



The Electrical Cable Specialists

## **Insulation Shield Materials in MV Cables**

Certain medium voltage specifications are proprietary to one manufacturer. For instance, one manufacturer in the industry offers EPR based semi-conducting insulation shields. Their argument is that the only way to assure compatibility of shield material with the insulation is to make them from the same base material.

Other manufacturers use an extruded thermoset insulation shield material. These manufacturers maintain that if the insulation shield and insulation are the same base material, the shield materials stick tightly to the insulation during extrusion.

All US manufacturers of shielded medium voltage cables qualify their cables to ICEA standards. Both ICEA S93-639 and S-97-682 reference a stripping test that ensures the insulation and semiconducting insulation shield separate properly. Some manufacturers also qualify their cables to the more stringent AEIC CS8-07 standard which includes a requirement that the semiconducting insulation shield be “applied directly over the insulation”.

In order to meet the strip ability requirement when the insulation shield and insulation are both EPR, a release agent is applied as the cable passes between the second and third in-line extruder. To some this fails to meet the requirement for applying the shield material direct over the insulation.

Both approaches to manufacturing the semiconducting insulation shield are valid. Call us if you or your team wants to discuss this topic in more depth.

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