

FEDOROV, Ya.S.

Attempt to place atomic weights under one law. *Kristallografiia*  
no.3:85-96 '55. (MLRA 10:2)

(Atomic weights)

FEDOROV, YE. S.

Burgsdorf, V. V., "Investigation of the Protection of Power Systems From Lightning"  
A. I. Gershengorn, N.P. Yemel'yanov, O.V. Livanova, A.I. Rogacheva, and Ye.S.  
Fedorov were reported to be associates of the laboratory. (Elektrichestvo, No. 2,  
1949). Central Scientific Research Electrical Engineering Laboratory (TsNIEE),  
Ministry of Power Stations.

SO; W-27801, 14, Sept. 1953

YAKERSON, Matvey Semenovich; TSYBUL'SKIY, Vladimir Abramovich. Prinsipali  
uchastnye: LABUDIN, I.A.; FEDOROV, Ye.L.; KELLO, I.O.; CHIZHEVSKIY,  
A.L.; POLENOV, A.N.; NIKITIN, M.N.; IVANOV, I.I.; GRYET, B.V.;  
FEDOROV, Ye.V.; FEKOV, M.G.; YEGOROVA, K.I., red.; ONOSKO,  
N.G., tekhn.red.

[The "Znamia Truda" Factory; a brief account of the "Znamia Truda"  
Armature Factory in Leningrad] Znamia truda; kratkii ocherk isto-  
rii leningradskogo armaturnogo zavoda "Znamia truda," 1960. 207 p.  
(MIRA 14:4)

(Leningrad--Factories)

KRAKHMAL'NIKOVA, G.A.; KIRENKOV, I.I.; Prinsipali uchastiye: LEYKUM, V.Ye.;  
FEDOROV, Ye.V.; UGOL'NIKOV, V.I.; SEMENOVA, L.I.

Spectropyrometric unit designed by the All-Union Research Institute  
of Metrology. Izv.tekh. no.5:18-19 My '62. (MIRA 15:6)  
(Pyrometers)

FEDOROV, Ye.Ya.

Calculating the lift capacity of a plane wing of finite span in  
a supersonic flow. Trudy KAI 24:77-86 '50. (MIRA 10:7)  
(Airfoils)

Dissertation: "Flow of a Limited Stream of Liquid Around an Arbitrary Profile." Cand Tech  
Sci, Kazan' Aviation Inst, Kazan', 1953. (Referativnyy Zhurnal--Mekhanika, Moscow, Apr 54)

SO: SUM 243, 19 Oct 1954

~~FEDOROV, Ya. Ya.~~

Flow around wing profiles in wind tunnel. Trudy KAI 31:3-22, 1966.  
(MLRA 10:5)

(Aerodynamics) (Airplanes--Wings)

FEDOSENKO, R.Ya., kand. tekhn. nauk (Moskva); REYNVALD, O.A. [Reinvalds, O.]  
(Riga); GNEVKO, D.G., inzh. (Minsk); ZAROZHNYI, A.M., inzh. (Minsk);  
VOYTKO, A.M., inzh. (Minsk); FEDCROV, Ye.Ya., inzh. (Minsk);  
AYZENBERG, B.L., doktor tekhn. nauk (Leningrad)

Protection of closed-loop networks. Elektrichestvo no.2:  
83-89 F '65. (MIRA 18:3)



ACC NR:	AP5026736	SOURCE CODE:	UR/0286/65/000/017/0012/0012
INVENTOR:	<u>Fedorov, Ye. Ya.</u>		3/
ORG:	none <sup>41, 53</sup>		⊗
TITLE:	A machine for winding corrugated strips onto pipes. Class 7, No. 174168		
SOURCE:	Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 12		
TOPIC TAGS:	pipe, metal forming machine tool, sheet metal		
ABSTRACT:	<p>This Author's Certificate introduces: 1. A machine for winding corrugated strips onto pipes to form ribs. The device includes a stand which has a holder for mounting and rotating the pipes, a shaft and a winding carriage with a device for corrugating the strip. This carriage reciprocates in the horizontal plane along the shaft. The operation of the machine is automated by installing a loading mechanism on the stand with a reloader for the blank workpieces made in the form of a hopper with inclined upper and lower guides for the blanks. The unit also contains a welder, a cutoff tool and a plate with grooves for moving the blank workpieces. These three devices are interconnected. Movable arresting devices mounted on the lower guide keep the blanks from moving during welding. The welder is made in the form of two movable electrodes, and the cutoff tool holder is mounted in the housing of one of these electrodes. 2. A modification of this machine in which the carriage is</p>		
Card	1/2	UDC:	621.774.03—418.7

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ACC NR: AP5025736

equipped with gears for primary and secondary corrugations and with a step distributor mounted in the carriage housing. 3. A modification of this device with provision for simultaneous winding of several pipes by interconnection of the holders using a cross-shaped turret mounted on the shaft of the machine.

SUB CODE: IE/

SUBM DATE: 04Mar63/

ORIG REF: 000/

OTH REF: 000

BU  
Card 2/2

FEDOROV, Ye. Ye.

AUTHORS: Berengilova, V.V. and Fedorov, Ye. Ye. SOV/132-58-12-2/14

TITLE: A New Type of Aluminum Deposits (Novyy tip mestorozhdeniy aluminiya)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 12, pp 10-17 (USSR)

ABSTRACT: The authors describe a new type of aluminum deposit discovered near the town of Kyakhta, in the Southern part of the Transbaykal region. The deposits are composed of rutile-bearing sillimanite schists from which silumin and aluminum can be extracted by the electrothermal melting process. The Kyakhta ore field is composed of a series of separate deposits, but on the whole the reserves of sillimanite-containing schists are practically unlimited. These schists also contain large reserves of ores from which, in the concentration process, rutile and pyrite can be extracted. Moreover, the sillimanite schists of the Kyakhta region are an excellent refractory, acid proof and electroceramic raw material. There are 2 sketches, 1 map, 1 table and 3 Soviet references.

Card 1/2

A New Type of Aluminum Deposit

SOV/132-58-12-2/14

ASSOCIATION: Glavgeologiya pri Sovete Ministrov RSFSR (Main Geological -  
Prospecting Administration, Ministers of the RSFSR)  
There are 3 references, of which 2 are English and 1 is Soviet.

Card 2/2



FEDOROV, Ye. Ye.  
AMS/A+B

1950  
B

1-1  
150.1(03)  
Akademiya Nauk SSSR, Izvestiya, Seriya Geograficheskaya i Geofizicheskaya. [Academy of Science, U.S.S.R., Izvestiya, Geographical and Cosmophysical Series]. Published by Izdatel'stvo Akademii Nauk SSSR, [Moscow]. Editor: O. I. Shubik, Moscow 17, Platinskaya ul. 48. The first volume appeared in 1937 at the instigation of the well-known scientists: V. V. Shubnikov, E. E. Fedorov, E. N. Tyrtshko and the present editor, O. I. Shubik. Each issue of this series contains about 100 pages of original papers, critical reviews and bibliographies on: (a) physical geography, (b) physics of the atmosphere, (c) physics of the sea, (d) physics of the earth's crust, and (e) mathematical geophysics. The contents of each issue are conveniently divided into four or five sections corresponding to the above categories. The journal appears bi-monthly, the most recent issue coming to our attention being Vol. XIII, No. 5, Sept.-Oct. 1949. Price 9 rubles per issue. Size 17x26 cm. Each paper, which has been presented to the Academy by some member, contains a brief abstract, is well annotated, and is supported by simple charts, diagrams, tables, mathematical formulae and sufficient notes to enable the reader to evaluate the works, both native and foreign, on which the paper was based. Articles are all in Russian and printing, except for references to foreign publications, and chemical and mathematical formulae, is in Cyrillic. In the Library of Congress will be found many publications of the Akademiya Nauk (formerly the Akademicheskoe Sotrudnichestvo Imperatorskogo Sankt-Peterburgskogo Universiteta, founded 1725 in St. Petersburg) dating back to 1774. Some of these, notably the Acta, the Nova Acta, Memoires, Zapiski, Comptes Rendus, and Doklady, contain excellent meteorological and climatological papers. DLC, DWA, DGS, DPL.

