Veo & Corrosion WheelProbe

Scanning System

The system consists of the veo 16:64, a 64 element Corrosion WheelProbe (CWP) and a CWP scanner. The Corrosion Wheel Probe is a tried and tested solution for corrosion mapping. The scan width is close to 50mm in one pass, it can be used on diameters from 4 - 42 inches.

Importantly the tyre allows excellent coupling to rough surfaces, and the design allows for consistent reliable inspection in both depth and amplitude. This amplitude mode enhances the possibility of finding small pit type defects that do not normally give a good ultrasonic response, resulting in very good indications of internal condition.

The CWP Scanner is a new enhancement in response to clients request to give an easier semi-automated way of providing 100% coverage. The CWP is fitted to an adjustable connector, equipped with a second encoder, and allows for multiple adjacent scans with a good overlap for complete coverage.

The distinct advantages of the CWP Scanning System is in it's relative simplicity and complete autonomy from the need for additional power sources on the inspection site. Ease of portability along with the speed of set-up and deployment is also a key advantage for the end user.

The scanner uses a completely standard corrosion wheelprobe, no modifications are required. The probe can be detached and used manually quickly and easily.

This CWP solution additionally gives the flexibility of utilising the CWP in a completely manual basis for small area scans, such as for screening of pipe work of vessels (where LRUT has been used) or for (with certain limitations) scanning along the length (Axial) of the pipe.

Veo 16:64
16 Channel, 64 Element, Phased Array, Flaw Detector

Phased Array	16 channels
Max Pulser Voltage	-100V
Mode	Pulse Echo or Pitch Catch
Pulse Width	25 to 1000 ns Square wave
Trigger	Free running or from Encoder
Architecture	Fully Digital Delay and Sum
Receive Bandwidth	200 kHz - 27 MHz
Resolution	12 bits per channel, with 16 bit data storage
Digitiser Frequency	100 MHz maximum
Max A-Scan length	8192 samples
Maximum PRF	20 kHz
Gain Range	0-84 dB (zero is approx. 3V p/p full scale)
Focal Laws	Up to 1024
Supported Scans	Sector or Linear
Supported Focus Modes	Constant Path, Depth, Offset
Real Time Scan Extraction	A-Scan, B-Scan, geometrically corrected Top view (real C-Scan) and End View
MultiGroup	Multiple Sector Scans plus TOFD or mono-element.
Conventional Channels	2
Pulser Voltage	-100 to -400
Modes	Pulse Echo, Pitch Catch, Through Transmission
Filters	Analogue narrowband: 0.5, 1, 2.25, 5, 10, 15 MHz. Broadband: 1-18 MHz
Display	26cm diagonal, 1024 x 600 pixel
Data Storage	6GB internal plus USB device, 8GB included, >20MB/sec transfer speed. Max. 2GB file size.
Ports	3 x USB 2.0; Gigabit Ethernet, WS-VGA Standard connector
Protection	IP66, with port cover closed
Batteries	2 x Li-ion, hot swappable
Battery Life	6 hours typical (two batteries)
Size	22 x 34 x 12 cm
Weight	5.3 kg with one battery
Shipping Case size	57 x 35 x 24 cm
Shipping Weight	12 kg
Warranty	One year

Corrosion WheelProbe

Sensor Frequency	5MHz Standard, 2 or 10 MHz available
Number of Probe Elements	64
Sensor resolution	0.8 mm (50 mm total array length)
Active Scan Width	44.8mm
Connector	IPEX Standard Cannon or Hypertronics also available
Cable Length	5m (10m option, not 10MHz)
Encoder Resolution	1/16th mm
Encoder Connection	ODU Standard, D-Sub or LEMO also available
Probe Dimensions (overall)	16 x 17 x 13 cm
Probe Weight	2.3kg
Minimum Clearance (above surface)	14 cm (approx.)
Shipping Case size	42 x 50 x 24 cm
Shipping Weight	6.8 kg

Scanning System

Pipe Diameter	12 to 120 cm nominal pipe size. (4in to 48 in)
Maximum Diameter (with standard included fittings)	12 inch pipe
Scan Pitch	40 mm
Total Scan Width	40 cm scanning at 10 locations
Scanner - overall length	70 cm approx
Scanner Weight	10kg (approx)
Shipping Case Size	113 x 41 x 16 cm
Shipping Weight	15 kg

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