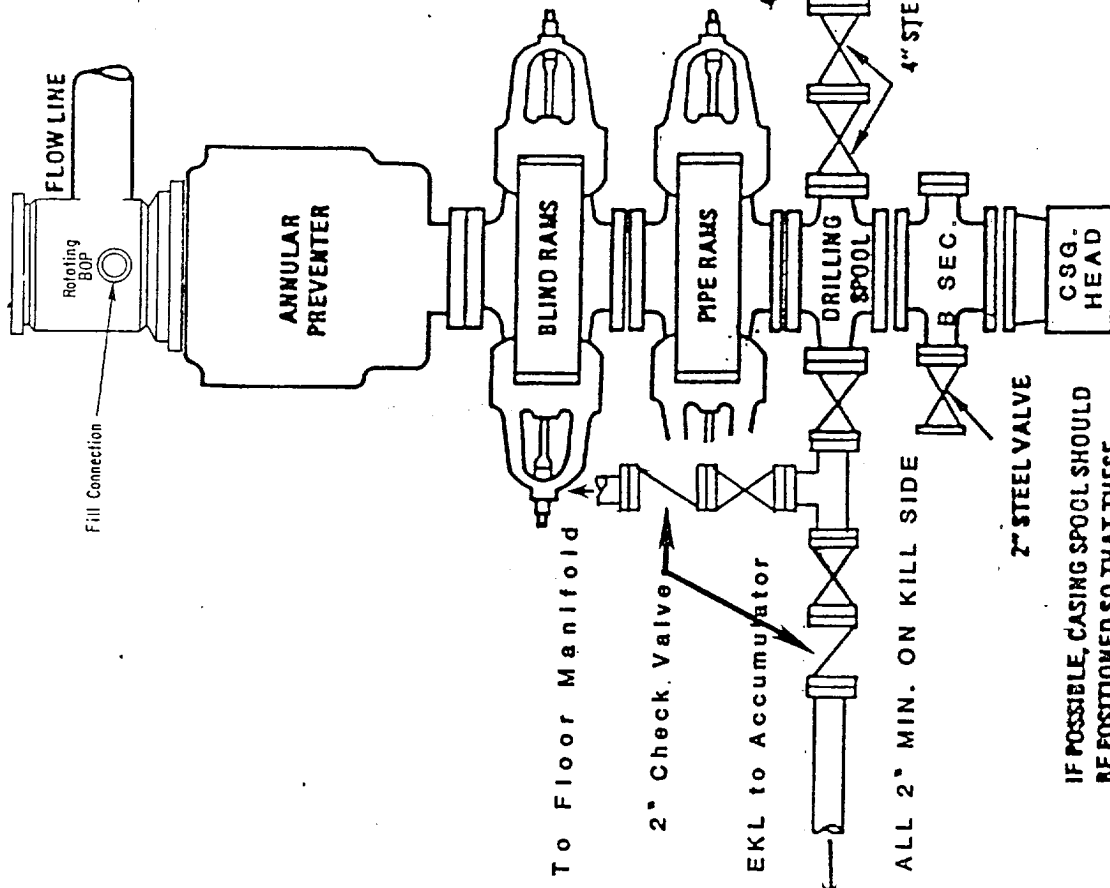


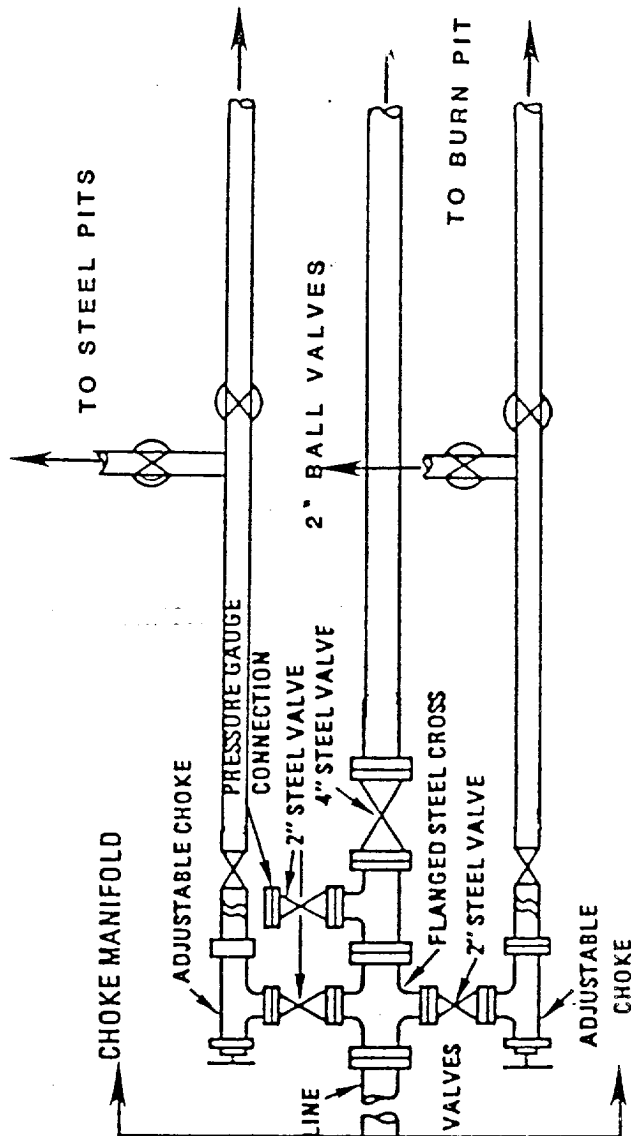
CLASS THREE PREVENTER



The blowout preventer shall be nipped up as needed and a spare set of drill pipe rams shall be on location. The ram preventers may be two singles or a double type. If full opening and closing outlets are on the side of the ram, then they may be used for connecting the ram to the wellbore. A set of spare flange bolts and nuts will be on location at all times for all flanges used.

The substructure height shall be sufficient to install a rotating blowout preventer. The accumulator shall be equipped with two pumps. One shall be covered with air, the other will be powered with electricity. Each pump shall be capable of fluid charging the total accumulator from precharge pressure to rated pressure within 2 minutes. The minimum nitrogen precharge pressure shall be 700psi. The pressurized fluid volume stored in the accumulator shall be sufficient to close all pressure operated devices simultaneously with the second pump. The accumulator shall be located on the rig floor, not less than 1300 feet from the wellbore. A remote closing manifold located on the rig floor shall be operational. The closing manifold and remote shall have a separate control for each pressure-operated device. Controls are to be labeled as to device and opened or closed. All controls are to be left in the open position when not in use. A pressure reducer and regulator will be provided for operation of the accumulator. All lines from the accumulator to the preventer will be rated to the same pressure rating of the preventer. The accumulator shall be placed away from the rig floor, the distance is specified in contract. Hydraulic fluid must meet API-5 specifications.

The choke manifold and all lines are to be supported by metal stands and securely anchored. The choke flow line, relief lines and choke lines shall be as straight as possible and without sharp turns. The flow line valves and ball line valves and all ram preventers must be equipped with stem extension; universal joints if needed and the stem extension must be located beyond the edge of the substructure constructed to facilitate easy operation from outside the substructure. All other valves shall be equipped with handles.



Beyond Edge of Derrick Floor

IF POSSIBLE, CASING SPOOL SHOULD BE POSITIONED SO THAT THESE VALVES ARE DIRECTLY UNDER THE BARREL OF THE RAM PREVENTER

10-10-81
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