Basic Parker Hose Constructions

Wrapped Ply–Machine Built

The wrapped ply construction is the oldest method of making hose. After a tube is in place on the mandrel, layers or plies of bias cut fabric are wrapped around the tube. The plies are applied by a building machine which is unable to insert a helix wire. The cover is applied and the hose wrapped in nylon tape for curing.

Size Range: 3/16 in. through 4 in. ID

Typical Uses: Water discharge, sand blast, conduit.

Advantages: Good control of inside diameter tolerances, many special constructions available without large minimum production runs.

Disadvantages: Wire cannot be used in a machine built version of wrapped ply hose; plied hoses are not capable of the high pressure ratings of braided hose.

Wrapped Ply–Hand Built

Wrapped ply hose may be hand built when the diameter is too large for the building machine, where helix wires are required, or where special build-in ends are desired. The plies are laid on by hand rather than by machine, and this allows for the hand-forming of built-in ends.

Size Range: 1/2 in. through 30 in. ID

Typical Uses: Oil suction and discharge, sand suction, acid suction and discharge.

Advantages: Special ends can be built into the hose, wide size range, special constructions available in small quantities.

Disadvantages: Relatively expensive due to high labor content.

Spiral Ply

This method involves applying all hose components (tube, reinforcement and cover) in spiral strips on a rigid mandrel. The layers are applied in a process capable of producing a wide range of ID's with helix wire and built-in ends.

Size Range: 1/2 in. through 30 in. ID

Typical Uses: Suction and discharge service including oils, acids and other fluids, dry materials and air.

Advantages: Special ends, helix wire, wide size range, ID tolerances, flexibility, cost.

Disadvantages: Higher cost than non-mandrel. Lengths restricted to lengths of mandrels.