

Separate plates or layers of cores for reducing vortex currents losses are isolated from each other by a layer of scale, varnish, glue or thin paper. In low power transformers it is not necessary to do this.

Isolation between phases in power transformers and windings VH and HN can be made in the form of oil, compound insulating gas.

The transformer oil is a refined oil fraction that is mineral oil. It is obtained by distillation of oil, where this fraction boils at 300 - 400 ° C. Depending on the grade of the raw material, the properties of the transformer oils turn out to be different [1].

Properties of transformer oil, as an electric insulator, are determined mainly by the value of the tangent of the angle of dielectric losses. Therefore, the presence of water and fibers in the oil is completely excluded, since any mechanical impurities worsen this indicator.

Advantages of oils are:

- low cost;
- low cost of service;
- low toxicity;
- long (expected) lifetime;
- self-healing after short-term thermal action;
- easy to dispose of.

Disadvantages of oils are:

- special storage conditions are required;
- necessary special fire extinguishing system;
- the probability of large soil contamination.

Compounds are called insulating compositions, liquid at the time of their application, which then hardens. Insulation compounds do not contain solvents. By their purpose, electrical insulation compounds are divided into impregnating and flushing [3].

The first ones are used for impregnation of windings of electric machines and apparatuses, the second ones are used to fill cavities in transformers.

Electrical insulation compounds can be thermosetting (not softening after their hardening) or thermoplastic (softened with subsequent heat).

Having considered all possible variants it is possible to draw a conclusion, power transformers with a compound in I bones of the basic isolation can be used at least for small capacities, as they have a significant drawback, it is not effective heat loss from windings, and besides, such transformers badly carry overload.

The power transformer with oil insulation can withstand a long overload, and the oil is much better draws heat from windings. In addition, the oil has an important advantage over the compound, after the electric arc ceases to pass through the oil, the oil will restore its electrical strength, and the compound is not able to do this.

References

1. Baida L. I., Dobrotvorsky N. S., Dushin E. M., Ismailov S. H., Mokienco D. N., Preobrazhensky A. A. (2013). *Electrotekhnichni vymiryuvannya* [Electrotechnical measurements]. K. : Enerhiya [in Ukrainian].
2. Bolshakova N. V., Borisanova K. S., Burtsev I. N., Voronkin I. V., Gryaznov A. G., Gutman M. B. (2007). *Materialy dlya electrotermichnykh ustanovok* [Materials for electrothermal plants]. M. : Energoatomizdat [in Ukrainian].
3. Koritsky Y. V., Pasyukov V. V., Tareeva B. M. (2010). *Dovidnyk po elektrotekhnichnym materialam* [Reference book on electrotechnical materials]. (Vols. 1-3). M. : Energoatomizdat [in Ukrainian].

Кравченко О.В., Менджул К.В., Приходько В.О., студенти гр. ТІП-161,
Науковий керівник – Лашук Н.М., викладач
Чернігівський національний технологічний університет (м. Чернігів, Україна)

RESUMES: WHEN, HOW AND WHY?

Resumes are an integral part of the hiring process. Today this process is required to gain employment, but it wasn't always this way. So where did the resume come from? And how did it become such an integral part of the hiring process? The word resume is derived from French, which means "summary". There is no specific date or any one person that can be credited with the invention of the resume. Varying sources claim the resume was started by heads of guilds in the Middle Ages. Others say it was the famous artist Leonardo De Vinci. In 1482 Leonardo De Vinci wrote a letter to the Duke of Milan in an attempt to gain his patronage and support. De Vinci's letter listed his skills and experience to his potential patron. In the late 1500s an English land surveyor named Ralph Agas wrote a number of advertisements in which he described his skills, expertise, and projects. In one of his ads he asserts that he has 40 years experience in the field of land surveying. Agas was possibly the first person to use media to publicize his resume.

There are varying accounts of where the term resume originated. One source claims that a travelling English lord coined the term when he called his letter of introduction a resume. Another source asserts that the term developed over time within the English skilled artisan and labour guilds of the Middle Ages. There is a gap of information between 1600 and the 20th century on resumes. This may be attributed to the rise of the industrial age in which the use of skilled labourers and handicraft workers declined. In the early 20th century resumes had become common. Resume popularity started in the 1930s and by 1950, having one was a prerequisite for getting an interview. Resumes at this point also came in different formats, from handwritten to typewritten.

