JINAN TESTING EQUIPMENT IE CORPORATION
Solutions for Materials Testing
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NDW Series Computer Controlled Torsion Testing Machine

Applications & Features

NDW Series Computer Controlled Torsion Testing Machine provides loading and weighing capabilities in both rotation directions, which makes it possible to conveniently determine not only the ultimate torque of a specimen, but also the specimen behavior under continuous or intermittent torque loading in both directions. Computer can dynamically display the torsion curve, loading speed, peak value, and so on.
It is mainly used for the torsion test of metal and non-metal materials, as well as the torsion test for parts and components. It is an essential instrument to measure torsion properties of materials for mechanics laboratories of aviation industry, construction industry, scientific research dept, universities and industrial enterprises etc.

- Adopting PC-controlled Japanese AC servo system, it is loaded through the active clamping head driven by the AC servo motor and cycloidal pinwheel reduction motor.
- High-precision symmetrical torque transducer to measure test torque and high-precision LEC model photoelectric encoder to measure torsion angle;
- Double control modes: manual control and computer control;
- WINDOWS-based supervision software used to calculate mechanical indexes of materials. Automatic test data processing, dynamic display of test curves, storage and print out of test results. Operator can intervene the analysis process to improve the analysis accuracy.
- The computer can dynamically display the torsion curve, loading speed, peak value etc.

Specifications:

Model	NDW-200	NDW-500	NDW-1000	NDW-2000	NDW-3000
Capacity (N.m)	200	500	1000	2000	3000
Measuring range of torque(N.m)	4-200	10-500	20-1000	40-2000	60-3000
Distance between the grips (mm)	0-500		4--1000		4-1200
Relative error of torque indication	≤1.0% (from 20% of each full range)				
Relative repeatability error of torque	≤1.0% (from 20% of each full range)				
Control method	Close-loop control of torque, torsion angle and deformation				
Curves	Torque/Angle/Deformation-Time curve Torque-Angle/Deformation curve				
Resolution of torsion angle	0.1°				
Torsion speed	0.12~720°/min，stepless				
Max. reading of torsion angle	9999.9°				
Followed Standards	ASTM A938,ISO 7800:2003				

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Software Introduction:

- Microsoft Windows operation platform, screen display, mouse action
- The test torque and peak value display from 4 to 6 measuring ranges, torsion angle display in four measuring ranges, automatic calibration.
- Recording torque-torsional angle, torque-time, torsional angle-time & corner-time trend simultaneously, and can switching over for observation at runtime.
- Data is processed in man-machine interaction mode, meets the requirements of the standard “Torsion Test Method of Metallic Materials Under room Temperature”. Data processing can be realized automatically, also interfered in manual mode to boost the accuracy.
- Test data stored by the form of ASCII code into “.txt” file, so convenient for customers to reprocess test data utilizing any form of commercial statements and word processing software, printing test reports as the format customer request.
- System supporting Open Loop control mode and Entire Close Loop (as Torque, Torsional Angle and Encoder Angle) control represents the high control level of testing machine.
- System provides customer with secondary programming function which means control more easy, process more flexible, adapts to many actual testing requirement.
- System support any commercial printers, customer can customize printing contents himself.
- Factory parameters are stored into files, easy to restore.
- Simple and reliable upgrade of system

Some software interfaces are as follows,