Tube Bending Machine

CAPABILITY SHEET · HOLD THE WALL. HIT THE ANGLE. · A CLAMP, A BEND DIE, A PRESSURE DIE, A WIPER AN

THE ONE IDEA

PRINCIPLE	Hold the wall. Hit the angle.
WHY IT MATTERS	A bend stretches the outside of the tube and squeezes the inside, so the machine has to hold the wall round and even, and then bend past the angle it wants because the tube springs back.

THE MACHINE

BEND HEAD	A bend arm with a clamp die and a bend die, a pressure die with a boost, a wiper die and a mandrel, driven from one hydraulic power unit.
FEED	A carriage on a rail feeds the tube, and a rotation axis turns it between bends; encoders tell the controller where each axis is.
CONTROL	A controller holds the bend table of length, rotation and angle for every part, and keeps the springback correction with the part number.
SAFETY	Interlocked guarding around the swing and the carriage, an emergency stop, and a way to release trapped hydraulic pressure.

THE METHOD

ORDER	Part, tooling, machine, safety, build and prove. The tooling and the proof are the two that a quick job skips.
LIMITS	Forces, pressures, tube sizes, radii, angle limits and batch sizes come from the customer's parts, and are not printed here.

CONFIGURATIONS

TUBE	A rotary-draw tube bender with a mandrel, a wiper die and a pressure die boost.
PIPE	A hydraulic pipe bender with a heavier frame and die set for larger pipe.
CELL	A bending cell with an infeed rack, a checking station and the bend data kept.

STANDARDS & SCOPE

STANDARDS	Public reference: ASME B31.3 for process piping, and PFI ES-24 for pipe bending methods and tolerances.
SCOPE BOUNDARY	It is the tube and pipe bending machine: not a hydraulic press, not a stretch forming machine and not a hydraulic power pack.
STATUS	Neometrix engineers hydraulic tube and pipe bending machines to order, and no delivered hydraulic tube and pipe bending machine 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