The start of the 21st century saw a further evolution for resumes on the Internet. Social media became a great way to network and spread resumes. In 2003 LinkedIn was launched, which allowed users to post their resume and skills online. The Internet also brought us resume help websites like Optimal Resume, which can help professionals write effective resumes. With the invention of paper, it became even easier to advertise skills and abilities. And with the Internet, your resume submission is only a click away. Throughout history people have sought ways to gain employment. And although much evolved, the resume has become the standard for differentiating skills and getting a job [1].

There are different resumes formats: chronological, functional, combined, video-resume, resume-info and others [2; 3].

Chronological resume formats. The most standard and common format for a resume is chronological. It lists your most recent position first and then your previous positions in descending order. It is necessary to underline the advantages and disadvantages of this format. Pros include: highlights a well known and respected organization or corporation. This format allows you to showcase the company in addition to your skills and therefore gain more recognition by simple association. It is far easier to review and obtain information for the recruiter. This format clearly lists the name of the company, dates, title, and specific job duties. Cons include: perhaps you do not want to highlight your previous employer. It is not always beneficial to be associated with an organization that known for something negative. If you have large gaps in employment, too many positions, or too little experience; if you were a housewife, out on disability, or being put on probation, have gaps in your employment that would be much easier to manage with a functional format resume.

Functional resume formats. An alternate to the standard resume format can be a useful tool for many who need a creative spin on their employment history or perhaps work in a progressive field such as education. On the one hand, you can hide long absences from the workforce or de-emphasized too many positions or too little experience at all. If your career is in an industry, you would repeat the same job duties for each position. On the other, this type of format is very difficult in the review process for a recruiter and you run the risk that they may not want to take the time to consider a document that takes more time to understand.

Combined resume. This kind of document is based on the previous two and contains the characteristic of both. In this format, the resume is given a lot of freedom for improvisation: sections are placed in an arbitrary sequence depending on how you want to place accents. This format represents the applicant in the most advantageous light; especially recommended candidates have relevant experience and excellent track record, managers at all levels, project staff (for the latter two categories of workers sometimes provide a special subspecies combined summary); also suitable for those who have recently started to build a career in the profession – by shifting the emphasis from experience to professional skills. It facilitates the task of resume analysis, minimizes the probability of erroneous perception, as it summarizes the experience and qualifications of the applicant. However, there is a possibility of drawing up too lengthy and voluminous document, so here is very important brevity of presentation and clear structure; it is more difficult to design for a person who is far from the sphere of personnel management, as there are too many conditions for the qualitative presentation of information.

Video-resume. A modern and actively gaining popularity form of self-presentation. Usually presented in the format of a video, in which the applicant tells about himself. Unlike all other types of resume, you can see and hear a living person, and not read about it. Self-presentation on average lasts 5-10 minutes. Actually, it contains a "two in one" - and a summary, and elements of the interview, which gives a more comprehensive picture of the candidate, his abilities and personal qualities. Especially recommended for positions related to working with people, where the ability to look decent, communicate and presentation skills is important; the video will allow the candidate to stand out and characterize him as a person using modern technologies inclined to innovation. Suitable for older seekers who are active, energetic, in good physical shape, but often receive refusals from employers only because of their age. For obvious reasons, this format does not fit applicants who are uncertainly feeling in front of the camera, shy of their appearance or manner of speaking; quite a labour-intensive process of preparing and recording a video, we need a high-quality technique; a video resume can be negatively perceived by companies in which a strictly regulated process for selecting candidates based on a textual summary.

