**REQUIREMENTS FOR THE DESIGN OF ABSTRACTS FOR PARTICIPANTS**

**SINO-RUSSIAN ASRTU SYMPOSIUM**

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| --- | --- |
| **Publication language** | The abstracts of the report should be submitted **in English.** |
| **The total volume of abstracts (including title, abstract, keywords, text, references)** | **Formatting:** The text should be submitted in MS Word format (doc., .docx);**Page orientation** - portrait (sheet vertically); **Margins:** left, right, top and bottom - 25 mm; **Text font -** Times New Roman, 12 pt;**Line spacing** – single;**The red line (indent) on the left is** 1.25 cm;**Maximum volume:** up to 2 A4 pages. |
| **Co - authorship** | **Up to 2 co-authors** are allowed**, in addition to the main author.** |
| **Information about the author(s)** | **No more than 2 works are accepted from one author or team of authors.****All of the following lines should be centered.****The first line** - The title (title of theses) is written with a capital letter. **Next line** - The full name of the author is indicated in full - Ivanov Ivan Ivanovich.**Next line** – Position, academic degree (if any). For example: student, undergraduate, graduate student, specialist, etc.**Next line** – The abbreviated name of the university / organization is in the version as it is presented in the constituent documents.**Next line** – Academic degree, academic title, surname, initials of the supervisor (if any).*If there are 2 or more authors: the organization is indicated for each co- author separately. If all the co-authors are from the same organization, then its name is given after the name of the last co-author.* |
| **Abstract** | The abstract should contain 4-6 sentences, or no more than 100 words.There should be an indication that this is an annotation (ABSTRACT ...).The abstract should not be italicized, underlined, etc.**The text should not be divided into paragraphs.**Citations and references to other works are not allowed in the abstract. Abbreviations must be deciphered.The abstract should contain:* Description of the main purpose of the study;
* Brief description of the methodology;
* Generalization of the most important research results and their practical significance.
 |
| **Keywords** | Immediately after the annotation, 3-10 keywords should be presented, which may consist of individual words and phrases.There should be an indication that these are keywords (KEYWORDS...).**Keywords should not contain formulas, diagrams and drawings.** |
| **Requirements for the content of theses** | After the keywords, you need to submit the text of the abstracts. The text MUST be divided into sub-chapters when writing:1. Introduction\*;
2. Relevance\*;
3. Methods and methodologies used, equipment, technologies;
4. Conclusion (it is necessary to assume possible prospects for further research on the topic, comparison with foreign and domestic analogues)\*;
5. Acknowledgements (added, if necessary, links to financial support for research, thanks to individuals and organizations);
6. List of used sources (LITERATURE) \*.

The presence of double or triple spaces is not allowed.When using abbreviations for the first time, it is mandatory to indicate their decoding.Direct speech (quoting) should be framed using quotation marks.**\*Mandatory sub-chapters in the abstract text.****The text of the abstracts should not contain the names of the sub- chapters (Introduction, Relevance, etc.).** |
| **List of sources used (REFERENCES)** | There should be an indication that this is a list of references (REFERENCES...).When making a list of references (bibliographic references), the name of the source (the name of the journal, monograph, collection of articles, conference materials, etc.) should be italicized and indicate all authors. |
| **Requirements for tables, figures and formulas** | The text may contain tables, the captions to which **should be given above the table with width alignment**,in the format: Table 1 Table name.Text formatting in tables: single spacing, Times New Roman font 12 pt.**There should be no more than 3 tables in the text.** |
|  | In the text, it is necessary to give a reference to the figure, table, diagram and formula, indicating the number of the figure, table, diagram and formula.**Note. Avoid abbreviating the names of tables, figures, and equations (i.e. Tab. 1, fig. 2, levels. 3) in the signature or in the text. Do not write "in the table above / below" or "in the figure on page 2", as the position and page number of the table or figure may change during layout.**All the components of the formulas should be formatted in the "Microsoft equation" macro and aligned in the center, numbered on the right edge.Graphic drawings must be of high resolution, at least 300 dpi. When using labels, the text should be displayed clearly.The name of the figure, the scheme ***should be aligned in the center under the figure in the following forma***t:Figure 1 The name of the figure (**No more than 5 figures**);Scheme 1 The name of the scheme (**No more than the 3 schemes**). |

# An example of the design of the abstracts of the report

Improving the selection of hollow sucker rods through the use of a mathematical model of the behavior of the rods in the hole

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ABSTRACT

A new method of calculation of the stresses on the basis of dependence Oding. The method is based on the dependence of Oding with the introduction of the index k terms of characterizing the design features of sucker rods and material of manufacture. The new technique yielded good agreement with the results of the situation in the well. To account for the peculiarities of operation of sucker rods in directional wells developed a mathematical model.

KEYWORDS

Sucker rods, hollow sucker rods, method of calculating the stress, the mathematical model of sucker rods, dependence Oding.

According to statistics for 2015 (Figure 1), more than a third of the total oil well stock in Russia is equipped with downhole rod pumps. Also, over the past 5 years, both in Russia and the world, such a concept as simultaneous-separate operation has been used, which implies the operation of several productive horizons by one well. The largest number of known schemes of simultaneous-separate operation is associated with downhole rod pumping units, which annually increases the share of downhole rod pumps. The final coefficients are shown in Table 1.



Fountain

Electric vane pump

Downhole rod pumps

Figure 1 Well stock of the Russian Federation for 2015

Table 1 Coefficient k for solid sucker rods [1,2]

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Size, mm | Stress concentrator,*Ks* | Scale effect, *Kds* | Surface quality, *Kf* | Hardening method, *Kv* | Inconsistency of the flow section | Softening factor | Final coefficient |
| 16 | 0,65 | 1,09 | 0,8 | 1,45 | - | 1,2 | 1,54 |
| 19 | 0,65 | 1,11 | 0,8 | 1,45 | - | 1,2 | 1,56 |

Methods for calculating reduced stresses and mathematical models of the rod string operation process used in the selection of sucker rods do not fully take into account today the factors affecting the operation of the rod string (design features of sucker rods, strength properties of the material from which they are made), which leads to will refuse her.

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1. *Serensen S.V., Kogaev V.P.*, Bearing capacity and strength calculations of machine parts, Moscow: Mashgiz, 1968, 488 p.
2. *Markovets M.P.,* Textbook for the course strength of metals in equipment of nuclear power plants. - M.: MEI, 1979, 94 p.
3. *Oding I.A.*, Permissible stresses in mechanical engineering, Moscow: Mashgiz, 1962, 260 p.