1022+1

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

FEDOROV, Ye. Ye.

"The Climate in the Lowland in the European Part of USSR Depends on Local  
Weather Conditions," 1949, Moscow.

FEDOROV, E. E. and A. I. BARANOV

Climate of the plain of the European part of U.S.S.R. in space and time.  
(In Russian).  
Trudy Inst. Geogr. U.S.S.R. Acad. Sci., Moscow, No. 44, 1949, 214 p.,  
figs., diags., charts, tables, bibl.



FEDOROV, Ye. Ye. and CHUBUKOV, L. A.

"The Formation of Dry Weathers," Problemy Fizicheskoy Geografii (Problems of Physical Geography), Vol. 16, Symposium, Moscow, 1951.

U-1483, 25 Sept 51

FEDOROV, I. I.

3  
geo (2)

Meteorological Abst.  
Vol. 4 No. 2  
Feb. 1953  
Aqueous Vapor and  
Hydrometeors

4.2-205  
Fedorov, E. E. and Chubukov, L. A., Formirovanie zasushlivykh pogod i puti ikh voz-  
moznogo preobrazovaniia. [Origin of drought weather and possibilities of its modification.]  
Problemy Fizicheskoi Geografii, 16:16-31, 1951. 16 figs., 11 refs. DLC—The types of drought  
weather, which occur in the European part of the U.S.S.R., are described in terms of Fedorov-  
Chubukov scheme of "complex climatology"; the radiational balance of this area during the  
summer months, the air mass characteristics and the geographical factors producing drought  
conditions are discussed. The possible effect of the planned afforestation in altering the climate  
of this area and the ways by which this effect can be achieved are analyzed. Subject Headings:  
1. Drought prevention 2. Forest influences 3. European U.S.S.R.—I. L.D. 551.577.38:551.588.6

FEDOROV, Ye. Ye., *inshener.*

Seismic prospecting by the reflected wave method in western  
Bashkiria and eastern Tatar A.S.S.R. Trudy Akad. neft. prom. no. 1:  
176-179 '54. (MIRA 8:2)  
( Bashkiria--Prospecting--Geophysical methods) (Tatar A.S.S.R.--  
Prospecting--Geophysical methods)

FEDOROV, Ya.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHNO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURETOV, H.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEHEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENCEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIENEMAA, Ye.K.; SAPOZHENIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; NERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVIATKOVA, A.M.; ZAVARINA, M.V.; SEMETER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MIRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Letedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut (for Buchinskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor. GUGMS no.3/4:26-154 154. (Card 2) (MIRA 8:3)

4. Vsesoyuznyy institut rastenievodstva (for Selyaninov, Rudenko).
5. Bioklimaticheskaya stantsiya Kislovodsk (for Boshno).
6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Alisov).
7. Ministerstvo putey soobshcheniya SSSR (for Biryukov).
8. Institut geografii Akademii nauk SSSR (for Gal'tsov, Grigor'yev).
9. Geofizicheskaya komissiya Vsesoyuznogo geograficheskogo obshchestva (for Eygensohn).
10. Ministerstvo elektrostantsiy i elektropromyshlennosti SSSR (for Muretov).
11. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Khromov).
12. Tsentral'nyy nauchno-issledovatel'skiy gidrometeorologicheskiy arkhiv (for Sokolov, Zolotarev).
13. Gosudarstvennyy okeanograficheskiy institut (for Samoylenko).
14. Tsentral'nyy institut prognozov (for Usmanov, Sapozhnikova).
15. Institut geografii Akademii nauk SSSR i Tsentral'nyy institut kurortologii (for Chubukov).
16. Nauchno-issledovatel'skiy institut imeni Sechenova, Yalta (for Trotsenko).
17. Arkticheskiy nauchno-issledovatel'skiy institut (for Vangengeym).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state of climatological research and methods of developing it].  
Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 3) (MLRA 8:3)

18. Dal'nevostochnyy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Sokolov).
  19. Institut geologii i geografii Akademii nauk Itovskoy SSR (for Styro).
  20. Rostovskoe upravlenie gidrometsluzhby (for Temnikova).
  21. Morakoy gidrofizicheskiy Institut Akademii nauk SSSR (for Dmitriyev).
  22. Vsesoyuznyy institut rasteniyevodstva (for Malyugin).
  23. Akademiya nauk Estonskoy SSR (for Liedemaa).
  24. Akademiya nauk Armyanskoy SSR (for Bagdasaryan).
  25. Leningradskiy gidrometeorologicheskiy institut (for Milevskiy).
- (Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 4) (MIRA 8:3)

26. Gosudarstvennyy gidrologicheskiy institut (for Bochkov). 27. Kazhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Uteshev). 28. Upravlenie gidrometsluzhby Armyanskoy SSR (for Nersisyan). 29. Leningradskoye upravleniye gidrometsluzhby (for Mikheylov, Deryatkova). 30. Tbilisskiy gosudarstvennyy universitet (for Tsomaya). 31. Tsentral'naya aerologicheskaya observatoriya (for Shmeter). (Climatology)

FEL'DMAN, Ya.I.; CHUBUKOV, L.A.; FEDOROV, Ye.Ye., redaktor; MARGOLIN, Ya.A., redaktor; ZEMLIAKOVA, T.A., tekhnicheskiy redaktor.

[Climate of arid regions of the U.S.S.R. and ways of improving it] Klimat zasushlivykh raionov SSSR i puti ego uluchsheniia. Moskva, Izd-vo Akademiia nauk SSSR, 1955. 93 p (MLRA 9:1)  
(Russia--Climate)



BERENGILOVA, V.V.; FEDOROV, Ye.Ye.

New type of aluminum deposits. Razved i okh. nedr 24 no.12:10-17  
D '58. (MIRA 12:1)

1. Glavgeologiya pri Sovets Ministrov RSFSR.  
(Kyakhta region--Sillimanite)

S/169/62/000/008/013/090  
E202/E192

AUTHORS: Fedorov, Ye.Ye., and Bagdasarova, A.M.

TITLE: Onora earthquake of July 22, 1959

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 18,  
abstract 8 A 123. (Tr. Sakhalinsk. kompleksn. n.-i.  
in-ta, no.10, 1961, 177-181).

TEXT: An earthquake occurred on 22.7.59 in the region of the village Onora of the Tymovskiy Rayon, Sakhalin oblast', with a strength of 6 bal. The position of the epicentre was 50° 12' N lat., 142° 17' W long; the depth of focus was 20 km. The coordinates were plotted using four methods: epicentral, average line, hyperboles and the method of azimuth determination. The discrepancies amongst the results did not exceed 14 km. In the village Onora, in the two-storey houses 75% of the stove pipes were broken, separate walls of the stoves collapsed. In the single-storey houses 15% of the stove pipes and separate stoves collapsed. Big cracks in the walls appeared in many houses, and the window panes fell out. Buildings which found themselves in the plain  
Card 1/2

Onora earthquake of July 22, 1959. S/169/62/000/008/013/090  
E202/E192

portion were more affected than those on the terrace. During the earthquake one could hear a rumble and thunder. The earthquake in Onora is ascribed by the authors to the lift along the fracture passing from NW to SW along which the chalk rocks of the western range were folded over the tertiary deposits of Tym'-Poronay Depression, with the plane of the fault fissure falling to the West. Photographs of the destruction, tectonic diagram and graph of the determined epicentre are given. ✓

[Abstractor's note: Complete translation.]

