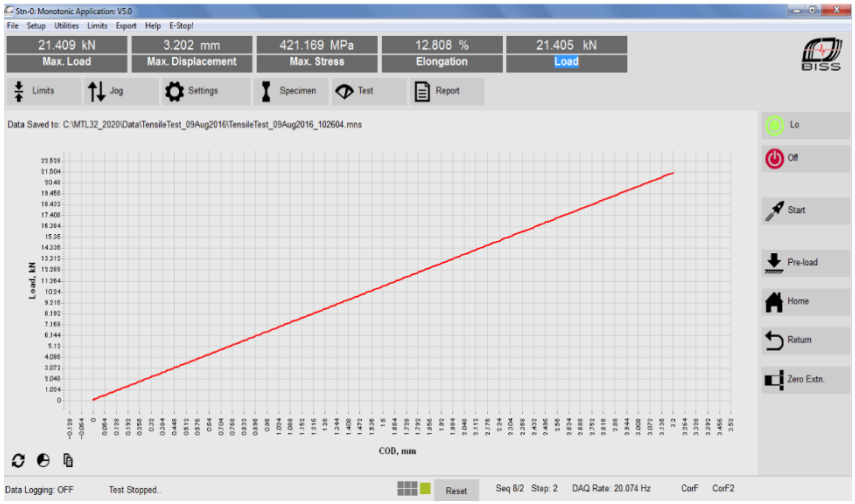
Monotonic Testing Software

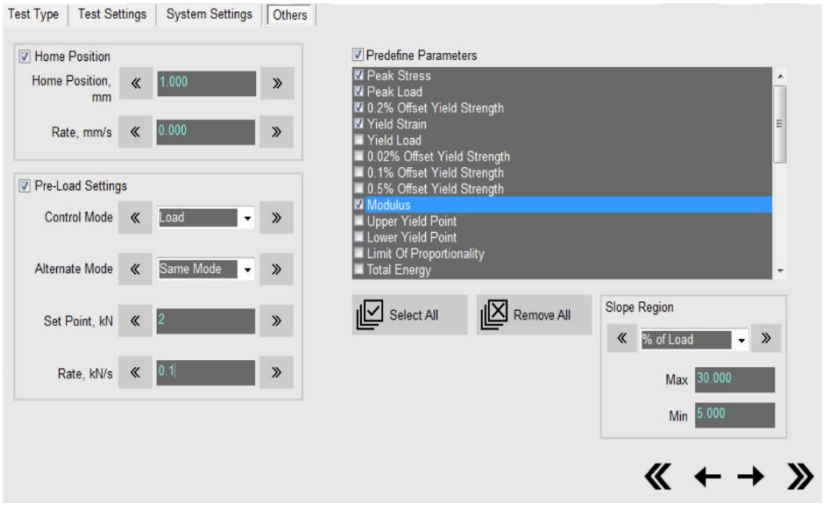
AC–08–0002



BISS Tension, Compression and 3-point bend application software to perform tests (as per ASTM E8M, E9, E855 and D790) under MTL-32 environment with 2370 series controller.

The user interface includes specimen description, loading parameters, pump controls, test run/stop, graph display, numeric readouts of several relevant test parameters. Test descriptions and test settings are available as panels accessed by clicking on relevant tabs or pull down menus.

Standard Features:



- Tests can be done in stroke, load or strain control.
- Online graphs of stress vs strain, load vs displacement, load vs time, displacement vs time etc.
- Option to save the test procedures and recall them for future use.
- Change of test speeds can be programmed for one test run
- Data storage and recalling facility
- Auto data acquisition settings
- Option to view multiple test graphs in one plot.
- Option to remove the extensometer and continue the test in stroke control.
- Option to stop the test after specified percentage load drop.
- Limit settings on stroke, strain and load channels.
- Offline post processing program to analyze the results in MS Excel.
- Option to batch processing the data.
- Post processing includes important calculations such as: Peak load, stress & strain, break load, stress & strain, true stress & strain, strain @ load, load @ strain, young's modulus, % of elongation @ break, % reduction in area, yield stress & strain, upper & lower YS, proof stress @ specified strain (0.2%, 0.5% etc), strain hardening coefficient, 'n' value, 'r' value, 'K' value, and many more

