Creep and Stress-Rupture Test Machine

CAPABILITY SHEET · A CREEP TEST IS ONLY AS STEADY AS ITS FURNACE. · A LEVER-ARM FRAME, A FURNACE W

THE ONE IDEA

PRINCIPLE	A creep test is only as steady as its furnace.
WHY IT MATTERS	The creep rate climbs steeply with temperature, so a small error or drift in the specimen's temperature becomes a large error in the rate and in the time to break.

THE MACHINE

FRAME AND LEVER	A stiff frame with a lever arm and dead weights, and a drive that holds the lever level, so that the pull stays constant as the specimen stretches.
FURNACE	A furnace with several zones and thermocouples tied to the specimen, so that the temperature held is the temperature the specimen has.
STRAIN AND ALIGNMENT	Rods from the specimen's shoulders carry its stretch to a transducer on a quiet mount, and the load train keeps the pull on the axis.
CLOCK AND LOG	A logger keeps the strain, the temperatures and every event, with a clock that stops at the break and survives a power cut.

THE METHOD

ORDER	Duty, frame and lever, furnace and temperature, strain and alignment, clock and log, build and prove. The furnace and the temperature survey are the two that a quick job skips.
LIMITS	Temperatures, pulls, strains and times come from the customer's duty, and are not printed here.

CONFIGURATIONS

CREEP FRAME	A creep frame: a lever-arm frame with a strain record for one specimen, its temperatures logged with the curve.
RUPTURE BANK	A stress-rupture bank: simpler stations in a row, each with its own furnace and break switch, and one clock for the bank.
IMPRESSION	An impression creep station: a flat-ended punch on a small sample under a steady load, with the depth recorded against time.

SCOPE

SCOPE BOUNDARY	It is the creep and stress-rupture test machine: not a universal testing machine, not a fatigue testing machine and not a pipe pressure tester.
STATUS	Neometrix engineers creep and stress-rupture test machines to order, and no delivered creep test machine is claimed.

DEFENCE PROGRAMMES DESK

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