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New designs for MV accessories: cold-shrinkable transition joints and evolution of separable cable connectors

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To join synthetic insulated cables, cold-shrinkable technology is now fully developed and readily accepted. This technology is now also extended to transition joints, connecting paper insulated to synthetic insulated cables.

To be able to use a cold-shrinkable joint for dry type cable on paper insulated cable, transition kits are needed to seal and protect the paper cores and to provide the necessary stress-control.

This paper describes the development of a transition joint using all cold-shrinkable components for the transition kit and for the joint itself.

Separable connectors form the link between the distribution cable network and the equipment.These products therefore are affected by changes in both fields, like: evolution in the design of MV-distribution cables (thinner insulation wall, larger cross-sections, replacement of PVC by PE for the outer jacket, solid conductors, changes in the screen construction and humidity barriers), size reduction of modern switchgear, more universal connector kits (to reduce the diversity, cost and size of inventories), need for additional functionality (cable-screen interruption, encapsulated surge arresters, etc.).

In response, the design of modern separable connectors is evolving. The status of recent developments is presented.