

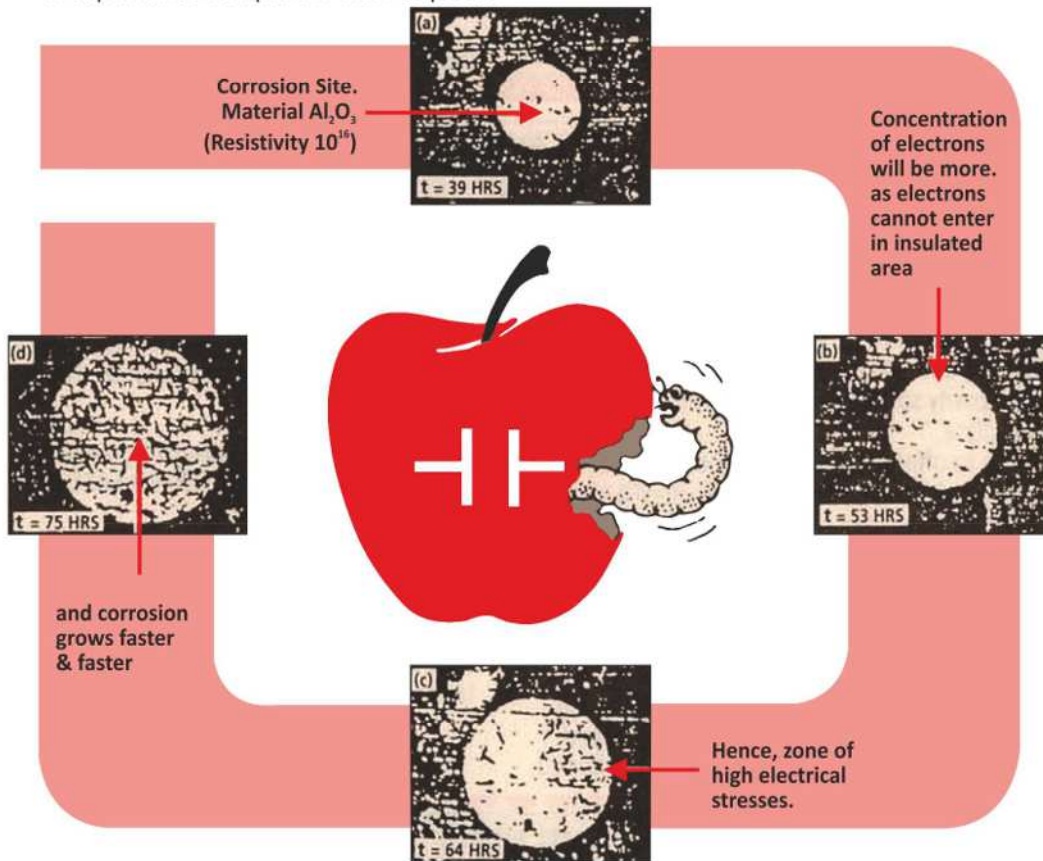
Contribute your 60 seconds to read this paper and verify the truth over the field

Why self healing Metallised Polypropylene (MPP) Power capacitors are short lived in our country?
-on account of Corrosion.

We know that trapped air in MPP winding can not be removed by any vacuum process i.e. enough of oxygen is available throughout the winding

Thickness of metal coating (in MPP) is only 0.000015 mm (extremely thin).

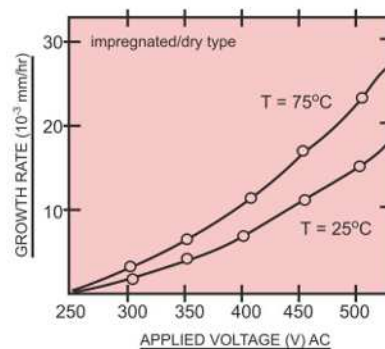
Corrosion is the conversion of extremely thin Aluminium metallising to its oxide i.e. Al_2O_3 with a resistivity in the order of 10^{16} . Hence loss of conducting plate area, resulting in reduction of capacitance / output of Power Capacitor



