

STAJKA, T.

"Construction of canals for timber transportation."

p. 30 (Per Bujqesine Socialiste) Vol. 12, no. 1, Jan. 1958
Tirane, Albania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

KUTACEK, M.; PROCHAZKA, Z.; GRUNBERGER, D.; STAJKOVA, R.

On the bound form of ascorbic acid. Part 17: Biogenesis of ascorbigen, 3-indolylacetonitrile and other indole derivatives in *Brassica oleracea* L. from DL-tryptophan-3-¹⁴C. Coll Cz Chem 27 no.5:1278-1283 My '62.

1. Research Institute for Plant Production, Czechoslovak Academy of Agricultural Science, Prague and Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

STAJKOVIĆ, Aleksandar; LUGIĆ, Aleksandar

Thromboelastography and its clinical value. *Med. pregl.* 18
no. 5:203-208 '65.

1. Zavod za patolosku fiziologiju Medicinske fakulteta u
Novom Sadu (V.d. upravnika: Prof. dr. Stanoje Stefanovic)
i Klinika za interne bolesti Klinicke bolnice u Novom Sadu
(Nacelnik: Prof. dr. Dimitrije Stanulovic).

STAJKOVAC, Aleksandar; LUCIC, Aleksandar

Nephrotoxic, cardiac, nutritional and edematous liver cirrhosis.
Etiology and pathogenesis. Med. pregl. 18 no.5:213-215 ' 65.

1. Zavod za patolosku fiziologiju Medicinskog fakulteta u Novom
Sadu (V.d. upravnika: Prof. dr. Stanoje Stefanovic).

STAJNER, A.

A rapid simple method for the determination of lipoproteins
on paper. Vnitřní lek. 11 no.11:1129-1132 N '65.

1. Vyzkumný ústav pro fyziatrii, balneologii a klimatologii,
Karlovy Vary (reditel prof. Dr. K. Prerovsky).

STAJNER, Albin, sanitetski pukovnik profesor dr. MEDICINA, Antona
sanitetski potporučnik dr.

Treatment of crushing injuries of the maxillofacial region in
cases of mass casualties. Vojnosanit. pregl. 22 no.7/8:460-463
Jl-Ag 165.

1. Vojnomedicinska akademija u Beogradu, Klinika za bolesti
usta, zuba i vilica, Odeljenje maksilofacijalne hirurgije.

STAJNER, Alfred, Pukovnik dr.

Treatment of benign tumors of the face and jaws. Voj.
san. pregl., Beogr. 13 no.3-4:184-194 Mar-Apr 56.

1. Hirurska katedra VMA. Klinika za bolesti celjusti, usta
i zuba Odeljenje za celjusnu hirurgiju.

(FACE, neoplasms
benign, plastic surg. (Ser))

(JAWS, neoplasms
benign, plastic surg. (Ser))

STAJNER, Alfred, Pukovnik dr.

Primary treatment of gunshot wounds of maxillo-facial region. Voj. san. pregl., Beogr. 13 no.5-6:229-236 May-June 56.

1. Hirurska katedra VMA Odeljenje za celijusnu hirurgiju.
(MANDIBLE, wds. & inj.
maxillo-facial gunshot inj., management (Ser))
(FACE, wds. & inj.
same)

STAJNER, Alfred, sanitetski pukovnik doc. d-r

Complex fractures of the facial bones in injuries of the maxillofacial region. Voj.san.pregl., Beogr. 17 no.6:654-659 Je '60.

1. Vojnomedicinska Akademija u Beogradu, Klinika za bolesti celjusti, usta i zuba
(FACIAL BONES fract & disloc)

STAJNER, Alfred, sanitetski pukovnik, doc., dr.; SKOKLJEV, Antonije,
sanitetski major, dr.

Sialolithiasis. Vojnosanit. pregl. 19 no.1:25-29 Ja '62.

1. Vojnomedicinska akademija u Beogradu, Klinika za bolesti
usta, zuba i vilica.
(SALIVARY GLANDS dis)

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STAJNER, A.; SKOKLJEV, A.

Hygromas of the neck. Acta chir. Jugosl. 10 no.3:223-228 '63

1. Klinika za bolesti usta, zuba i vilica Vojno-medicinske akademije u Beogradu; Nacelnik: puk.prof.dr. Safet Latific.

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STAJNER, Alfred, sanit. puk. prof. dr.

