



ASSOCIATION OF ELECTRIC CABLE MANUFACTURERS OF SOUTH AFRICA
VERENIGING VAN ELEKTRIESE KABELVERVAARDIGERS VAN SUID-AFRIKA
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Spark testing of sheathing of armoured cables

At present there is no specified requirement for the spark testing of outer sheaths in any of the present SANS specifications. (See SANS 1507-3, 4 and 5; as well as SANS 97, 1339 and 1713.)

This omission leaves the manufacturer with a dilemma as they would apply spark testing to an internal requirement which could be different at the various manufacturers.

Proposal

Include in every specification where there is a metallic layer below the outer sheath the following wording in the clause dealing with the Cable Sheath.

"In order to ensure that the sheath is continuous and does not have any pinholes, the sheath shall be subjected to the following spark test voltages:-

a.c.: 6kV per millimetre of the tabulated nominal radial thickness of the sheath, up to a maximum 25kV

d.c.: 9kV per millimetre of the tabulated nominal radial thickness of the sheath, up to a maximum 38kV"

See table below for clarity.

Spark testing of over sheaths

Nominal Radial of Sheath		Test Voltage	
Above	Up to and including	ac	dc
mm	mm	kV	kV
-	0,25	3	5
0,25	0,50	5	7
0,50	0,75	6	9
0,75	1,00	7	11
1,00	1,25	9	13
1,25	1,50	10	15
1,50	1,75	12	17
1,75	2,00	13	20
2,00	2,25	14	22
2,25	2,50	16	24
2,50	2,75	17	28
2,75	3,00	19	28
3,00	-	25	38