Card 2/2

FEDOROV, Ye.Ye.

Control in the sluicing method of sampling by means of a  
mineralogical analysis of loose sediments without elutriation.

Trudy VAGT no.8:154-156 '62.

(MIRA 15:11)

(Aldan Valley—Ores—Sampling and estimation)

FEDOROV, Yu., inzh.

By force of habit. Mast.ugl. 8 no.9:25 8 '59.

(MIRA 13:2)

(Cheremkhovo--Mining engineering--Study and teaching)

FEDOROV, Yu., insh.

Readers' letters. Avt.transp. 38 no.2:53 P '60. (MIRA 13:6)  
(Motor vehicles)

OSTAPENKO, K.; KRYKIN, A.; DUL'NEV, V.I.; OSETRV, V.S.; TOPALYAN, K.M.;  
FEDOROV, Yu.; YATSYSHIN, A.I.; TITOK, V.A.; YEPIFANOV, G.;  
RASTEGAYEV, Yu.

Controlling little-known animal diseases. Veterinaria 42  
no.8:118-124 Ag '65' (MIRA 18:11)

FEDOROV, Yu.A.

Electrocracking of petroleum products. *Khim. v shkole* 15 no.4:75-76  
Jl-Ag '60. (MIRA 13:9)

1. Pedagogicheskiy institut, g. Cheboksary.  
(Chemistry—Experiments) (Acetylene) (Cracking process)



Fedorov, Yu. A.  
FEOROV, Yu. A.

Effect of saliva on the penetration of certain substances into dental tissue under experimental conditions. Stomatologia 36 no.6:3-7  
N-D '57. (MIRA 11:2)

1. Iz biokhimicheskogo otdeleniya (zav. - prof. D.Ye. Mancylov)  
TSentral'nogo nauchno-issledovatel'skogo rentgenologicheskogo i  
radiologicheskogo instituta (dir. - prof. M.N. Pobedinskiy)  
(TEETH) (PHOSPHORUS IN THE BODY) (SALIVA)

**FEDOROV, Yu.A.**

Use of agar hydrocolloidal plastic material in dental prosthesis.  
Stomatologiya 38 no.6:65-66 N-D '59. (MIRA 13:4)

1. Iz 6-y stomatologicheskoy polikliniki lechebnogo ob'yedineniya  
khozraschetnoy seti Leningradskogo gorodskogo otdela zdravookhra-  
neniya (glavnyy vrach L.N. Ivanova, konsul'tant ortopedicheskogo  
otdeleniya - kand.med.nauk Ye.D. Volova).  
(DENTAL PROSTHESIS)

GAVRILOVA, V.A.; FEDOROV, Yu.A.

Case of a patient not being able to use his maxillary prosthesis.  
Stomatologiya 39 no.6:70 N-D '60. (MIRA 15:1)

1. Iz Vladimirskey gorodskoy bol'nitsy No.1.  
(TEETH, ARTIFICIAL)

FEDOROV, Yu.A.

Effect of phosphorus-calcium and fluorine compounds on experimental dental caries in white rats. Dokl.AN SSSR 137 no.6:1481-1484 Ap '61.  
(MIRA 14:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii i Pervyy Leningradskiy meditsinskiy institut imeni I.P.Pavlova. Predstavleno akademikom N.N.Anichkovym.  
(TEETH--DISEASES) (CALCIUM GLYCEROPHOSPHATE--PHYSIOLOGICAL EFFECT)  
(SODIUM FLUORIDE--PHYSIOLOGICAL EFFECT)

FEDOROV, Yu.A.

Increased liability to dental caries due to ionizing radiation.  
Dokl. AN SSSR 140 no.5:1195-1198 0 '61. (MIRA 15:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy  
radiologii i Pervyy Leningradskiy meditsinskiy institut im.  
I.P.Pavlova. Predstavleno akademikom N.N.Anichkovym.

(TEETH---DISEASES)

(X RAYS---PHYSIOLOGICAL EFFECT)

FEDOROV, Yu.A. (Leningrad)

Standard crowns and pivot teeth of plastic. Stomatologia 41  
no.4:95-96 J1-Ag '62. (MIRA 15:9)  
(DENTAL PROSTHESIS) (PLASTICS IN MEDICINE)

FEDOROV, Yu.A. (Vladimir)

Six supernumerary teeth. Stomatologia 42 no.3:90 My-Je'63  
(MIRA 17:1)

FEDOROV, Yu.A.

Study of various changes in teeth and some indices of the phosphorus-calcium metabolism in white rats. Dokl. AN SSSR 150 no.2:438-440  
My '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut stomatologii, Odessa.  
Predstavleno akademikom N.N.Anichkovym.  
(TEETH-DISEASES) (CALCIUM METABOLISM) (PHOSPHORUS METABOLISM)



FEDOROV, Yu.A.

Study of the local effect of calcium glycerophosphate and sodium fluoride on the experimental dental caries in white rats. Dokl. AN SSSR 161 no.1:244-247 Mr '65. (MIRA 18:3)

1. Nauchno-issledovatel'skiy institut stomatologii, Odessa.  
Submitted August 22, 1964.

I. 22087-66

ACC NR: AP6012934

SOURCE CODE: UR/0115/65/000/005/0012/0013

AUTHOR: Fleyer, A. G.; Fedorov, Yu. A.

ORG: none

42  
B

TITLE: Accuracy of automatic recording of time signals qm

SOURCE: Izmeritel'naya tekhnika, no. 5, 1965, 12-13

TOPIC TAGS: servosystem, radio broadcasting, measuring instrument, time signal, signal recording

ABSTRACT: The Novosibirsk State Institute of Measures and Measuring Devices has developed a device for automatic attachment to the second signals broadcast on shortwave and longwave radio. The only portion of this device carrying a metering load is the electronic servosystem. The time signal in the automatic device is recorded by fixing the moment of time at which the leading edge of the time signal at the output of the radio receiver reaches a given level and by fixation of the area of correspondence of the leading edge of the time signal with a strobe impulse formed in the recording device. This article presents a comparison of these two paths from the point of view of time signal recording area resulting from changes in amplitude of the signal at the output of the radio. The results show that the second method has an

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UDC: 529.781

ACC NR: AP6012934

error factor which is much less dependent on signal level than that of the first method. The correspondence area method has the additional advantage of the possibility of fixing the signal at the point of zero amplitude of the leading edge and consequent reduction of the error associated with leading edge length as well as pulse amplitude. Orig. art. has: 3 figures and 5 formulas. [JPRS]

SUB CODE: 17, 09 / SUBM DATE: none / ORIG REF: 001

Cont 2/2 *BLG*

L 31128-66

ACC NR: AP6010875

SOURCE CODE: UR/0115/66/000/002/0082/0084

AUTHOR: Fleyer, A. G. ; Fedorov, Yu. A.

30  
B

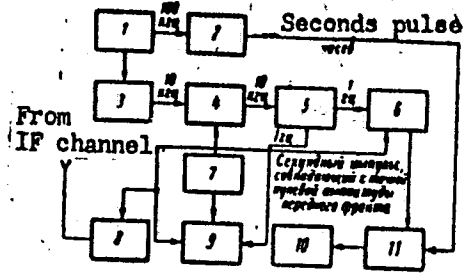
ORG: none

TITLE: Instrument for automatic reception of radio signals of exact time in seconds

SOURCE: Izmeritel'naya tekhnika, no. 2, 1966, 82-84

TOPIC TAGS: time measurement, time signal

ABSTRACT: The development of a device for automatic locking into exact time (seconds) radio signals is reported. The device includes (see figure) quartz-clock master oscillator 1, quartz-clock frequency divider 2, 1:10-ratio scaler 3, phase shifter 4, 1:10<sup>4</sup>-ratio scaler 5, follower stage 6, motor 7, radio receiver 8, signal-recognition device 9, digital printer 10, visual reading device 11.



