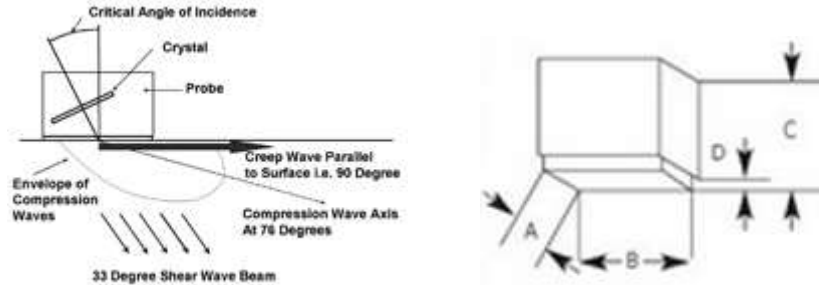


Creeping Wave Probe

Creep Waves are high angle ultrasonic longitudinal waves. The creeping wave is actually the upper part of the envelope of a 76° compression wave beam which propagates just under the component surface, see Figure. These are not true surface waves and the energy is concentrated within a few millimeters of, and almost parallel to, the surface. Hence, the technique is very sensitive to shallow surface-breaking cracks whilst at the same time being relatively insensitive to surface condition.



The maximum working range is typically 45 mm in front of the probe because the creep wave rapidly loses energy in the form of 33° indirect shear, or 'head', waves as it propagates. However, these head waves will re-convert to a creep wave at the inner surface of the component. Like the top surface creep wave, this inner surface creep wave is very sensitive to inner surface breaking cracks and as it runs parallel to the inner surface it will not be sensitive to the presence of weld roots.

Creep waves have the advantage that, being longitudinal waves, they are far less attenuated in austenitic and Inconel weld metal than shear waves.

Keiyu P/N	Frequency MHz	Crystal Size mm	Connectors	Dimensions AxBxCxD
2P6x10 76L	2	6x10	Lemo 00	17x20x22x2
2P6x10 86L	2	6x10	Lemo 00	17x20x22x2
2P8x10 76L	2	8x10	Lemo 00	17x20x22x2
2P8x10 86L	2	8x10	Lemo 00	17x20x22x2
2P10x15 76L	2	10x15	Lemo 00	22x28x28x3
2P10x15 86L	2	10x15	Lemo 00	22x28x28x3
4P6x10 76L	4	6x10	Lemo 00	17x20x22x2
4P6x10 86L	4	6x10	Lemo 00	17x20x22x2
4P8x10 76L	4	8x10	Lemo 00	17x20x22x2
4P8x10 86L	4	8x10	Lemo 00	17x20x22x2
4P10x15 76L	4	10x15	Lemo 00	22x28x28x3
4P10x15 86L	4	10x15	Lemo 00	22x28x28x3