**ORDER**

**No. A 584**

**Sofia, 30.09.2020**

**INSPECTION BODY OF TYPE C**

**at “ETRA-EL” Ltd., Sofia**

**Management and office address:** 5000, Veliko Tarnovo 3, Magistralna Str.

**To perform inspection of:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Scope type:** *Flexible\** | | | | | |
| **№** | **Field of Inspection** | **Type** **of Inspection** | **Parameter of Inspection / Characteristic** | **Test and Measurement Methods Used During Inspection** | **Regulations, Standards, Specifications, Schemes** |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Electrical facilities and equipment up to and above 1000 V | New and operational sites and facilities | Insulation resistance | Norms for testing electrical machines and equipment (NIEMS)-1995  ПК-1 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004);  TS |
| Resistance of lightning protection grounding systems | ПК-2 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004);  TS |
| Impulse resistance of lightning protection grounding systems | ПК-2 | Ordinance No. 4, (SG iss. 6/2011);  TS |
| 2. | Electrical facilities and equipment above 1000 V- Cable lines of up to 20kV | New and/or operational sites/ facilities | Elevated DC voltage test | NIEMS- 1995  ПК-5 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004);  NIEMS-1995 CP  TS |
| 3. | Electrical facilities and equipment above 1000 V- Power transformers of up to 35 kV | New and/or operational sites and facilities | Insulation resistance | NIEMS-1995  ПК-6 | NIEMS-1995  Ordinance No. 16-116, SG iss. 26/2008; |
| Resistance of the coils | БДС 15320  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004)  Ordinance No. 16-116, (SG iss. 26/2008);  TS |
|  |  |  | Transformation factor | БДС 15320  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004),  Ordinance No. 16-116, (SG iss. 26/2008);  TS |
| 4. | Electrical facilities and equipment up above 1000 V-  Current measuring transformers up to 35 kV | New and/or operational sites/ facilities | Insulation resistance | NIEMS-1995  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004);  NIEMS-1995  TS |
| Resistance of the coils | БДС 15320 | Ordinance No. 3, (SG iss. 90, 91/2004),  NIEMS-1995  TS |
| Transformation factor | БДС 15320  ПК-6 | NIEMS-1995 TS |
| Volt-ampere characteristic | NIEMS-1995  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004),  TS |
| 5. | Electrical devices and equipment over 1000 V- Voltage measuring transformers up to 35kV | New and/or operational sites/ facilities | Insulation resistance | NIEMS-1995  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004);  NIEMS-1995  TS |
| Resistance of the coils | БДС 15320  ПК-6 | Ordinance No. 3, (SG iss. 90, 91/2004);  NIEMS-1995  TS |
| Transformation factor | БДС 15320  ПК-6 | NIEMS-1995  TS |
| 6. | Electrical installations and equipment of up to 1000V | New and/or operational sites/facilities | Impedance of the loop “phase-protective conductor” | ПК-3 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004),  TS |
| Circuit breakers:  Contact voltage;  Shutdown time | ПК-4 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004),  TS |
|  |
| 7. | Electrical installations and equipment of up to 400kV | New and/or operational sites/facilities | Transient resistance of a contact system | NIEMS-1995  ПК-7 | NIEMS-1995  TS |
| Transient resistance of connections | NIEMS-1995  ПК-7 | Ordinance No. 16-116, (SG iss. 26/2008);  Ordinance No. 3, (SG iss. 90, 91/2004),  TS |
| 8. | Artificial lighting in working and domestic environments | New and/or operational sites/ facilities | Illuminance | Methodological guidelines for the measurement and assessment of artificial lighting in buildings 40-85, Standardizatsia Publishing House, 1985.  ПК-8 version 1 of 11.09.2019 | Ordinance No.49, SG iss. 7/1976  Ordinance No. 9,  SG iss. 46/1994;  Ordinance No. 24, SG iss. 95/2003;  Ordinance No. 2,  SG iss. 15/2007;  Ordinance No. 3,  SG iss. 15/2007  Ordinance No. 26, SG iss. 103/2008 Bulgarian State Standard EN 12464-1  TS |
| 9. | Microclimate in working and living environments | New and/or operational sites/ facilities | Air temperature,  Air velocity,  Relative air humidity | Ordinance No. RD-07-3, SG iss. 63/2014 БДС 16686  ПК-9 | Ordinance No. 9,  SG iss. 46/1994;  Ordinance No. 24, SG iss. 95/2003;  Ordinance No. 2,  SG iss. 15/2007;  Ordinance No. 3,  SG iss. 15/2007  Ordinance No. 26,  SG iss. 103/2008  Ordinance No. RD-07-3, SG iss. 63/2014 БДС 14776  TS |

\* *Introduction of а new version of standards/documents or standards/documents replacing them is allowed. An up-to-date list of standards/documents with their dated versions shall be provided by the CAB.*

Ordinance No. 16-116 on the technical operation of energy equipment (SG iss. 26/2008)

Ordinance No. 3 on the structure of electrical installations and current-carrying lines (SG iss. 90 and 91/2004)

Ordinance No. 4 on the lightning protection of buildings, outdoor facilities and open spaces (SG iss. 6/2011)

NIEMS-1995. Measurement standards for elecrtrical machines and equipment

Ordinance No. RD-07-3 on the minimum requirements for the microclimate of workplaces (SG iss. 63/10.08.2014)

Ordinance No. 3 on the health requirements for kindergartens (SG No. 15/2007)

Ordinance No. 2 on health requirements for computer and internet rooms for public use (SG iss. 15/2007)

Ordinance No. 24 on sanitary and hygienic requirements for discotheques (SG No. 95/2003);

Ordinance No. 9 on the health and hygiene requirements for the use of personal computers in the education and extracurricular activities of pupils (SG iss. 46/1994)

Ordinance No. 49 on artificial lighting of buildings (SG iss. 7/1976)

Ordinance No. 26 on the structure and operation of nurseries and children's kitchens and the health requirements for them (SG iss. 103/2008)

Methodological guidelines for measurement and assessment of artificial lighting in buildings 40-85, ed. Standardizatsia Publishing House, 1985

TS-Technical Specification.