Electrical work: protect yourself!

What happened
The incident occurred in a HV installation of the LHC: While connecting an electrolytic capacitor which was left open and unearthed despite having been out of service for several weeks, the operator suffered an electric shock when he manually closed the circuit to earth on reconnecting this equipment to the installation.

N.B.: When not in use, this type of HV capacitor as well as HV coaxial cables may spontaneously recharge and therefore represent a hazard if they have not been correctly discharged and shorted.

The consequences
The operator suffered two light burns (red marks) at the points where the current entered and exited his body. If his two hands had been in contact with each other the consequences could have been much more serious.

To avoid this type of accident
Earth the capacitors in order to protect yourself from indirect contact! The capacitors must be earthed by a professional who will analyse the consequences. If they are not in use, HV capacitors and cables, including any associated feed box or metal screen, must be kept shorted. Don’t forget that the wearing of HV Class 3 insulating gloves is mandatory when performing any type of operation with electrical equipment.