

On correcting these failures, the installation would be perfect in respect to auditing.

Nevertheless with regards to industrial inspection, there would lack other details such as:

- Copies of the projects where the date appears
- Visa and date of this
- Installed power
- Hired power
- Unifilares with protection (automatics) and the section of individual short-circuit lines and of the rest of the circuits.

From the building work director:

- Address, post code, official school from which they belong
- Membership number (College ID number)
- Telephone and fax number

Installations Company

- Low voltage specialities
- Company tax code (CIF)
- Telephone number
- Authorised installer that signed electric installation form (Boletin)
- Low voltage specialities and the ID card (DNI) of this authorised installer

List of Isaac Newton Telescope faults

In general:

- It is necessary to have the low voltage industry register file's number

- Install emergency lights in the paths and changes of direction for mentioned evacuation routes.
- Install emergency lights above the extinguishers guaranteeing a minimum of 5 lux in these.
- Check the tightness of the automatic screws, igas etc in all of the panels, because there has been several loose terminals detected.
- Place in the substation the earth (ground) wire with the neutral as it was originally

In the main distribution room:

- Install two more emergency lights above panels and one above the exit.
- In the panel substitute the white cables for the blue ones, because they are neutral

In the generators' room:

- Install the present emergency lights to 90 degrees, with respect to the present position directing the illumination of the generator panels and install a new one in the exit of the room.

Generator Panel hose situated in the main distribution room.

- Change the 1,00mm² cable of circuit 11 (last automatic below and to the right). It must be a minimum of 1,5mm².
- Replace the automatic 20A of circuit 4 for one of 10A.
- Replace the automatic 25As of circuits 6 and 7 for ones of 16A.
- Replace the automatic 15A of circuit 8 for one of 10A.

Substitute both the emergency light on the bottom floor of the INT telescope in the exit door to the car repairs workshop and the one that is above the exit door towards the cars.

Nitrogen Liquid Floor:

- Replace the automatic 32A of the old compressor to 25A.
- Replace the automatic 32A of air to 25A.
- Replace the automatic 32A of the air compressor to 25A.
- Put the emergency light on the electric panels
- Replace the automatic 32A socket to 16A.
- Put the 16mm² cable in the panel by force, to the automatic 50A of the gas separator
- Substitute the automatic 32A of the chiller force panel to 25A.
- Low insulation in the most right hand phase of air compressor
- Adapt the power panel to the colour code
- Emergency light above the exit door outside

INT Telescope

D8 panel of mechanic workshop

- Adapt panel to colour code
- Replace the three phase automatic of 25A of the MCB16 to 16A.

- Replace the three phase automatic of 32A of the MCB12 to 25A.
- Replace the three phase automatic of 32A of the MCB9 to 25A.

Illumination panel of the repair shop (next to D8)

- Adapt to colour code
- Install the emergency light above the panel

D15 Garage Panel

- Adapt to the colours code
- Replace the automatic of 32A of pneumatic machine to 25A.
- Replace the automatic of 40A of the soldering socket to 20A.
- Replace the automatic of 32A of the elevator sockets to 20A.
- Do not switch off electric heating 1
- Do not switch off electric heating 2
- Electric heating 1 and 2, have low insulation in the most left hand phase
- Low insulation in phase 2 of the lights circuits and office lighting
- Low insulation in phase 3 (right) of the circuit sockets and in the office sockets

D10 Panel

- Adapt to the colour code
- Replace the automatic 20A of the C2 to 16A or block off the black 2,5 cable that it has connected.
- Put the emergency light above this panel

D10 Panel

- Put the emergency light above the panel
- Replace the automatic 15A of the C1 to 10A.
- Replace the automatic 30A of the C2 to 20A.
- Replace the automatic 30A of the C3 to 20A.
- Replace the automatic 30A of the C4 to 20A.
- Replace the automatic 15A of the C6 to 10A.

S2A Panel

- Install the emergency light above the panel

Panel between panel S2A and D5/A of 6 circuits

- Replace all of the automatic 30As from C1 to C6 for 16A.

D5/A Panel

- Install emergency light above this panel
- Install emergency light above the two exit doors of the INT telescope distribution panel
- Replace the automatic 30A of the C1 to 25A.
- Replace the automatic 30A of the C2 to 25A.
- Replace the automatic 30A of the C8 to 25A.

D2/B Panel

- Replace the automatic 30A of the C1 and C6 to 20A.
- Replace the automatic 30A of the C2, C3, C4, C5, C7 and C8 to 16A.

D6/B Panel

- Install the emergency light above the panels of D6/B, D3/C and S4/C.
- Replace the automatic of 30A of the C1 and C4 to 25A.
- Replace the automatic of 30A of the C2, C3, C6 and C7 to 20A.

S4/C Panel

- Low insulation in circuits C1 to C20 or that is to say in all the circuits of this panel

Dome Panel

- Connect the shutter button circuit to the spare automatic of 40A.
- Replace the automatic circuit of 4 x 175A of the top shutter for one of 4x90A.

