**SCOPE 316 ОКС**

**of Inspection Body of type С ORION 5-LAB**

**at ORION-5 Vatrachki & Sons OOD**

**Management address**:

1404 Sofia, Strelbishte, 171 Gotse Delchev Blvd, Building 27, Ent. 2, Floor 1, Apt.17

Office address:

1680 Sofia, Borovo, Bulgaria Blvd., Building 13, Ent. 7, Floor 1, Apt. 2

**To perform inspection of:**

| **Type of the scope:** *Flexible\** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **№** | **Field of Inspection** | **Type of Inspection** | **Parameter of Inspection / Characteristic** | **Test and Measurement Methods Used During Inspection, Inspection Procedure** | **Regulations, Standards, Specifications, Schemes** |
| 1 | **2** | **3** | **4** | **5** | **6** |
| 1**.** | Electrical systems and equipment up to 1000 V | At new  and/or  or operational sites /  facilities | Loop impedance of the ‘Phase – protective conductor’ | PKfzp Procedure | Ordinance № 3,  SG №90, 91/2004;  Ordinance № 16-116,  SG № 26/2008;  Technical Specifications |
| FI (residual current) circuit breakers protection) inrush current; shutdown time;  touch voltage; protective earth resistance | Procedure  PKd | Ordinance № 3,  SG №90, 91/2004;  Ordinance № 16-116,  SG №26/2008;  Technical Specifications |
| 2. | Electrical systems and equipment up to 1000 V | At new  and/or  or operational sites /  facilities | Resistance of lightning protection earthing systems | Procedure  PKm | Ordinance № 4,  SG № 6/2011;  Technical Specifications |
| Resistance of protective earthing systems | Procedure  PKz | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008;  Technical Specifications |
|  |  | Insulation resistance of cables and power lines | БДС 1986 item 3.3 a), b), e) and f).  Procedure  PKi-k-nn | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008;  Technical Specifications |
| 3. | Electrical systems and equipment up to 1000 V | At new  and/or  or operational sites /  facilities | Isolation of power lines (busbars) with nominal voltage up to 20 kV, by means of increased voltage control with industrial frequency 50Hz to 50 kV | БДС 5589  БДС 3637  БДС 13910 Procedure PKi-t-srn | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008; Standards for testing electrical machines and equipment;  Technical Specifications |
|  |  | Isolation of power cable lines up to 20kV, by increased direct voltage control up to 70kV | БДС 2406  Procedure PKi -k-srn | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008;  Standards for testing electrical machines and equipment; Technical Specifications |
| 4. | Power transformers for voltage up to 110kV | At new  and/or  or operational sites /  facilities | Insulation resistance and ratio R60:R15 | БДС 16654 Procedure PKi -s-tr | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008;  Standards for testing electrical machines and equipment; Technical Specifications |
|  |  | Active resistance of the coils | БДС EN 60076-1  БДС 15320 Procedure PKas-s-tr | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16- 116,  SG № 26/2008;  Standards for testing electrical machines and equipment;  Technical Specifications |
|  |  | Transformation factor | БДС EN60076-1  БДС 15320  Procedure PKkt-s-tr | Ordinance № 3,  SG № 90, 91/2004;  Ordinance № 16-116,  SG № 26/2008;  Standards for testing electrical machines and equipment;  Technical Specifications |

***\*Flexible scope:*** *Implementing a new version of standards/documents or standards/documents replacing them is allowed. An updated list of standards/documents and their dated versions is provided by CAB.*

**References:**

Ordinance № 16-116 on the technical operation of electrical equipment (SG № 26/2008);

Ordinance № 3 on the arrangement of electrical systems and power lines (SG № 90 and 91/2004);

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

NIEMS - Standards for testing electrical machinery and equipment (1995)

TC- Technical Specification