

# Application Report

**BRANCH** : Ultrasonic Pigging, Pipeline Inspection etc  
**TEST TASK** : Flaw Detection and Wall thickness Measurement  
**SOLUTION** : Special Ultrasonic Probes

One of our customers was involved in a project where they had to design and build an ultrasonic pig for flaw detection and wall thickness measurement applications in pipelines. To this customer, we sold our special ultrasonic probes from our principal company **M/s KARL DEUTSCH GmbH, Germany**, which has been the industry standard worldwide for the intelligent pigging application. These probes are designed and developed to be high temperature, high pressure and vibration resistant and were supplied to this client in good numbers !



Ultrasonic Pig

The STS 15 WB 4 HT – 120° is an immersion testing probe, which is suitable for flaw detection applications. The probe frequency is 4 MHz and the transducer element diameter is 15 mm. For the STS 15 WB 4HT-120, we offered a special cable with 2 Lemo FVS (hexagonal shaped) connectors at either ends which will withstand a temperature of 120 deg Celsius or a pressure of 60 bar. The pulse width of this probe is < 950 ns. For wall thickness measurements greater than 10 mm, we offer our probe TS 10 PB 2-7 P60 HT-120° which is a point focused probe with a focus length of 60 mm (in water), a wide frequency range between 2 and 7 MHz and a transducer diameter of 10 mm.

The STS 6 PB 2-7 P 35 HT – 120 ° is a point focus (35 mm in water) immersion testing probe, suitable for wall thickness measurement purposes smaller than 10 mm. It is provided with a fixed cable, which can resist pressure up to 120 bar and temperature up to 120°C and at the free end, it was offered with a Lemo FVS male connector . This probe is a broadband type one, with a wide frequency range between 2 MHz and 7 MHz and has high acoustical damping. The pulse width of the probe is < 600 ns.

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## Suitable Ultrasonic Probes:

- STS 15 WB 4 HT – 120°
  - TS 10 PB 2-7 P60 HT-120°
  - STS 6 PB 2-7 P 35 HT – 120 °
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