

◆ INP neutron logging tool while drilling

INP sends fast neutrons to formation through the neutron source installed on the instrument, the instrument detector measures the amount of the thermal neutrons reaching the instrument after formation attenuation, determines the hydrogen index of the formation and calculates its porosity. The instrument adopts Am-241/Be neutron source and HE3 tube detector, and is installed with ultrasonic transducer for clearance detection and compensation calculation.

- Existing dimensions
 - 6.75"
- Maximum outer diameter of instrument: 190mm
- Applicable borehole size: 8.5~9.875"
- Maximum working temperature: 150°C
- Maximum working pressure: 20,000 psi
- Applicable displacement: 225~650 gpm
- Applicable vibration: ≤ 20 grms(5Hz~1 kHz)
- Applicable impact: 500 g@1ms half sine
- Measurement of neutron porosity
 - Measuring range: 0~100 pu
 - Measuring accuracy: ± 0.5 pu (0~10 pu)
 - $\pm 5\%$ (10~50 pu)
- Longitudinal resolution: 12"
- Ultrasonic well diameter measurement
 - Measuring range: 8.5~12"
 - accuracy: ± 0.2 "
- System application
 - Measurement of formation porosity