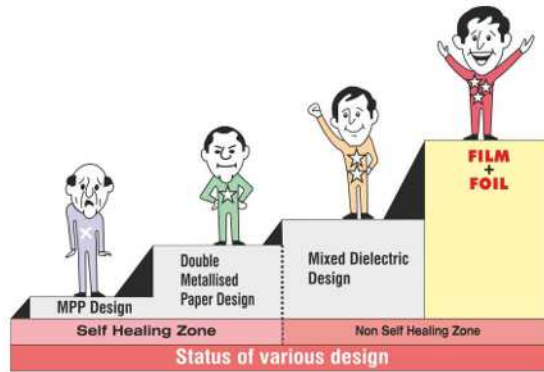
Initially corrosion grows slowly but as time passes it grows very fast-the growth being rectilinear.

Conclusion form adjacent graph:

1. Corrosion grows fast with rise in supply voltage. Below 250 Volts corrosion growth is negligible but at 440 Volts, corrosion growth is tremendous.
2. Rate of corrosion is high with higher ambient temperature.



Now you will realise, why our design engineers have shifted to the costlier **FILM +FOIL** super technology and flatly refused the acceptance of Self Healing M.P.P. technology for MAMAL power capacitors.



Q *Is the specification **FILM + FOIL** sufficient to get good power capacitor ?*

- Must be genuine **FILM + FOIL DESIGN** - Which is non self healing. It comprises of a layer of hazy polypropylene film of 14 micron as dielectric and 5 micron high purity, soft - annealed aluminium foil as a conducting plate.

Beware of following terminologies - MISUSED

- 1 **MD - XL** : Some manufacturers may offer Single Layer - Self Healing Double Metallised Paper designed capacitors with 0.2 Watt to 0.5 Watt / KVA_r losses.
 - 2 **Double Dielectric / Heavy Duty** : Some manufacturers may offer Single Layer - Self Healing MPP designed capacitors with 0.5 Watt / KVA_r losses.
 - 3 **All PP / FILM + FOIL** : Some manufacturers may offer Single Layer PP designed capacitors with 10 micron Polypropylene film.
- Impregnant should be of Capacitor Grade i.e. SAS - 60E Premixed with 0.7% epoxide and should not be transformer oil, castor oil and rape-seed oil.

A **ABSOLUTELY NO.** *Something else also should be specified.*

- Raw material should be of good quality. By going for inferior quality raw materials, price can be reduced considerably, but premature failure becomes confirmed.
- Bushing should have high mechanical strength and the method of fixing should be proper to get leakproof joint.
- Must have built in fuses with each wound coil.
- There should be a meaningful guarantee that **NO REDUCTION IN OUTPUT OR NO FALL IN CURRENT FOR 60 MONTHS.** If any reduction is found, either capacitor should be replaced and the same guarantee should be given from the date of replacement or REFUND of hard earned money invested.
- If you want to know more details about the different technologies of power capacitors, please ask for detailed technical booklet. It is yours, absolutely free of cost.

HUMBLE REQUEST TO ALL POWER CAPACITOR USERS:

Atleast now, make a routine habit to measure capacitive current with the help of Ammeter/Tong Tester every month and maintain the records. if any reduction in current / failure of capacitors is noticed, please protest to the supplier / manufacturer immediately. This may help you to protect your investment in power capacitor.

Check the Name Plate of failed capacitor - MAY FIND TYPE AS "SH-MPP", MAY CONCLUDE AS NOT SUITABLE FOR OUR VOLTAGE SUPPLY SYSTEM AND AMBIENT TEMPERATURE.

READ

If you feel that we are providing Good Information, then please send the Name, Contact Number & Address of Electrical Consultants / Contractor / Panel Builder

Given for information upto our best of knowledge without any guarantee as regards either for mistake or omission



Malde Capacitors Mfg. Co.

Off : 401, Madhav Apts., Jawahar Road, Opp. Rly. Strn., Ghatkopar (E), Mumbai- 400 077.
Tel.: +91 99789 62625, 87585 62625, 88797 62625 / 533.
WhatsApp : 99303 62625 • Email: maldecapacitor@gmail.com



25 KVA_r x 4 Nos. in Bank form