

The History of the Accelerometer

Adapted from Patrick Walter's publication in SJV January 2007

McCollum & Peters develop the first resistance-bridge-type accelerometer (1923)

Southwark advertises a two-axis accelerometer (1936)

J. Hans Meier constructed 1st strain gage accel (1938)

Statham Instrument Company manufactures transducers using unbonded wire strain gage (1943)

Gulton Manufacturing made the 1st practical commercial PE accel in the US (1949)

260 people attend Symposium on Barium Titanate Accelerometers, focused on military requirements (1953)

Kistler begins US operations (1954)

Columbia Research founded (1955)

Endevco develops annular shear accel (1959)

Endevco's 1st PR accel (1962)

PCB Piezotronics founded (1967)

PCB[®] first used ICP[®] in 100,000G shock accel (1971)

PCB develops Modally-Tuned[®] impact hammer with University of Cincinnati – SDRL (1972)

Dytran founded (1980)

PCB develops Structcel[®] modal array system (1983)

PCB designs array calibrator for 128 accels (1986)

Analog Devices introduces first high volume surface micromachined accel (1991)

TEDS standard IEEE1451.4 approved, committee includes B&K, Endevco, Kistler, PCB and Wilcoxon (2004)

The Modal Shop's commercial accel cal systems expand to include new design of air bearing shaker and pneumatic shock exciter (2005)

1920

The accelerometer was first commercialized in the US by Southwark (1927)

1930

The bonded resistance strain gage credited to Simmons (Caltech 1936) and Ruge (MIT 1938)

1940

Bruel & Kjaer founded (1942)

B&K develops first PE accel with Rochelle salt crystals (1943)

Endevco manufactures its 1st accel (1951)

Endevco founded (1947)

B&K begins to use ceramics in PE accel design (early 50's)

Accel calibration services 1st provided by NBS (1956)

1960

Kistler granted US patent for charge amp (1960)

Wilcoxon founded, commercializes mechanical impedance head (1960)

Kistler integrates FET within PE accel (early 60's)

B&K develops their first shear type of accel (1972)

1970

Dr. David Brown starts working with Hewlett Packard to develop multi-channel FFT DSA (1975)

Endevco designs silicon accel to 100,000G (1974)

1980

R. Sill at Endevco commercializes Hop Bar calibration (1985)

Shock cal services again offered by NBS (1987)

B&K and Endevco market upgraded accel calibration systems (late '80's)

1990

Dr. Patrick Walter chairs a session on accelerometer history at SAVIAC (1996)

2000

Preliminary acceptance of IEEE 1451.4 Transducer Electronic Data Sheet allows delivery of first TEDS accels (1999)