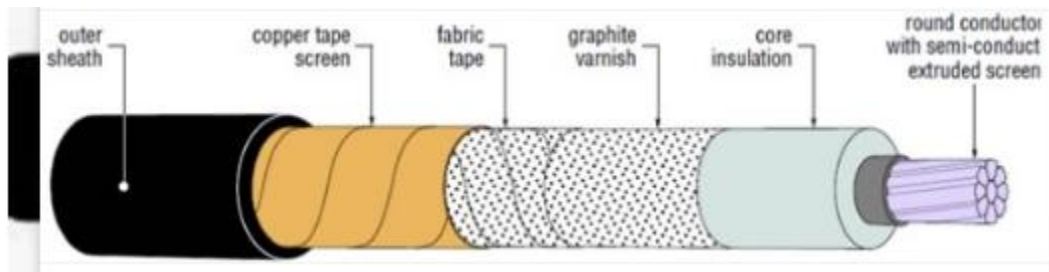


4.1 Pressurized Paper Insulated Cable



- Over the years a large variety of cables with pressurized insulation have been developed and put into service.
- Two designs, both fluid-filled, one at low pressure and one at high pressure, now account for the vast majority of new installations throughout the world.
- Using gas pressures still find some application and it is convenient to divide designs into groups.
- Each group may in turn be split into self-contained designs with lead or aluminium sheath and designs in which the cable is pulled into a pre-installed steel pipe, the pipe being subsequently filled with the pressurizing medium of insulating liquid or gas.
- They also have potential for use at 750 kV and 1000 kV. Gas-pressurised cables, however, are limited to 132 or 275 kV according to design and this is associated with somewhat inferior electrical breakdown strength.

Fluid-filled cables:

- There can be some confusion about the interpretation of the generic description of a fluid-filled (FF) cable and, in particular, the coupling of the term 'low pressure' with it.
- In general, when no other description is given, FF cable is taken to mean a self contained cable which operates at a maximum static sustained pressure of 5.25 bar with transient pressures up to 8 bar.
- This is the conventional cable which has very wide usage and is discussed in chapter 30.

Unreinforced sheath LPFF cable:

- use of a cable which operates at a pressure which is sufficiently low to be withstood by a specially alloyed lead sheath having no reinforcement.
- The pressure has therefore to be kept below 1 bar, which limits its application to fairly flat routes.

Mollerhoj cable:

- Type of cable which has been used in Denmark at voltages up to 132kV.
- It is a truly self-contained cable because after the installation has been completed the ends are sealed and there are no feed tanks.
- The cores are laid side by side in fiat formation under a lead sheath.