

## **ANNEXE 8**

# **ELECTRICAL WORK REGULATIONS**

## 1. Additional conditions relating to electrical work

- 1.1 The floor of the halls contains conduits for all technical system connections (including electrical systems). The location of these conduits is shown on the floor plan.
- 1.2 The work of connecting stands to the mains power supply of the MECC complex (voltage: 230/400 V with neutral wire at fifty (50) Hz) is entrusted by MECC Maastricht exclusively to Mansveld Expotech Infra B.V. (note: the Supplier at the time of the establishment of the Rules and Regulations MECC Maastricht B.V.), a recognized electrical contractor.
- 1.3 Stand holders are not permitted to provide their own power supply, for example by means of power units or generators.
- 1.4 All stand installations must comply with the regulations in accordance with the latest edition of the following standards: NEN 1010-6, NEN 3111, NEN 3140 and NEN 8020-20 as well as the international standard IEC 60364 and EN-50110. Irrespective of the electrical contractor that has been called in, all installations must always be approved by the MECC Maastricht recognized electrical contractor (note: the Supplier at the time of the establishment of the Rules and Regulations MECC Maastricht B.V. is Mansveld Expotech Infra B.V.). If desired, the latter can also fit the entire stand electrical system.
- 1.5 Due to safety and legislation (NEN 1010 provision 711.536.2.3), it is mandatory for each individual stand to use its own main connection (end group), this is also to limit the inconvenience in the event of disruptions and the like at one of the main connections. For technical reasons, it may therefore be possible for several stands to be connected to a switch box and for this switch box to be placed in one of the connected stands. It is not permitted for a participant to switch the power of this cabinet on and/or off, this is exclusively reserved for the Supplier designated by MECC Maastricht.
- 1.6 The participant should notify the recognized electrical contractor, through Exhibitor Services, of the required mains connections and any other required facilities no later than twenty-eight (28) days before the first build-up day of the event; it should also supply a plan of the stand showing the location of the stand and the positions of the mains connections and any other facilities. A charge will be made for mains connections that are not notified in time.
- 1.7 Daytime-rate electricity is switched on from half an hour ( $\frac{1}{2}$ ) before until half an hour ( $\frac{1}{2}$ ) after the opening hours of the event in the case of consumer exhibitions and from one (1) hour before until one (1) hour after the opening hours in the case of trade shows. For safety reasons, the mains supply is shut off on the last day immediately after the close of the event. For the use of equipment that requires continuous power (24 hours), e.g. security or refrigerators and freezers, a continuous connection to the main power can be requested. Continuous power comes from a separate distribution network; given the limited capacity of this distribution network, it is not permitted to connect other installations, in particular stand lighting, to the continuous power network.
- 1.8 If, in the opinion of the Supplier, the participant's electrical system is defective or otherwise unsound, the Supplier is entitled to refuse to connect the participant to the mains supply.

## 2. General remarks about electrical installations in the stands:

- 2.1. Stand installations should be fitted with sheathed cables having a cross-sectional area of no less than 2.5 mm<sup>2</sup>. The use of thinner wiring for the power supply to wall sockets is strictly forbidden.
- 2.2. An exception is made for lighting circuits, which may have a 1.5 mm<sup>2</sup> cross-sectional area provided that they do not carry more than 2 kW and the associated final circuit must be fitted with an appropriate protective device. Under-floor cables should have a minimum cross-sectional area of 2.5 mm<sup>2</sup> and may not be jointed.
- 2.3. The installation must be distributed over sufficient end groups and proportionally over the phases. Each group must be protected with the correct installation equipment, and the end groups must also be equipped with a 30 mA Residual Current Device (RCD). (maximum 3 end groups behind a RCD).
- 2.4. Any joints must be welded by means of wire nuts and industrial terminal connections and must have extra protection in the form of an insulated junction box. Concealing welded joints behind walls, under floors, or in ceilings is NOT PERMITTED.
- 2.5. Electrical wiring must be laid at a sufficient distance from steam, water, and gas pipes. Wiring that is exposed to potential damage must be properly protected. Metal parts which could potentially conduct electricity in the event of an electrical fault should be properly earthed. Electrical cabling and materials must be firmly attached using the appropriate industrial fittings.
- 2.6. Electric motors must be fitted with a thermal control and safety switch. Motors with a capacity in excess of 3 kW should also be fitted with a starter that limits the starting current to three times the nominal current, up to a maximum of 180 Amps.
- 2.7. The electrical stand installation must therefore be designed in such a way that interference as a consequence of higher harmonics has no influence on the electricity grid within the MECC complex. The following limiting values apply:
  - harmonic deformations (THD) <5%
  - ratio of the third harmonic to the first <3%
  - cosine phi >0.9

### Points for attention in connection with electrical systems

- Standing and hanging trusses must be earthed if current-carrying materials (such as lights, wall sockets, cables, etc.) are in the immediate vicinity (on/in/under/over/through)
- Aluminium system stands must be earthed (Maximum 4 aluminium system stands per earthing).
- Steel structures must be earthed if any current-carrying material or equipment (light fitting, wall socket, cable etc.) is present in their immediate vicinity (i.e. attached to or on, below, or through the structure).
- Grounding must be through a separate grounding line, connected as close as possible to/at a grounding point switch and distribution box.
- Welded joints can be finished with wire nuts if they are suited to the flexible cable used.
- Welded joints (within or out of reach) must be protected by a junction box.
- RCD must be designated as class A (class AC not allowed).
- A so-called splitter is not to be used. (e.g. Splitter 63ACEE plug to 2 x 32ACEE).
- Each end group must be equipped with the correct automatic circuit breaker in combination with a 30 mA RCD or with a Residual Current Circuit Breaker rated at 30 mA.
- Every switch and distribution box must be equipped with a main switch for switching on/off.
- Plugging/pulling the plug > 3 kW is not a solution for switching the switch and distribution box on/off.
- Stand installation must be sheathed in an appropriate conduit.

#### Continuation of points for attention in connection with electrical systems

- Wiring for <2 kW lighting must have a cross-sectional area of not less than 1.5 mm<sup>2</sup> (except for factory-fitted/original wiring in light fittings).
- Cables under raised floors must be jointless.
- Cables under raised floors must have a cross-sectional area of not less than 3 x 2.5 mm<sup>2</sup>
- No more than one year may elapse between two successive NEN 3140 inspections of a switch and distribution box. This frequency follows from Appendix T (electrical appliances) of NEN 3140.
- If the frequency of use is low (<5 x per year), the maximum time between two successive inspections of a switch and distribution box is two years (for practical reasons often one year).
- A switch and distribution box must bear a sticker showing who has performed the NEN 3140 inspection and the date on which the approval expires/ceases to be valid.
- The stand electrical system must be inspected in accordance with NEN 1010-6 before being put into operation. The result must be explicitly shown on the relevant completion report.
- In the case of smaller (i.e. uniform) stands, the stand electrical system may be divided over several stands (depending on the switch and distribution box).
- Cabling, distribution blocks etc. will be inspected by means of random checks.
- Proof must be provided that power cables (often >6 mm<sup>2</sup>) have been inspected.