
167 MAGNETOSTRICTIVE
168 ...Magnetostrictive
169 ...Elongated continuous type
166 ...Electret
167 ...Liquid filled transducer
168 ...Transducer with pressure compensating means

PLURAL TRANSMITTERS TO RECEIVER OR TRANSMITTER TO PLURAL RECEIVERS

SELECTIVE (E.G., REMOTE CONTROL)

...Humanly generated sound or speech responsive (e.g., human whistle)

FREQUENCY RESPONSIVE ACTUATION

DISTANCE OR DIRECTION FINDING

...With beam steering, scanning, or focussing

...By transducer movement

...By electrical means

...Transducer switching or gating

...With phase shifter or delay means

...By combining or comparing signals

...Phase comparison and/or correlation

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173  ..Transducer with support
174  ..Transducer with diaphragm
175  ...Diaphragm with electric
    driving coil
176  ..Transducer with resonant or
    damping structure
177  .Towed land cables
178  .Receivers
179  ..Pendulum type
180  ..Piezoelectric
181  ..Capacitive
182  ..Moving coil
183  ...Spider spring
184  ...Having arcuate movement
185  ..Moving magnet
186  ...Having arcuate movement
187  ...Spider spring
188  ..Casing or housing
189  .Vibrator-type transmitter
190  ..With feedback control
191  MISCELLANEOUS

CROSS-REFERENCE ART COLLECTIONS

900  SONAR TIME VARIED GAIN CONTROL
    SYSTEMS
901  NOISE OR UNWANTED SIGNAL
    REDUCTION IN NONSEISMIC
    RECEIVING SYSTEM
902  SPEED OF SOUND COMPENSATION
903  TRANSMIT-RECEIVE CIRCUITRY
904  DOPPLER COMPENSATION SYSTEMS
905  SIDE LOBE REDUCTION OR SHADING
906  AIRBORNE SHOCK-WAVE DETECTION
907  COORDINATE DETERMINATION
908  MATERIAL LEVEL DETECTION, E.G.,
    LIQUID LEVEL
909  COLLISION AVOIDANCE
910  PORTABLE SONAR DEVICES
911  PARTICULAR WELL-LOGGING APPARATUS
912  .Particular transducer

FOREIGN ART COLLECTIONS

FOR 000 CLASS-RELATED FOREIGN DOCUMENTS