

BIOMECHANICAL



ENGINEERING





S-E-A has a long history as an acknowledged leader in investigative engineering and forensic science. Since 1970, S-E-A has been a multidisciplinary, full-service and professional organization providing research, analysis and testing. We offer complete investigative services, which include mechanical engineering, biomechanical engineering, electrical engineering, civil engineering, chemical engineering, fire investigation, industrial hygiene and a fully equipped chemical testing laboratory. Our full-time staff of investigators, engineers and chemists are licensed/registered professionals and are court-qualified experts in their respective fields.

Injury Reconstruction/Evaluation

- Vehicle accidents
- Slips, trips and falls
- Industrial accidents
- Construction accidents
- Pedestrian accidents
- Product liability
- Human factors/worker exposure/ergonomics/PPE
- Sports related injury/protection
- Medical devices

S-E-A Research Center

- S-E-A Roll Simulator
- Minor accident simulation
- Protective equipment testing
- Occupant restraint evaluation
- Consumer product evaluation

S-E-A's biomechanical engineers have the formal education, training and experience to bridge the gap between engineering and medicine in order to analyze the effects of applied forces and motion on the human body.

Crash Testing Experience

- Single vehicle (barrier/rollover/pole)
- Vehicle to vehicle (frontal, side, rear)
- Heavy vehicles
- Sled testing

Computer Aided Engineering

- MADYMO

- Kinematic and kinetic response
- Safety device utilization/efficacy

- Motion Capture

- Movement recordings for translation to digital model
- Relatable to determining kinematics and kinetics

- 3DSSP

- Musculoskeletal injury risk
- NIOSH low back injury risk analysis

- Animation

ATD Testing

- Fully instrumented seated and pedestrian anthropomorphic test device (ATD)
- Secondary instrumentation
 - Accelerometers, load cells, load plates, strain gauges, rotational rate sensors
- In-vehicle, pedestrian and incident specific impact biomechanics testing experience and capabilities



--- Representative S-E-A Biomechanical Clientele

- Civil Litigants
- Law Firms
- Manufacturers
- Insurance Companies
- Governmental Agencies
- Research Laboratories
- Retailers



www.SEAlimited.com



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Our Logo In geology, there is an ideogram used to represent twisted rock formations. The Nsibidi people in Ghana use the same structure to indicate a situation where two witnesses contradict each other but only one is telling the truth (the straight line).

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