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Quality Assurance Plan for HV Stator Coils / BARS

Routine Test ↓ (standards adopted)	Rated Voltage U →	3.3 KV	6.6 KV	11 KV	13.2 KV
AC HV Test on manufacture of coils / bars in shop at 1.3 (2 U + 1) (IEC 60034 / BS 4999 & 5000)		10	18	30	36
AC HV Test after placing the coils / bars in slots at (2 U + 3) (In-house Standard)		10	16	25	29
AC HV Test after wedging the slots at (2 U + 2) (In-house Standard)		9	15	24	28
AC HV Test on 3 phases of completed stator winding at (2 U + 1) (IEC 60034 / BS 4999-5000)		8	15	23	27
Surge Comparison Test on all coils on manufacture in shop at 1.5 U (In-house Standard)		5	10	16	20
Surge Comparison Test on all coils after placing in slots at 1.5 U (In-house Standard)		5	10	16	20
Surge Comparison Test on completed stator winding at 2 U + 1 (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		8	15	23	27
Tan Delta Test on random / all coils and completed stator winding (IEC 60894 / BS 4999-5000 / ESI 44 – 7)		At 0.2 U, 0.4 U, 0.6 U, 0.8 U & 1.0 U			
Measurement of insulated size in the moulded portion (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		100 % of the coils / bars			

Type Test ↓	Rated Voltage U →	3.3 KV	6.6 KV	11 KV	13.2 KV
After AC HV Test at 2 U + 1 for 1 minute on two coils / bars, raise voltage to 2 (2 U + 1) (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		16	30	46	56
Surge Comparison Test (in KV) on two coils at 2 U + 1 (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		8	15	23	28
AC HV Test (in KV) in the overhangs on 2 coils / bars at 2 U (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		7	13	22	26
Tan delta Test on 2 stator coils / bars at room temperature before and after heating the coils / bars to 100° C (IEC 60894 / BS 4999-5000 / ESI 44 – 7)		At 0.2 U, 0.4 U, 0.6 U, 0.8 U and 1.0 U			
Measurement of DC Resistance at room temperature (IEC 60034 / BS 4999-5000 / ESI 44 – 7)		5 % of the coils / bars			
AC BDV Test of insulation of conductors in each spool used for the coils (In-house Standard)		Shall be > 5 KV			