The time radio signal is recognized by the area of coincidence of the radio signal with a locally generated  $\Pi$ -shaped gated pulse. The error of time signal reception is claimed to be about 20 or 30  $\mu$ sec. Orig. art. has: 3 figures and 1 table. [03]

SUB CODE: 09/ SUEM DATE: none/ ORIG REF: 003/ ATD PRESS: 4239

Card 1/1 PC

UDC: 681.2:621.396.91

FEDOROV, Yu.A. (Moskva)

Vibrations of a closed circular cylindrical shell in a field of random acoustic pressure. Inzh. zhur. 3 no.3:498-503 '63.

(MIRA 16:10)

1. Institut mekhaniki AN SSSR.

(Elastic plates and shells--Vibration)

FEDOROV, Yu.A.

Method of determining the production volume of electric welding  
equipment. Avtom. svar. 18 no.5:66-69 My '65. (MIRA 18:6)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

IZMAIL'SKIY, V.A.; FEDOROV, Yu.A.

Spectra of benzylideneaniline, its derivatives and their salts. Zhur. fiz.  
khim. 39 no.3:768-771 Mr '65. (MIRA 18:7)

1. Moskovskiy pedagogicheskiy institut imeni Lenina.

ACCESSION NR: AP4043526

S/0258/64/004/003/0525/0532

AUTHOR: Fedorov, Yu. A. (Moscow)

TITLE: On nonlinear oscillations of rectangular plates under action of random forces

SOURCE: Inzhenernyy zhurnal, v. 4, no. 3, 1964, 525-532

TOPIC TAGS: nonlinear oscillation, elastic rectangular plate, varying load, ergodic function, mean square intensity, forcing function, linear differential equation, correlation function, generalized load, generalized coordinate

ABSTRACT: The nonlinear oscillations of an elastic rectangular plate (fixed at its edges) were investigated under randomly varying loads, both in time and in space. The plate vibration equations with dissipation are written in the form

$$D\Delta\Delta w - L(w, \Phi) + \rho h \frac{\partial^2 w}{\partial t^2} + 2\rho h\beta \frac{\partial w}{\partial t} - q(x, y, t)$$

$$\frac{1}{Eh} \Delta\Delta\Phi + \frac{1}{2} L(w, w) = 0$$

$$\left( L(w, \Phi) = \frac{\partial^2 w}{\partial x^2} \frac{\partial^2 \Phi}{\partial y^2} + \frac{\partial^2 w}{\partial y^2} \frac{\partial^2 \Phi}{\partial x^2} = 2 \frac{\partial^2 w}{\partial x \partial y} \frac{\partial^2 \Phi}{\partial x \partial y} \right)$$

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ACCESSION NR: AP4043526

Thickness  $h$  is assumed small compared to lateral dimensions  $a$  and  $b$ . The load  $q(x, y, t)$  is considered to be an ergodic function of time and an arbitrary function of the coordinates. A small parameter  $\mu$  is defined

$$\mu^2 = \frac{\bar{q}}{q_0}$$

where  $\bar{q}$  is the mean square intensity. The deflection  $w$  and the forcing function  $\Phi$  are then expanded in power series in  $w_k$  and a set of linear differential equations are obtained in  $w_k$  and  $\Phi_k$ . The equations are subsequently solved for  $w$ ,  $\Phi$  and stress  $\sigma_{xx}$  up to zeroth and first approximations in  $\mu$ . Correlation functions are then developed for a generalized load defined by

$$Q_{mn}^{(0)}(t) = \frac{4}{abph} \int_0^a \int_0^b q_0(x, y, t) W_{mn}(x, y) dx dy, \text{ and generalized coordinates defined}$$

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ACCESSION NR: AP4043526

by

$$f_{mn}^{(0)}(t) = \int_{-\infty}^t h_{mn}(t-\theta) Q_{mn}^{(0)}(\theta) d\theta,$$

$$h_{mn}(\tau) = \begin{cases} \frac{1}{\Omega_{mn}} e^{-\beta\tau} \sin \Omega_{mn} \tau & (\tau > 0), \\ 0 & (\tau < 0), \end{cases}$$

$$\Omega_{mn} = \sqrt{\omega_{mn}^2 - \beta^2}.$$

The spectral density of each function is determined. From these results expressions are obtained for the mean square deflection and stress. In these formulae, terms appear which are expressed by the correlation function of the generalized coordinates, including first- and sixth-order terms and their integrals. As an example the case of plane acoustic waves with random frequency and amplitude are analyzed, acting on a square plate. The results show that the linear theory gives a better value for the mean square stress than for mean square deflection. Orig. art. has: 34 formulas and 4 figures.

ASSOCIATION: Institute mekhaniki AN SSSR (Institute of Mechanics AN SSSR)

SUBMITTED: 29Jun63

SUB CODE: ME,GP

Card 3/3

NO REF SOV: 002

ENCL: 00  
OTHER: 002

IZMAIL'SKIY, V.A.; FEDOROV, Yu.A.

Effect of substitution of the benzene ring with a naphthalene ring  
in compounds having individual chromophoric systems. Zhur. VKHO 9  
no. 3:359-360 '64. (MIRA 17:9)

1. Laboratoriya krasiteley i problemy tsvetnosti pri Moskovskom  
gosudarstvennom pedagogicheskom institute imeni Lenina.

IZMAIL'SKIY, V.A.; FEDOROV, Yu.A.

Effect of benzene nucleus substitution using naphthalene and anthracene Part.1: Absorption spectra of mono and dinitrophenylethyl Alpha-naphthylamine. Zhur. ob. khim. 34 no.12:3872-3877 D '64 (MIRA 18:1)

IZMAIL'SKIY, V.A.; FEDOROV, Yu.A.

Spectrum genetics of the derivatives of benzylideneaniline and  
benzylidene-1-naphthylamine containing  $\text{NO}_2$ - and  $\text{NMe}_2$  groups.  
Dokl. AN SSSR 158 no.4:900-903 O '64.

(MIRA 17:11)

1. Laboratoriya khimii krasiteley i problemy tsvetnosti pri  
Moskovskom gosudarstvennom pedagogicheskom institute im. V.I.  
Lenina.

FLEYER, A.G.; FEDOROV, Yu.A.

Precision of automatic methods for recording time signals.  
Izv. tekhn. no.5:12-13 My '65. (MIRA 18:8)

S/032/62/028/001/002/017  
B125/B138

**AUTHORS:** Zil'bershteyn, Kh. I., Kaliteyevskiy, N. I., Razumovskiy,  
A. N., Fedorov, Yu. F.

**TITLE:** Hollow-cathode discharge for analysis of impurities in  
silicon

**PERIODICAL:** Zavodskaya laboratoriya, v. 28, no. 1, 1962, 43-45

**TEXT:** The authors studied the spectrum analysis of impurities in silicon with the aid of a hollow thermionic cathode. These impurities were concentrated by treating Si powder with fluoric and nitric acid vapors on a teflon film. Teflon films with a standard and with the test specimen were put at the bottom of a hollow carbon cathode which was heated to 550°C. On complete volatilization of the teflon specimen and standard became attached to the bottom of the cathode. The spectra were taken by a hollow-cathode discharge in a helium current (10 - 15 mm Hg, discharge amperage 900 ma), using an MCT-22 (ISP-22)-spectrograph and type CW-2(SP-2) photographic plates. The spectral lines of both the volatile and non-volatile impurities had maximum intensity at 800 - 1000ma.  
Card 1/3

Hollow-cathode discharge for ...

