

Transmission Tower Testing Facility

CAPABILITY SHEET · FULL-SCALE TOWER LOAD TESTING · SERVO-CONTROLLED WINCHES · PLC CONTROL · EN

THE ONE IDEA

PRINCIPLE	The hard part is not the pull. It is pulling in proportion while the tower moves: every load point must rise together in the ratio of the load case, while every rope changes angle as the tower leans.
WHY TEST	Calculation covers the members one by one. Only a full-scale test shows how joints, bolts, connections and members behave together - and a fault found on the ground is a drawing change, not a repair campaign.

THE LOAD PATH & CONTROL

LOAD PATH	Servo winch, rope, pulley, load cell, tower. The load cell sits at the tower end of every rope, so what is recorded is what the tower felt.
PLC CONTROL	Every load point climbs to its target at the same relative pace and holds together. Rope-angle tracking uses the measured position of the tower to keep each force in the direction the load case sets.
LOAD CASES	Wind across the line, a conductor pulled along it, and weight from above - each stored as a plan of points, ratios and holds, and combined as the specification requires.

MEASUREMENT & SAFETY

MEASURED	Force at every rope; displacement at the tip and chosen panel points; inclination at chosen levels; strain in chosen members - all on one time base, with video.
SAFETY	Operation from a control room outside the exclusion zone; brakes that hold on loss of power; overload, rope and drive protection; an emergency release that lowers every load together.

CONFIGURATIONS

FIXED STATION	Test bed, reaction structures, servo winches, controls and control room, built as one facility.
WINCH SET	Modular servo winch skids with load cells and controls, for a test bed that already exists.
RETROFIT	PLC, load cells and data record for winches already in service. One load-case library and record system across all three.

SCOPE & STATUS

STANDARDS	IS 802 (Part 3, testing) and IEC 60652 (loading tests on overhead line structures) are public standards. Load cases, safety factors and hold times come from the standard and the customer's specification and are applied as written.
BOUNDARY	The facility applies the loads and records the result. It does not design towers and does not certify them; certification and accreditation rest with the operating laboratory and its regulator.
STATUS	Neometrix engineers transmission tower testing facilities to order, with servo-controlled winches that load a full-scale tower under PLC control, and no delivered transmission tower testing facility is claimed.

DEFENCE PROGRAMMES DESK

sales@neometrixgroup.com · +91 7777 876 876 · neometrixgroup.com

Neometrix Defence Limited · E-148, Sector 63, Noida, Uttar Pradesh, India

Figures describe the facility class Neometrix engineers to order and are not a quotation. Load capacities, load points, rope geometry and measurement channels are established against the customer's towers, specification and site at design review. ISO 9001 / ISO 14001. © Neometrix Defence Limited.