**Тема:**  «Техническая документация электрика. Прикладное значение техдокументации»

**Цель:** Повторить грамматический материал , продолжить изучать лексическую тему «электричество, правила безопасности электрика на рабочем месте, заполнение проф.форм».

**Задачи:** Отработать навык работы (в т.ч. перевода) с профессиональной лексикой по теме «электричество», повторить тематический материал, актуализировать имеющиеся знания.

**Специальность:** 13.02.09 Монтаж эксплуатации линий электропередачи, 13.02.11 Техническая эксплуатация и обслуживание электрического и электромеханического оборудования (по отраслям)

1. **Study the glossary.**
2. **Read the text.**
3. **Learn the rule (if any).**
4. **Do the tasks.**

**SKILL ME!**

Technical documentation belongs to key aspects of the production process. It iss the carrier of information, which constitute the basis for technological processes in manufacturing, construction, wiring of electrical appliances etc.

The purpose of the topic is to master an independent reading of technical documentation which reflects developments in the metalworking and electrical industries. *It is also aimed at the correct treatment (management) of technical documentation.* Without this ability it is not possible to properly install wiring and ensure the quality of each step of the manufacturing process.

*Working with documentation has an indicative nature and it primarily outlines the main areas which the learners have to focus on.* Its use requires the utilisation of other supportive resources (scientific literature, internet sources) for fixing the subject, depending on national and local circumstances and needs.

*It is necessary to follow certain rules when working with the technical documentation - for example, marking and numbering of the document, document archiving etc.* The technical documentation is the *property* of the company/enterprise and it is necessary to handle it accordingly.

The working method with the documentation depends on what kind of documentation is involved. Firstly, the technical documentation must include a *clear* specification (label) of the product, part or semi-product. The specification can be:

***Full (****name****;*** *dimension data****;*** *material identification (numerical, alpha-numerical, verbal)****;*** *identification of a document which supplement the requirements on the product, its part or semi-product)*

**Simplified**

## Types of technical documentation in electro-industry can be divided according to:

1. purpose of its use
2. processing method
3. way of drawing (in electrical engineering)
4. **Translate the lines given in italics into Russian.**
5. **Find equivalents for the followings:**
6. Составляет основу
7. Электрооборудование
8. Носит показательный характер
9. Содержать в порядке
10. Вид документации
11. **Fill in the gaps with the missing words:** modify; property; tools; disposal; depends; communication

The technical documentation is part of the company's\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Management (or the administration) of the technical documentation now increasingly \_\_\_\_\_\_\_\_\_\_\_ on the use of modern technologies. The reason and purpose of the use of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which are computer-assisted is the fact that these systems allow, for example:

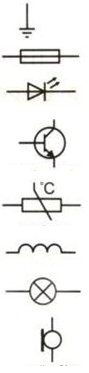
* develop a product
* manufacture a product
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ product
* direct connection to the production cycle
* the direct connection and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between the different departments within the company but also with suppliers/customers by using the cloud
* monitor product life

One of the trends that meet this requirement, is the PLM (Product Lifecycle). PLM manages the life cycle of the product from planning to its\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. **Match the word with it’s definition:**

|  |  |
| --- | --- |
| 1. insulation resistance: | 1. It determines the resistance of a material to an electrical discharge, perpendicular to the electrodes. It is stated in [V/m]. |
| 1. electric strength: | 1. It determines the resistance of a material to an electrical discharge to the laminate. It is stated in [V]. |
| 1. breakdown voltage: | 1. Surface resistivity (usually Rp=1012Ω) and internal resistance (usually Rv=1013Ω). They specify thresholds of conductivity and short circuits. They are measured by the mega ohmmeter. |
| 1. dielectric constant | 1. This is the rate of dielectric losses. |
| 1. loss factor: | 1. It determines the material ability to capture electrostatic energy. It is measured by capacitive bridge routinely at 1 MHz. |

**5. Write the name of the component for each mark.**



**1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

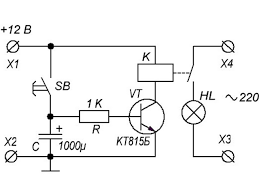
**4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**6\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**7\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**8\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. How many non-electric connections are there?
2. How many earth-protective wires are there?
3. How many circuits parts repetitions are there?
4. How many lamps are there?
5. How many speakers are there?
6. How many busbars are there?
7. How many photodiodes are there?
8. How many capacitors are there?
9. How many switches are there?