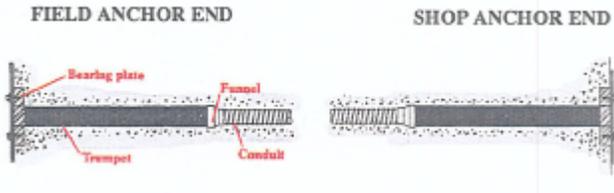


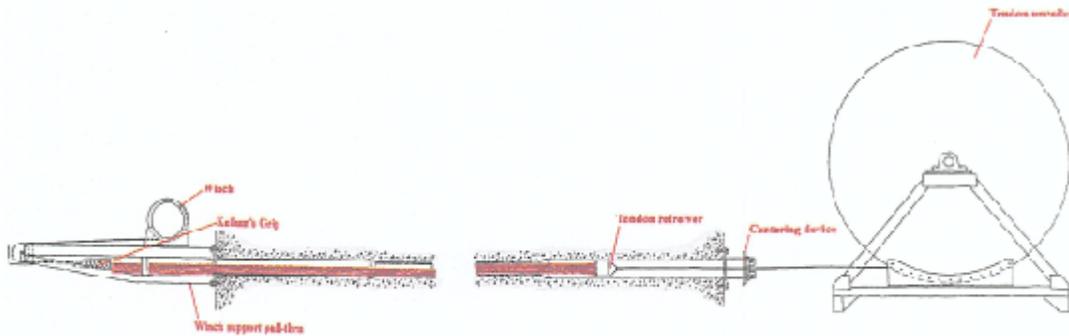
Precision Post-Tensioning System Installation Process

This document illustrates a typical procedure in which tendons are placed, stressed, and greased in a nuclear containment buildings.

1. Prior to pouring concrete, semi-rigid steel conduit of the appropriate diameter is set in its pre-determined position. This conduit is attached at each end to the steel trumpet bearing plate assembly (called the "trumplate"). These trumplates are bolted to the concrete forms prior to connecting them to the conduit.



2. The tendons are coiled at the manufacturing plant and shipped to the site on specially designed racks. The coiled tendons are transferred to the uncoiling reel which is positioned at the shop anchor stressing location. The tendons are then winched through the metal conduit with the help of a powered tugger at the opposite end.



3. The wires are installed in the field anchor and button-headed. (The wires in the shop anchor at the opposite end are button-headed at the factory.) A winch at the shop anchor end pulls the tendon back through the conduit to a taut position.



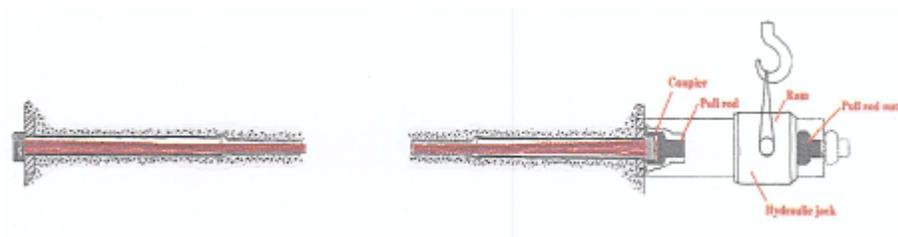
4. A threaded bushing is screwed onto the shop anchor head. The pull rod of the stressing jack is then attached to this bushing.



5. The tendon is ready for stressing. Depending on design considerations, tendons are stressed either at both ends or at one end only. The anchors at both ends accepted the identical stressing jack.



6. A hydraulic jack was coupled to the anchor to be stressed and exerted equal pull on the wires which are held securely in the anchor by their button-heads. As the tendon elongated and the anchor is pulled away from the bearing plate, steel shims of varying thicknesses, are inserted. When the required tendon elongation has been attained, the anchor is brought to rest on the shim stack.



7. The tendon is now fully stressed and ready for greasing.



8. Grease caps with gaskets are positioned over the anchors at each end, and grease is pumped into the grease cap and through the conduit under pressure, completely encasing the tendon and its anchors for permanent corrosion protection.

