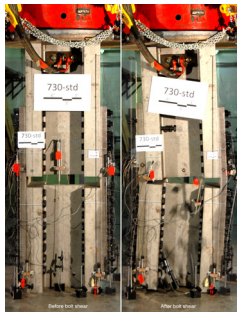
The 3,000,000-lb Southwark-Emery

. . . serving today's technology needs

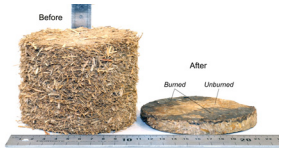
Research

Machine assembly, 1929
Hoisting of north lead screw

Riveted joint tests, ~1950
Nathan Newmark, William Munse

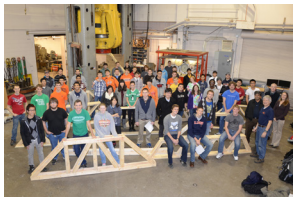


Strength of spliced I-beams
American Institute of Steel Construction



High-pressure compaction of biomass—switchgrass and miscanthus
Compression to 110,000 psi in one miscanthus sample caused self-ignition

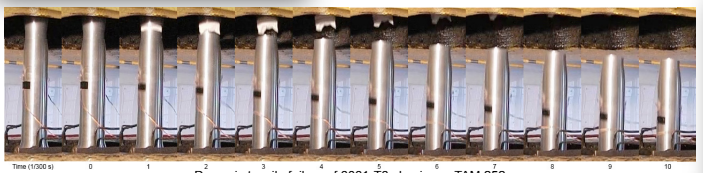
Teaching



Failure testing of wood trusses, TAM 195
Students teams compete for highest load-to-weight ratio

Plastic deformation of I-beam, TAM 456
Students use electrical-resistance strain gages to analyze stress

Crushing of concrete cylinders at EOH
Failure load of 18-in.-dia. cylinders approaches 2 million lb



Dynamic tensile failure of 6061-T6 aluminum, TAM 252
High-speed images (300 frames/s) of 5-in.-dia. bar immediately after failure at 1 million lb

Concrete testing, CEE 300
6-in.-dia. high-strength concrete

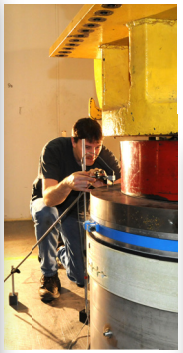
Public service

Leak detection in mechanical seals
Nuclear reactor waste containment seal

Hydraulic ram calibration to 3 million lb
Traceability to NIST is critical for construction industry

Crane hook proof testing
Single hooks, sister hooks

Load cell calibration
Tension



Strength of MRI shells
Critical MRI component

Cable anchor testing
Progressive failure monitoring

Failure testing of girder-plate beam
Displacement, strain measurements in 3-point bending

Load cell calibration
Compression

Load pin calibration
Double shear

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