S/032/62/028/001/002/017  
B125/B138

Since the impurity elements in the teflon could not be determined accurately enough by the present method the silicon powder contained in the two half cylinders of a hollow cathode (Fig. 1) was pretreated by acid vapors. The impurity concentrate was attached to the interior of the cathode by two drops of a solution of polystyrene in benzene. Discharge in a composite hollow cathode takes place in the same way as in an ordinary one. The spectral lines of the volatile impurities Zn, Pb, In have maximum intensity at 400 - 600 ma, but remain almost constant when the amperage is further increased. Those of the less volatile impurities Fe, Ni, Mn, Mg and others have maximum intensity at 800 - 1000 ma. The totality of the elements was therefore determined at 800 - 900 ma with a 2 min discharge. Screens between the cathodes prevented undesirable side effects. Under the conditions described, the absolute accuracy of quantitative analysis is  $3-5 \cdot 10^{-10}$  g Ag, Mn, Cu;  $6 \cdot 10^{-10}$  g Ga, In;  $(3-5) \cdot 10^{-9}$  g Al, Ni;  $(6-7) \cdot 10^{-9}$  g Mg, Fe. The accuracy of the Mg, Al, Fe, Cu determination depends on the traces of these elements in the cathode material. Reproducibility is poor. The measuring arrangement is similar to that of Yu. I. Korovin, L. V. Lipis (Optika i spektroskopiya, 5, 3, 334 Card 2/3



Hollow-cathode discharge for ...

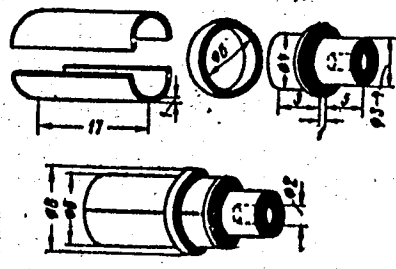
S/032/62/028/001/002/017  
B125/B138

(1958)). The present paper was the subject of a lecture delivered at the soveshchaniye po spektroskopii (Conference on Spectroscopy) in July 1961 in Gor'kiy. Kh. I. Zil'bershteyn, Priryutko et al. (Zavodskaya laboratoriya, XXV, 12, 1474 (1959)) are referred to. There are 2 figures and 1 Soviet references.

ASSOCIATION: Institut khimii silikatov (Institute of Silicate Chemistry)

Fig. 1: hollow cathode used for analysis (dimensions in mm).

FIG. 1



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S/032/62/028/006/011/025  
B101/B138

AUTHORS: Zil'bershteyn, Kh. I., Piryutko, M. M., Nikitina, O. N., and Fedorov, Yu. F.

TITLE: Techniques of the spectrochemical analysis of semiconductor silicon

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 6, 1962, 680 - 682

TEXT: The spectrochemical analysis of semiconductor silicon already described (Zavodskaya laboratoriya, v. 25, no. 12, 1474 (1959)) is supplemented by some data. (1) The prevention of contamination of the samples during pulverization was investigated. Comparison of silicon monocrystal plates, agate, piezoquartz and leucosapphire as pulverizers showed that contamination by Cu, Ca, Al, Mg, Fe and Ni is prevented only with silicon monocrystals. (2) Initial crushing of the sample occurred by crushing the crystal wrapped in a ftoroplast-4 (fluoroethylene) film between ftoroplast plates in a hydraulic press. (3) The solutions of the nitrates of the elements to be investigated, used as standards, were found to remain unchanged after storage for seven months in polyethylene bottles.

Card 1/2

Techniques of the...

S/032/62/028/006/011/025  
B101/B138

- (4) Spectral analysis of ftoroplast-4 and polyethylene showed that the first-named polymer contains fewer impurities (Al, Ca, Mg, Fe, Cu, Si).
- (5) The preparation of thin-walled electrodes by means of a hollow-cylindrical cutter with central drill is described. The cutter grinds the electrode to 4 mm diameter and the drill makes a hole of 3.5 mm diameter. Output of the device: 40 - 60 electrodes per hr. There are 1 figure and 3 tables.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

Card 2/2

ZIL'BERSHTEYN, Kh.I.; PIRYUTKO, M.M.; NIKITINA, O.N.; FEDOROV, Yu.F.;  
NENAROKOV, A.V.

Rapid chemical concentration of silicon in the preparation of  
samples for spectral analysis. Zav. lab. 29 no.10:1266-1267 '63.  
(MIRA 16:12)

1. Institut khimii silikatov AN SSSR.

L 2122-66 EWT(1)/EWP(e)/EWT(m)/EPF(c)/EWP(1)/EPF(n)-2/EWP(t)/EWP(b) IJP(o)

JD/WW/GG/WH

ACCESSION NR: AP5024556

UR/0070/65/010/005/0727/0731  
548.0

AUTHOR: Zil'bershteyn, Kh. I.; Ioffe, V. A.; Fedorov, Yu. F.

TITLE: Electron paramagnetic resonance in irradiated monocrystals of quartz with aluminum impurities

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 727-731

TOPIC TAGS: irradiation, radiation damage, quartz, EPR, electron paramagnetic resonance, x ray

ABSTRACT: The EPR was investigated in natural and synthetic single crystals of quartz containing different amounts of aluminum impurities. Samples 6 x 4 x 2 mm were irradiated at room temperature with a dose of 104r, which was sufficient to cause saturation in all samples. The EPR spectrum (first derivative of the absorption curve) was recorded at both 77K and at room temperature (see Figs. 1 and 2 of the Enclosure). At room temperature when H || C the width of the main peak was 15.9 oe and g was 2.00; the width of the satellites was 3 oe and g was 1.97 and 2.02 oe. When the crystal was oriented in a different direction the satellites disappeared. The structure and the shape of the central peak changed, but the g-factor remained practically constant. The EPR spectrum at 77K (Fig. 2) was almost  
Card 1/4

L 2122-66  
ACCESSION NR: AP5024556

identical to that observed by J. H. E. Griffiths et al (Report of the Bristol Conference on Defects in Crystalline Solids, Physical Society, London, 1955, p. 51) at 20K. The group of equidistant lines was attributed to a hole center associated with aluminum and was described by the spin-Hamiltonian and the values of constants determined in the above-quoted paper by Griffiths. The maximum value of the g-factor of the second group of lines observed at 77K during rotation about the vertical axis was 2.021; the minimum value was 2.004. The nature of this signal is unknown. It was found that the intensity of the EPR signal observed at 77K decreased linearly with increasing annealing temperature, becoming zero at 350C. The color of the crystal changed in the same manner. Orig. art. has: 6 figures.