Resume-info. It is the most original and creative kind of modern resume. It differs from standard text options in that the information in it is reflected in the form of pictures or diagrams, which are accompanied by verbal comments. To make such a resume, you must first mentally present your idea, come up with original graphic elements. Resume-infographics is suitable primarily for representatives of creative professions-designers, artists, illustrators, marketing or advertising specialists, programmers. It makes it possible to stand out against the

background of many boring standard summaries; briefly, graphically and in essence – all information about the candidate can be placed on one page, which saves the time of the recruiting specialist. As already mentioned above, it allows demonstrating the abilities and talents of the applicant. A ready-made resume can be placed on social networks, which will help your own promotion. Take into account that it should be used by people of traditional professions and spheres of activity with caution.

While making your resume, you should pay attention to a format; point the reader to places where you have samples of your work product — LinkedIn, a personal website — and add your phone and email address; emphasize key skills; highlight performance.

Summing up, it is necessary to note that CV should demonstrate to any potential employer why they should hire you above any of the other skilled candidates who have presented themselves for employment.

References

1. Johnson Hur. History of the resume. URL: <http://bebusinessed.com/history/history-of-the-resume/> (дата звернення: 11.01.2018).
2. Resume Formats – Pros And Cons. URL: <http://www.theresumeprofessionals.com/resume-formats-pros-and-cons/> (дата звернення: 21.02.2018).
3. 45 Creative Resumes to Seize Attention. URL: <https://www.hongkiat.com/blog/creative-designer-resume-curriculum-vitae/> (дата звернення: 18.02.2018).

Kulyk O.E., group MPIp-171

Scientific director: Skiter I.S., Candidate of Mathematical Sciences, assistant professor
Language coordinator: Lytvyn S.V., Candidate of Pedagogical Sciences, assistant professor
Chernihiv National University of Technology

DESIGNING A MODULE FOR MONITORING INFORMATION ABOUT NETWORK BEHAVIOR AND DATABASE MANAGEMENT

Now a huge resource is available in the Internet, as it is said within the scope of the article [1], allowing cybercriminals to penetrate computer networks.

Detailed information about the vulnerabilities of programs is available publicly. There are easily available guidelines for organizing attacks, as well as examples of existing software tools that allow attacks.

Since attacks on computer networks are constantly evolving, there is a need for their constant research, to be able to withstand them. So far, a variety of Internet traffic analysis programs have been created.

Based on the articles [2-3] it can be noted, that such programs as, Wireshark and tcpdump are pretty well known among the solutions for network diagnostics.

Wireshark has a great user interface, many options for filtering and sorting, it can work with any of the three most popular operating system families - * NIX, Windows and macOS.

Tcpdump does not have a visual interface, but it perfectly analyzes the behavior of the network, while it does not require a lot of hardware resources. Also it may not seem convenient, but an experienced user will find it useful in providing information in the form of a text, since it is easier to handle it later.

The need is to constantly collect statistical information that describes the behavior of the Internet network, as well as create patterns of non-standard network behavior. These templates will be accumulated in the database. This in the future will give an opportunity to determine when the network behaves non-standard, and the kind of non-standard behavior. Thus, it is supposed to develop a utility that will collect information from the Internet online. There will be algorithms in the basis of program that will determine if this behavior of the network normal or not. If is definitely a non-standard behavior, the values of the indicators that describe the state of the Internet will enter the database as a template for a non-standard behavior.

All statistical information will be stored in the log file. At regular intervals, the file is parsed, the algorithm picks up the average values of the statistical parameters and writes them info to the database and clears the log file.

For graphical display for a certain period, the average values of statistical parameters from the database will be used.

Also, in order to have patterns of standard Internet behavior, it will be provided for the program to start writing mode of parameters that describe the standard behavior of the network. This algorithm will be performed at certain intervals.

The program will be based on scripts written in bash, each script will be responsible for collecting information on a certain parameter or a set of parameters that are logically combined. After reviewing the article[4], it was decided to take into account the following statistical parameters: number of incoming / outgoing / intranet IP, TCP, UDP packets; the number of polls of unresolved UDP ports; the number of completed UDP requests; the number of pending UDP requests; the number of outstanding requests by the UDP protocol, the response timeout has expired; the number of TCP port polls; the number of polls allowed TCP ports; the number of TCP connections that are in the establishment state, i.e. SYN SAND; the number of TCP connections that are in an open state, i. e. ESTABLISHED;