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FOREIGN TECHNOLOGY DIVISION



THESES AND ANNOTATIONS OF A SCIENTIFIC AND TECHNICAL
CONFERENCE OF PROFESSORS, INSTRUCTORS, GRADUATE
STUDENTS, AND STUDENTS OF THE ENGINEERING DEPARTMENT
(Selected Articles)



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OF PROFESSORS, INSTRUCTORS, GRADUATE STUDENTS, AND STUDENTS OF
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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

| Block | Italic | Transliteration | Block | Italic | Transliteration |
|-------|------------|-----------------|-------|------------|-----------------|
| А а | <i>А а</i> | A, a | Р р | <i>Р р</i> | R, r |
| Б б | <i>Б б</i> | B, b | С с | <i>С с</i> | S, s |
| В в | <i>В в</i> | V, v | Т т | <i>Т т</i> | T, t |
| Г г | <i>Г г</i> | G, g | У у | <i>У у</i> | U, u |
| Д д | <i>Д д</i> | D, d | Ф ф | <i>Ф ф</i> | F, f |
| Е е | <i>Е е</i> | Ye, ye; E, e* | Х х | <i>Х х</i> | Kh, kh |
| Ж ж | <i>Ж ж</i> | Zh, zh | Ц ц | <i>Ц ц</i> | Ts, ts |
| З з | <i>З з</i> | Z, z | Ч ч | <i>Ч ч</i> | Ch, ch |
| И и | <i>И и</i> | I, i | Ш ш | <i>Ш ш</i> | Sh, sh |
| Й й | <i>Й й</i> | Y, y | Щ щ | <i>Щ щ</i> | Shch, shch |
| К к | <i>К к</i> | K, k | Ъ ъ | <i>Ъ ъ</i> | " |
| Л л | <i>Л л</i> | L, l | Ы ы | <i>Ы ы</i> | Y, y |
| М м | <i>М м</i> | M, m | Ь ь | <i>Ь ь</i> | ' |
| Н н | <i>Н н</i> | N, n | Э э | <i>Э э</i> | E, e |
| О о | <i>О о</i> | O, o | Ю ю | <i>Ю ю</i> | Yu, yu |
| П п | <i>П п</i> | P, p | Я я | <i>Я я</i> | Ya, ya |

*ye initially, after vowels, and after ъ, ы; e elsewhere.
When written as ѣ in Russian, transliterate as yě or ě.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

| Russian | English | Russian | English | Russian | English |
|---------|---------|---------|---------|----------|--------------------|
| sin | sin | sh | sinh | arc sh | sinh ⁻¹ |
| cos | cos | ch | cosh | arc ch | cosh ⁻¹ |
| tg | tan | th | tanh | arc th | tanh ⁻¹ |
| ctg | cot | cth | coth | arc cth | coth ⁻¹ |
| sec | sec | sch | sech | arc sch | sech ⁻¹ |
| cosec | csc | csch | csch | arc csch | csch ⁻¹ |

Russian English

rot curl
lg log

GRAPHICS DISCLAIMER

All figures, graphics, tables, equations, etc. merged into this translation were extracted from the best quality copy available.

HIGH-SPEED CUTTING OF LEVEL MINE WORKINGS

V. A. Raskin

The report considers problems of organizing work, scientific research and new technology for cutting level workings.

The modern process of high-speed cutting of mine workings cannot be organized without carefully analyzing different cutting methods. In the report, a great deal of attention is given to the determination of the correct number of workers in the shaft sinking crew, the expedient organization of the supply of materials, servicing of the machines, mechanisms and equipment, conducting explosive work, the selection of rational forms of the cycle of operation, and the use of mucking organizations.

The report gives examples of the organization of high-speed cutting of level workings in the USSR and other states.

INVESTIGATIONS OF MOVEMENTS OF WALL ROCKS WHEN WORKING THICK SLOPING SEAMS WITH INCLINED LAYERS USING THE "KTU" SUPPORT

Levendra Natkh Tkhakur (India)

The report gives the results of studies, made using models made of equivalent materials, of the possibility of working a plate 10 m thick lying at a depth of 500 m from the surface and having a system of inclined layers using the KTU [tr. note: expansion unknown] under conditions of the Djakarta field (India).

The following were measured on the models: the displacements of the immediate and main roof, the deformation of the coal floor when working the upper level, and the rate of movement of the roof in the spaces near the face on the upper and lower levels. It was established that it suffices to have a KTU with a fixed resistance of around 10 t/m² when working the lower level for supporting the roof.

Special attention is given in the report to the dynamics of the bearing pressure in front of the face and its change as the shaft space is widened. Measurements of the deformation of the coal floor when working the upper level showed the periodic nature of the movement of the floor in front of the face and its bulging into the mined space.

The author establishes the expediency of using this system under

the conditions of the Djakarta field (India). A number of suggestions are given for using the system when working gas-bearing seams.