[CS]

ASSOCIATION: Institut khimi silikatov AN SSSR (Institute of the Chemistry of Silicates, AN SSSR)

SUBMITTED: 01Jul64

ENCL: 02

SUB CODE: SS, NP

NO REF SOV: 003

OTHER: 004

ATD PRESS: 4113

Card 2/4

L 2122-66

ACCESSION NR: AP5024556

ENCLOSURE: 01

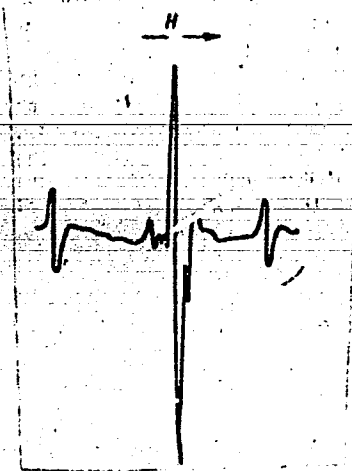


Fig. 1. EPR spectrum of irradiated quartz at  $T = 300K$ ,  $H \parallel C$

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L 2122-66

ACCESSION NR: AP5024556

ENCLOSURE: 02

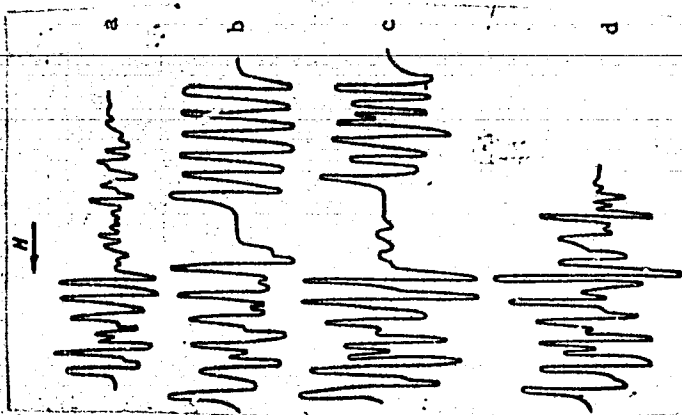


Fig. 2. EPR spectrum of irradiated quartz at  $T = 77K$

a -  $H \parallel C$ ; the angle between H and C is: b -  $45^\circ$ ;  
c -  $53^\circ$ ; g =  $150^\circ$ .

Card 4/4



S/123/61/000/024/002/016  
A004/A101

**AUTHORS:** Potyagaylo, M.V., Minkov, M.A., Fedorov, Yu.G.

**TITLE:** New drill design for deep-hole drilling in heat-treated steels

**PERIODICAL:** Referativnyy zhurnal. Mashinostroyeniye, no. 24, 1961, 53, abstract 24B329 (V sb. "Novoye v instrumental'n. proiz-ve", Leningrad, Lenizdat, 1960, 27 - 38)

**TEXT:** The authors describe a drill for the high-speed annular drilling of deep holes 50 - 100 mm in diameter in heat-treated alloyed steels of a hardness of HB 300-320. The drill has a capacity of up to 6.0 m/hour. The drill consists of the body and T15K6 (T15K6) sintered-carbide inserts. To divide the chip over its width there are three edges at the cutting part of the insertion tool. The radial clearance of 10 mm is sufficient to remove the fine chips being washed out. The drill direction is ensured by three BK-8 (VK-8) sintered-carbide inserts. The authors present a drawing of the drill and a table of geometric parameters which showed the most steady results during the testing. They describe the equipment of the horizontal drilling machine especially modernized for this purpose, the oil tank for the high-pressure supply and removal of the cutting

Card 1/2

New drill design for deep-hole drilling ...

S/123/61/000/024/002/016  
A004/A101

fluid and the anti-vibration bushing. The pump capacity is 200 liter/min at a pressure of 15 kg/cm<sup>2</sup>. The drill life during the drilling of holes 55 mm in diameter without resharpening is 4,500 - 5,000 mm, the width of the wear chamfer at the back edge not exceeding 0.3 - 0.4 mm. The machining finishing is v 5. The cutting speed is 105 - 115 m/min; the feed 0.15 - 0.17 mm/rev. The authors give some recommendations to ensure high-efficiency drilling. There are 9 figures.

I. Briskman

[Abstracter's note: Complete translation]

Card 2/2

Vedrov, A. G. On infinite groups of which all nontrivial  
subgroups have a finite index. Uspehi Matem. Nauk  
(N.S.) no. 1(41), 187-189 (1957). (Russian)  
The only group satisfying the conditions in the title of  
the paper is the infinite cyclic group.

of finite index is the infinite cyclic group.

INTERNATIONAL REVIEWS

13 10 01

PROSKURYAKOV, Igor' Vladimirovich; ~~FEDOROV~~, Yu.G., red.; TSVETKOV, A.T., red.;  
MURASHOVA, N.Ya., tekhn.red.

[A collection of problems in linear algebra] Sbornik zadach po  
lineinnoi algebre. Moskva, Gos.isd-vo tekhniko-teoret. lit-ry,  
1957. 368 p. (MIRA 11:2)  
(Algebra--Problems, exercises, etc.)

GEL'FAND, I.M.; PYATETSKIY-SHAPIRO, I.I.; FEDOROV, Yu.G.

Determining the structure of a crystal by the nonlocal search method.  
Dokl. AN SSSR 152 no.5:1045-1048 0 '63. (MIRA 16:12)

1. Chlen-korrespondent AN SSSR (for Gel'fand).

VAYNSHTEYN, B.K.; GEL'FAND, I.M.; KAYUSHINA, R.L.; FEDOROV, Yu.G.

Use of the R-factor minimalization method in determining  
crystal structures. Dokl. AN SSSR 153 no.1:93-96 N '63.

(MIRA 17:1)

1. Chleny-korrespondenty AN SSSR (for Vaynshteyn, Gel'fand).

BERESTOV, A.V. (Head District Veterinary Doctor), BERESTOV, V.A. (Candidate of Veterinary Sciences), KLYAPISHEV, I.A., SHAKMAKOVA, V.I. and MAKAROV, N.V. (Veterinary Doctors), BARABOSHIN, S.A., BUCHINOV, I.N., LYAMIN, A.F., ~~FEDOROV, Yu. I.~~, and FILIMONOV, I. Ya. (Veterinary Medical Assistants, Ul'yanov Oblast', Terentul'sk District).

"Protein hydrolysates in dispepsia in newborn calves..."  
Veterinariya, vol. 39, no. 3, March 1962 pp. 71

FEDOROV, Yu.I., uchastkovyy markshoyder

Fixing of permanent surveying signs in the transformation chambers.  
Ugol' Ukr. 6 no.6:40 Je '62. (MIRA 15:7)  
(Donets Basin—Mine surveying)



ANILOVICH, V.Ya., kand. tekhn. nauk; GORODETSKIY, I.M., inzh.; DYU-IN YU, inzh.;  
FEDOROV, Yu.I., inzh.; CHERNYAVSKIY, I.Sh.

Investigating the dynamic loads in the transmission of the T-25  
(T-74) tractor during starting. Mekh. i elek. sots. sel'khoz.  
21 no.3:1-4 '63. (MIRA 16:8)

1. Khar'kovskiy traktorny zavod.  
(Tractors--Transmission devices)

3370-66 EWT(1)/EWT(m)/EWP(1)/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) IJP(c)  
 ACCESSION NR: AT5020496 JD/GS UR/0000/64/000/000/0476/0490

AUTHORS: Fedorov, Yu. I.; Bondarenko, S. D. 59  
44.52 44.55 B+1

TITLE: The use of acid-resisting light-sensitive emulsions to produce local inhomogeneities with high resolution in single crystals and films of germanium and silicon 27  
16 44.55, 18

SOURCE: Mezhdunarodskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 476-490

TOPIC TAGS: germanium, silicon, emulsion, semiconductor, etched crystal, ultra-violet light, photoengraving

ABSTRACT: Photosensitive acid-resisting emulsions for use in photoengraving of semiconductor parts and semiconductor surfaces were synthesized and tested. Etching agents were prepared for use on germanium and silicon, films of germanium and silicon, silicon oxides, and gallium arsenide single crystals. Sensitizers that increase the sensitivity of the emulsions to ultraviolet light are indicated. Over 20 preparations--including natural colloids, organosilicon compounds,

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L 3370-66

ACCESSION NR: AT5020496

cinnamic aldehyde, emulsions based on azo and diazo compounds and polymeric polyesters--were tested. The photoengraving method consists of preparation of surfaces, application of emulsion, exposure, development, heat tanning, ultraviolet tanning, etching, and washing and drying. It was found that the esters of polystyrene and cinnamic acid, polyvinyl alcohol, and cinnamic acid have high dielectric characteristics that change negligibly with time. It was also found that some of the resins that were synthesized are universal for photoengraving emulsions for the above-mentioned semiconductor materials. The sensitized emulsions that were used retained their ability to be tanned by ultraviolet rays for several months. Orig. art. has: 4 graphs, 3 photographs, 1 table, and 6 formulas.

