GRID® GAUGING RUN INTEGRITY DATA SYSTEM

Online's GRID® Systems consist of an acoustic GRID® Pinger connected to a 7001 Break Wire Gauge Plate (BWGP) and/or a 7000 Auto Resetting Gauging Fingers Ring (ARGF). When fitted to a pig and run through a pipeline, the system detects the presence and location of multiple* defects along the pipeline and transmits the information in the form of coded acoustic pulses at ranges of up to 1km subsea. The transmissions can be monitored using an acoustic receiver and the data decoded using OEL's dedicated AUDIOSCOPE software.

Key Benefits

- The operator does not need to recover the pig to visually confirm integrity of the gauge plate, or run an intelligent pig, which results in a significant time and cost saving, particularly if receiving the pig subsea.

- Events can be logged by the GRID® Pinger and downloaded to a laptop to present to the client once the pig has been recovered. This provides additional confirmation of the results of the pig run.

- Ping rates, acoustic power and pulse lengths can be altered to extend battery life allowing for specific project requirements to be met.
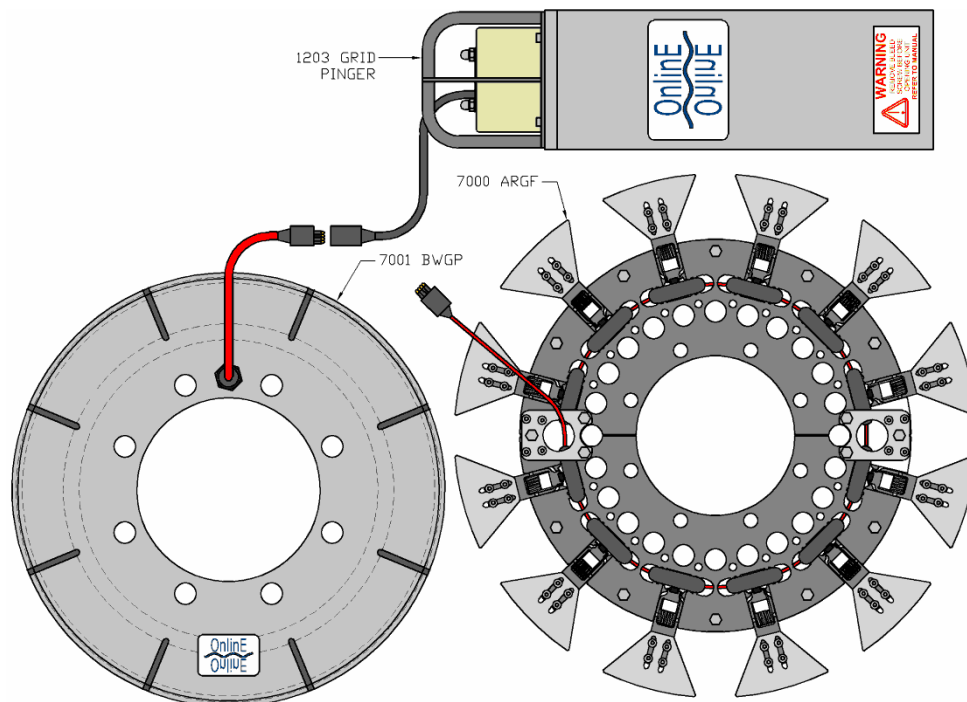
* A 7000 ARGF ring must be fitted in order to detect multiple events.

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ISO 9001:2015 Quality Management

The system can be manufactured to meet specific project specifications and supplied with either a 600, 800 or 1200 sized GRID® Pinger. These are based on OEL's proven 600, 800 and 1200 Series acoustic pinger designs. The system is typically suitable for pipelines of 6" and upwards when using a 7001 BWGP and 10" and upwards when using a 7000 ARGF.
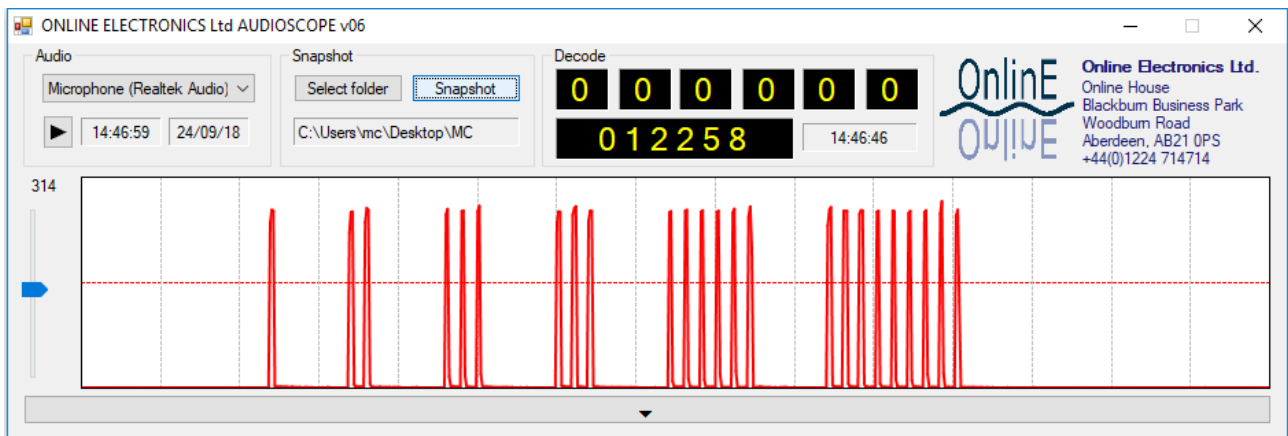
Operation

In the standard configuration, the BWGP and/or ARGF are fitted to the disc packet on the front of a PIG and connected to a GRID® Pinger that is mounted inside the PIG body.

Once activated, the GRID® Pinger will transmit the RTC time (in format HH:MM:SS), and log the start time into memory.

When the GRID® Pinger is in the PASS state, it will transmit a single pulse at the Pass Ping Rate (PPR), and will transmit the Time Since Start (TSS) at intervals determined by the Pass Data Rate (PDR).

The GRID® Pinger will remain in the PASS state until it detects that the BWGP has broken, at which point the GRID® Pinger will log the Time of Event (TOE) in memory, then enter into the FAIL state.

When the GRID® Pinger is in the FAIL state, it will transmit a single pulse at the Fail Ping Rate (FPR), and will alternately transmit the Time Since Start (TSS) and Time of Event (TOE) at intervals determined by the Fail Data Rate (FDR). Using the TSS, TOE data and pump rate line information, the user can calculate the approximate time and position of the pipeline defect.

Only the first event will be detected by the BWGP. Any subsequent events will be detected by the ARGF ring (if fitted) and logged by the system.