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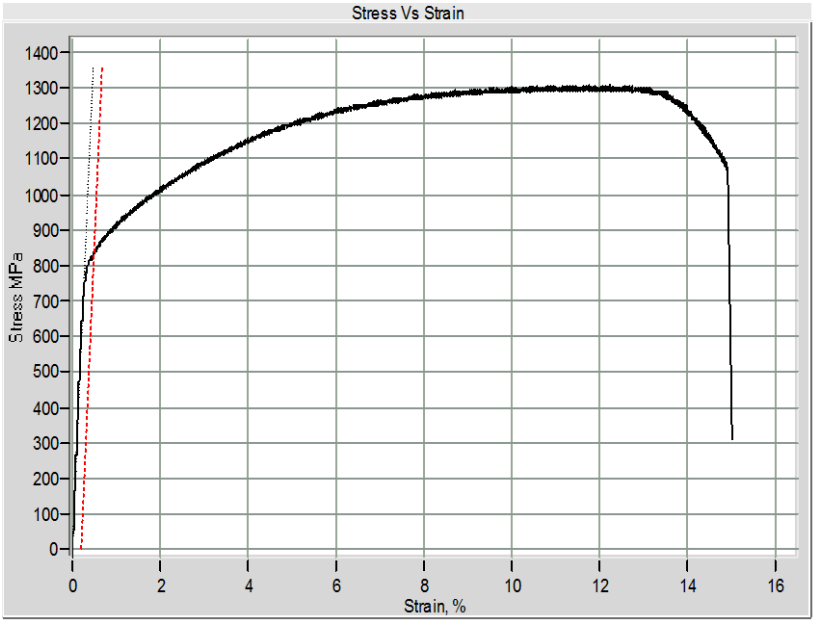
Tensile Test Results: Stress-Strain Plots

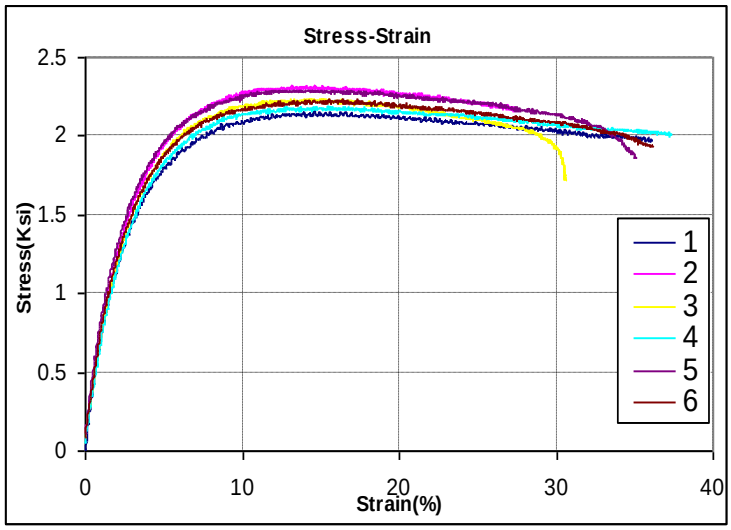
Indivudual Plot



Tabulated results

Peak Stress:	1308.721	MPa
Peak Load:	25.7	kN
0.2% Offset Yield Stress:	846.499	MPa
Yield Load:	16.623	kN
0.02% Offset Yield Stress:	761.042	MPa
Modulus:	201.167	GPa
Total Energy:	86.593	kN -mm
Energy under Plastic Region:	58.295	kN -mm

Batch Processing Plots



Tabulated results

Specimen ID	Width (in)	Thickness (in)	Max Stress (Ksi)	Stress @ 18% Strain(Ksi)	Modulus (Ksi)	Peak Load (Kip)
1	0.24	0.07	2.161	2.128	57.144	0.036
2	0.236	0.071	2.329	2.296	59.9	0.039
3	0.24	0.072	2.237	2.227	57.869	0.039
4	0.241	0.069	2.189	2.167	56.129	0.036
5	0.24	0.071	2.294	2.273	63.961	0.039
6	0.241	0.071	2.233	2.212	60.915	0.038
Average	**0.239**	**0.0706**	**2.24**	**2.217**	**59.319**	**0.037**

Note: Specification are subject to change without prior notice