PBE Panel in the distribution room (basement)

- Substitute the automatics of 15A of the C1, C3 and C4 to 10A.

L.G.E. panel on the ground floor

- Install the emergency LIGHT above panels L.G.E, PNN and CSB

PNN Panel on the ground floor

- Remove the 2,5mm² circuit connected to the C6 of 30A, this circuit for example can be connected to C2 that is of 15A.

CSB Panel (UPS) ground floor

- Change the **IGA** of 70A to one of 50A.
- Replace the automatics of 30A of the C1, C2, C3 and C4 to 20A.
- Replace the automatics of 30A of the C6 to C8 to 16A.

LFE Panel

- Install the emergency light above LFE and PFN panel in the control room on the second floor.

WHT Telescope (4,2m)

GFP-1 Panel (ground floor power)

- Pass the automatics of CT04 (30A), CT06 (20A) and CT08 (15A at present) to 10A.
- Pass the automatics of CT01, CT02 and CT03, which have 30A at this moment to 15A.

GFL-1 Panel (ground floor lighting)

- On removing the supply, the emergency light will remain flashing intermittently
- Circuit 8 has little insulation on the earth (ground) phase
- (With the outflow of CT08, there is a phase connected to another phase by a blue cable, replace this with a black cable or similar.)

- Install an emergency light above this panel and another above the exit.

Sewage pump panel

- Adapt this panel to the colour code
- Replace the automatic 4x15A of sewerage pump to 4x10A.
- Replace the present IGA for one of 4x20A

AP Panel (lighting and aluminizing power)

- Fix the standard lighting lamp, closest to the crane motor
- Remove cables that come out from the left of the 35A fuse
- Put the emergency light in the hall before entering the (aluminizacion) room.

Feed panel from the UPS CB79 located in the grace stand

- Check the **aprite** of terminals
- Adapt this panel to the colour code
- Change the 6mm² individual short circuit to 10mm²
- Replace the IGA of 63A for one of 40A
- Replace the automatics of UPS1, UPS2, and UPS3 presently of 32A for ones of 16A.

Distribution panel of the dome situated in the dome.

- Adapt this panel to the colour codes
- Change the two red 1,5Mmm that go from the automatic socket (1° above for ones of 2,5mm²)
- Replace the automatic dome drivers (90A) and the botton (60A) drivers for ones of 35A.
- Install the emergency lights on the dome panels.

Air conditioning panel in the grace box

- Replace the automatics of the circuits (13A), CTO3 (10A) and CTO5 (10A), for ones of 6A.

DLP2E Panel

- Adapt it to the colour codes
- Replace the projecting cables of the general switch for ones of 10mm².
- Replace the automatics of 15A of CT0S 3 and 4 for ones of 10A.
- Replace the general switch of 30 for one of 25 or move the section of the individual short circuit to 10mm² of the section.

DL2NE Panel

- Replace the automatic 2x20A of the CT06 for one of 2X15A.
- Replace the automatic 4X15A of the CT06 for one of 4X10A
- When disconnecting the automatic CT05, it continues having voltage; therefore it is being supplied by another source, so eliminate this second supply point.

Distribution panel that is situated in the operations room

- Substitute the automatic 1x32A of the CTO CB48 of the secondary distribution/layout for one of 1x16A.
- Adapt this panel to the colour codes.

SFL-1 (Lit second floor)

- On disconnecting the general switch it has a alternating voltage of around 10V (corriente alterna)

SFP-1 Panel (Second floor Power)

- Install the emergency light on the panel
- Replace the automatics of 30A of CT02 and of CT06 for ones of 16A.
- Replace the automatics of 20A of CT03 and of CT05 for ones of 16A.

Air conditioning panel located in the air conditioning room

- Adapt the chiller cables to the colour codes
- Voltage returns on disconnecting the general switch.

Fume extractor panel located at the exit of the air conditioning

- Adapt the cable to the colour code
- Replace the automatic 3x30A of the fume extractor for one of 3x25A.

FFL1 (Lit 1st floor)

- Return voltage of disconnecting the general switch

FFP-1 Panel (First floor power)

- Replace automatics of 30A of circuits 1 and CT02, FOR ONES OF 20A.
- Replace the automatics of 20A of circuits 3, CT04, CT05 and CT06 for ones of 16A.
- Insulation phase, earth (ground) very low (0,02MΩ)

GFP/2 Panel on the hydraulic oil floor

- Install the emergency light above the panel
- It has returning voltage on the receptors (with the general switch turned off, there is lowered voltage)
- Substitute the automatic 3x40A of the CT0s' altitude circuit's pump and oil circulation pump for ones of 3x25A.
- Replace the automatic 3x50A of the (azimuth) CTO for one of 3X25A.
- Replace the automatic 1X16A of the CTO contactors for one of 1x10A.
- Replace the automatic 3x32A of the cooling floor for one of 3x25A.
- Replace the automatic 3x20A of the optical laboratory for on of 3x10A.