ASSOCIATION: none

SUBMITTED: 05Oct64

ENCL: 00

SUB CODE: 83

NO REF SOV: 000

OTHER: 000

Card 2/2 *md*

GRISHKOV, A.I., kand.tekhn.nauk; FEDOROV, Yu.K., inzh.

Pressures and torques in rolling on blooming mills. Izv.vys.ucheb.  
zav.; mashinostr. no.10:19--197 '61. (MIRA 14:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii.

(Rolling(Metalwork))

FEDOROV, Yu.K.

Tropopause characteristics at the Oasis Station in Antarctica.

Meteor. i gidrol. no.12:27-31 D '61.

(MIRA 14:11)

(Atmosphere)

FEDOROV, Yu.K.

Results of determining the characteristics of the tropopause  
from radiosounding data at the Antarctic observatory of Mirnyy  
in July and August 1958. Trudy TSIP no.118:34-41 '62.

(MIRA 16:4)

(Mirnyy station, Antarctica--Atmosphere)

GRISHKOV, A.I.; FEDOROV, Yu.K.; LOKTIONOV, G.I.; IVANOV, G.M.

Investigating the coefficient of resistance to the movement of a strip along the roller table. [Sbor. trud.] TSNIICHM no.29:113-120 '63. (MIRA 17:4)

FEDOROV, Yu.K.

Rise in temperature in the stratosphere over Antarctica during the winter of 1964; according to observations at Mirnyy. Meteor. i gidrol. no.6:34-35 Je '65. (MIRA 18:5)

1. 9-ya Sovetskaya antarkticheskaya ekspeditsiya, Mirnyy.



MORZOV, V.P.; KOVALENKO, N.F.; KHLEBNIKOVA, V.N.; FEDOROV, Yu.K.

Thermodynamic properties of deuterium and tritium-substituted  
nonlinear triatomic hydrides. Teoret. i eksper. khim. 1 no.4:  
462-467 1965. (MIRA 18:10)

L. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

FEDOROV, Yu.M., inzh.; BOGHISHCHE, V.G., tekhnik

Volumetric planning in the State Institute for the Design  
and Planning of Mine Construction in the Coal Industry.

Shakht. stroi. 6 no.6:14-16 Je '62.

(MIRA 15:6)

1. Gosudarstvennyy institut po proyektirovaniyu shakhtnogo  
stroitel'stva kamennougol'noy promyshlennosti.

(Coal preparation plants)

S/137/62/000/004/066/201  
A052/A101

1.8000

AUTHORS: Fedorov, Yu. N., Serebryakov, A. G., Kostrygina, N. A.

TITLE: UKL-2 (UKL-2) automated ultrasonic unit for internal flaw detection in sheets

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 26, abstract 4D148 (V sb. "Prom. primeneniye ul'trazvuka. Kuybyshevsk. aviats. in-t". Kuybyshev. 1961, 174-180)

TEXT: The method and installation for automatic internal flaw detection (laminations, non-metal impurities etc.) in rolled sheets are described. The described equipment is based on the shadow pulse immersion ultrasonic method. UKL-2 unit is described, and the general design scheme with the block diagram are presented. The unit is used in the industry and has the following characteristics: the tested sheet size = 1.5 - 15 x 1,000 - 1,500 mm; the admissible curvature of the test sheet is up to 10 mm, the maximum weight of the test sheet = 200 kg. The speed of control is 0.2 m/min and the maximum area of the detected flaw is 25 mm<sup>2</sup>.

[Abstracter's note: Complete translation]

A. Leont'yev

Card 1/1

S/260/62/000/007/001/004  
1006/1206

**AUTHOR:** Fedorov, Yu. N., Serebryakov, A. G. and Kostrygina, N. A.

**TITLE:** Automatized ultrasonic device УКЛ-2 (UKL-2) for sheet control against internal defects

**PERIODICAL:** Referativnyy zhurnal, otdeln'yy vypusk. 40. Pribory tochnoy mekhaniki 1, i ispyta:el'nyye ustanovki, v. 7, 1962, 19-20, abstract 40.7.112. From collection "Prom. primeneniye ul'trazvuka. Kuybyshevsk. aviats. in-t". Kuybyshev, 1961, 174-180

**TEXT:** A device is described for the automatic control of a sheet against slight defects (dislocation, non-metallic incorporation etc.) with equivalent surface of the order of a few square millimeters. The equipment is based on the ultrasonic shadow impulse immersion method with the application of pairs of transmitting and receiving piezoelectric transducers. The sheet to be analyzed is submerged in a water bath, which provides acoustical communication between the transmitting and receiving gages situated symmetrically on both sides of the sheet. The gages are put into horizontal motion along the sheet by driving screws, the sheet remaining motionless. At every passage of the gages, 50 mm of the sheet is checked. Arriving at the end positions, the sheet moves up a pace, and this process is repeated automatically until the whole sheet is controlled. If a defect appears, sound and light signals are put in operation and the motion is stopped automatically. Approximate coordinates of the defect are evaluated following the scale. For a more exact location of the sheet defect one can use a manual gear and an electronic-light indicator. An essential diagram of the device

Card 1/2

Automatized ultrasonic...

S/260/62/000/007/001,004  
1006/1206

is given. During the running-in of the device, a batch of 100 sheets was checked, 8 and 5 mm thick, of dimensions  $1000 \times 1000$  and  $550 \times 550$  mm. The minimum defect discovered was around  $2.5 \text{ mm}^2$ . Rate of control  $0.2 \text{ m}^2/\text{min}$ . Maximum weight of analysed sheet not more than 200 kg. Maximum allowable curvature of analysed sheet not more than 10 mm.

[Abstracter's note: Complete translation.]



Card 2/2

ACCESSION NR: AT4013980

S/3070/63/000/000/0098/0100

AUTHOR: Fedorov, Yu. N.; Serebryakov, A. G.; Kostrygina, N. A.; Tsyro, O. I.; Shchukin, A. I.

TITLE: The semi-automatic ultrasonic apparatus UKL-2 for inspecting sheet metal for internal defects

SOURCE: Novy\*ye mashiny\* i pribory\* dlya ispy\*taniya metallov. Sbornik statey. Moscow, Metallurgizdat, 1963, 98-100

TOPIC TAGS: sheet metal inspection, ultrasonic inspection, piezoelectric transducer, metal defect, metal sheet

ABSTRACT: For detection of internal defects (laminations, non-metallic inclusions) in sheet metal, a semi-automatic immersed ultrasonic inspection device has been developed, in which several pairs of transmitting and receiving piezoelectric transducers are used. The transmitter 4 and receiver 3 are placed symmetrically on opposite sides of the test sheet 1. (See Fig. 1 of the Enclosure.) Water is used as the immersion liquid in the test tank 1. With the aid of power-driven threaded spindles, the transmitter and receiver can be moved horizontally back and forth along the inspected sheet with a speed of 6.8 m per minute. During this movement, the sheet is stationary. At the end of each passage, the transducers

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are arrested, and the sheet is raised by the width covered by inspection during one passage. At the detection of a defect, a sonic signal 6, a light signal 7, and an automatic stopping device are triggered simultaneously. The approximate coordinates of the defect can be determined by taking readings on scales. For more accurate locating of the defect, a manual drive and an electron beam indicator 9 can be used. The drive mechanisms for the sheet and the transducers are mounted on the test tank structure. Adjustment is provided for different sizes of sheets to be inspected. All automation and electronic elements are unified in one cabinet, in the upper panel of which the controls are installed. The electric scheme of the installation is described, with some simplifications but in considerable detail. The receiver and transmitter each contain ten piezoelectric transducers, 10 mm in diameter and 1 mm thick. The frequency of ultrasonic vibrations is 2.8 megacycles/sec. The circular quartz plates are arranged in two vertical rows, overlapping 40%, permitting the inspection of a 50 mm wide strip during each horizontal path. The resolving capacity of the installation was determined by examining sheet specimens with artificial defects, represented by flat bottom drillings, not fully penetrating the sheet and closed by plugs of the same material. As a result of these tests, it has been established that the minimum size of a defect detectable by the apparatus is 2.5-3 mm<sup>2</sup>. However, this size depends on

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many factors, such as kind of defect, sheet thickness, surface condition, degree of flatness, and is 3.5-4 mm<sup>2</sup> in practice. At the present time, three UKL-2 installations are in operation at the "Krasny\*y Vy\*borzhets" plant in Leningrad. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 20Feb64

ENCL: 01

SUB CODE: MM

NO REF SOV: 001

OTHER: 000

Card 3/4

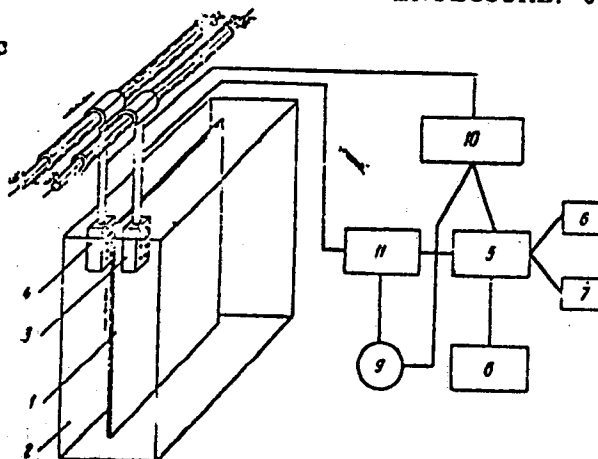


ACCESSION NR: AT4013980

ENCLOSURE: 01

Fig. 1. Schematic illustration of ultrasonic inspection equipment.

- 1 — metal sheet under inspection
- 2 — test tank with water
- 3 — receiver
- 4 — transmitter (sound generator)
- 5 — defect recorder
- 6 — sonic signal
- 7 — light signal
- 8 — stopping device
- 9 — electron beam indicator for accurate locating of defect
- 10 — electric vibration generators
- 11 — amplifier



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L 18217-65 EMT(d)/EMT(1)/EMT(c)/EMT(v)/EMT(k)/EMT(1) R-1/R1-4 ASD(p)-3  
 ACCESSION NR: AT500L226 MLK S/0000/61/000/000/0174/0180

AUTHOR: Fedorov, Yu. N.; Serebryakov, A. G.; Kostrygina, N. A. B

TITLE: UKL-2 automatic ultrasonic installation for the monitoring of internal defects in a sheet 21

SOURCE: Vsesoyuznaya mezhyuzovskaya konferentsiya po promyshlennomu primeneniyu  
 Kuvb\*shev. 1960. Prayshlennoye primenenive ul'trazvuka (Indus-  
try of Ultrasound); trudy konferentsii.

TOPIC TAGS: ultrasonic defectocopy, sheet material, internal defect/UKL-2

ABSTRACT: The UKL-2 apparatus was developed to detect automatically flake forma-  
 tions or external inclusions in sheet metal, and is based on an ultrasonic  
 shadow-type immersion method using several pairs of transmitting and receiving  
 piezo-pickups. A block diagram of the method is shown in Fig. 1 of the Enclosure.  
 Used to couple the tested sheet acoustically with the transmitter and  
 piezo-pickups, which move over the stationary sheet in a horizontal direction,  
 there is a strip 50 mm wide. After each passage of the pickups, the sheet is  
 scanned and the next strip is scanned. Upon detection of a defect, the

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Sound signals are produced and the scanning is stopped automatically. The approximate coordinates of the fault are read on scales, and a more accurate determination is made manually with the aid of a cathode ray tube indicator. The electronic circuitry, the actuating mechanisms, and the pickups are described briefly. The equipment is available through the following sources: 1. 2000 mm wide, with maximum sheet curvature 10 mm. The maximum sheet weight is 200 kg. The scanning rate is 0.2 m<sup>2</sup>/min, and the minimum defect size is 2.5 mm<sup>2</sup>. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 11May61

ENCL: 01

SUB CODE: GP, IE

NR REF SOV: 000

OTHER: 000

Card 2/3

SECRET  
REF ID: A75001226

ENCLOSURE: 01

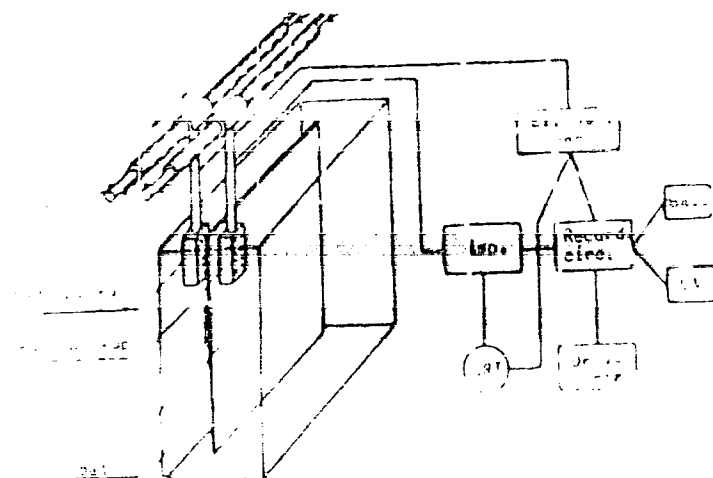


Fig. 1. Diagram of method

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izdat, 1964. 341 p. (MIRA 18:1)

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sulfamine electrolyte. TSvet.met. 38 no.10:25-28 0 '65.  
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AUTHOR: Fedorov, Yu.S., Mining Engineer

SOV-127-58-8-14/27

TITLE: Methods of Preparation and Regeneration of Heavy Suspensions  
(Sposoby prigotovleniya i regeneratsii tyazhelykh suspensiy)

PERIODICAL: Gornyy zhurnal, 1958, Nr 8, pp 63-65 (USSR)

ABSTRACT:

The author describes different heavy suspensions used at home and abroad for concentrating processes. The use of these suspensions simplifies the whole operation. Substances with high specific gravity are used as weighing compounds in the suspensions: magnetite, ferrosilicon, barite, galenite and others. Granulated ferrosilicon is widely used abroad, and is also prepared in the USSR by the Chelyabinskiy zavod ferro-splavov (the Chelyabinsk Plant of Ferro Alloys). To obtain the best conditions for the concentration of various ores, heavy suspensions must contain ferrosilicon with a 15% content of silicon with grain dimensions of 0.074 mm. Such ferrosilicon is not produced at the Chelyabinsk plant. The content of the weighing compound in heavy suspensions varies according to the ore to be processed. Different wetting agents are used abroad to reduce the viscosity of the suspension, when large quantities of the weighing compound are added. They are not used in the USSR. The author also describes different methods of regeneration of the suspension, when it

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becomes soiled with slimes from concentrated ores. The method varies according to the composition of the suspension: magnetic separation for ferrosilicon, flotation - for galenite, separation in hydrocyclones or a combination of all three methods. There are 6 references, 3 of which are Soviet, 2 German and 1 American.

ASSOCIATION: Institut gornogo dela AN SSSR (Institute of Mining Industry of A.S. USSR,

1. Ores--Processing
2. Ores--Flotation
3. Ores--Separation

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