Maxillary carcinoma extending into the orbit. Chir. maxillofac.
(Zagreb) 5 no.1:27-36 '65.

Distr: 4E2c(j)

Aromatic diazo and azo compounds. XXXI. Decomposition of diazo compounds derived from azo dyes possessing Cleve acid as the end member. Karel Štainer, Ferdinand Mužik, Zdeněk J. Allan, and Jaroslav Pospíšil (Výzk. ústav org. synth., Pardubice-Rybitví, Czechoslov.). Chem. listy 52, 1301-9(1958); cf. C.A. 52, 17215c.—Coprantine Brown RL (C I B A) (cf. C.A. 49, 16438i), prepd. (cf. C.A. 49, 7855h) from tetrazotized benzidine (I), salicylic acid (II), Cleve acid (III), diazotization, and 8-quinolinol (IV) (1/2 as much as the other compds.), was shown by paper chromatography on Whatman No. 1 and elution with: 15% aq. NH₃, pyridine, and iso-AmOH mixt. (in vol. ratio 1:1:1) to contain 45% of the expected trisazo dye, violet spot, R_f 0.4, 40% of the 4,4'-[p-(3,4-HO:C(HO)C₆H₄:N:N)-C₆H₄]C₆H₄:N:N₂ deriv. of 1,1'-binaphthyl-6,6'-disulfonic acid (V); yellowish brown spot, R_f 0.2; 10% of the disazo dye from 1 mole tetrazotized I and 2 moles II, yellow spot, R_f 0.7; and 5% of the disazo dye from 1 mole tetrazotized I, 1 mole II, and 1 mole III (the NH₂ group of the latter is converted to OH), red spot, R_f 0.6. A weakly acid (to Congo) soln. (500 ml.) of 0.1 mole diazotized 1,2,5-H₃NC₆H₃(SO₃H)₂ was added at 5-10° to a weakly alk. (to Brilliant Yellow) soln. of 0.1 mole III, 160 ml. H₂O, and 40 ml. 2.5N Na₂CO₃. Filtering off (after 2 hrs.) the pptd. azo dye, dissolving the paste (57 g.) in 300 ml. H₂O and 30 ml. 2.5N NaOH, filtering the soln., treating with 40 ml. 2.5N NaNO₂, pouring the mixt. into 160 ml. 2.5N HCl and excess ice, adding (after 15 min.) NaCl, filtering off, and washing with 10% aq. NaCl gave prisms of the diazo compd. RN₂Cl, R = 4-[2,5-(NaO₂S)₂C₆H₃:N:N]-6-(NaO₂S)C₆H₄ throughout this abstr. The mixt. of 12.5 g. wet RN₂Cl in 50 ml. ice

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and H₂O decompd. by addn. of 20 ml. 2.5N Na₂CO₃ at 0°, 15°, and 100°, resp., yielded (as shown by paper chromatography on Whatman No. 1 and elution with 1N HCl) 65, 65, 85% RR (R_f 1.0); 15, 10, 5% R₁NH (R_f 0.8); 15, 10, 7% RNH₂ (R_f 0.8); <1, <1, <1% ROH (R_f 0.4); 4, 4, 1% unidentified compd. (R_f 0.3); and 0, 10, 0% trisazo dye, the 4-[2,5-(NaO₂S)₂C₆H₃:N:N]-2-[RN:N]-deriv. of 1,β-HOC₁₀H₇SO₃Na (VI) (R_f 0.1). Authentic samples of ROH and VI were prepd. by conventional methods. RR was isolated presumably in the form of C₂₂H₁₇O₁₀N₅Na₂·12H₂O. An aq. soln. of RR was acidified with aq. HCl, reduced at the boil with SnCl₂, and chromatographed on paper in 1N HCl. Spots were detected by diazotization in an atm. of nitrous fumes and by spray with a soln. of 2,3,6-HOC₁₀H₇(SO₃Na)₂ and Na₂CO₃; the orange spot (R_f 0.98) was identified as 1,2,5-H₃NC₆H₃(SO₃Na)₂ (comparison with an authentic specimen); the next violet spot is presumably due to the 4,4'-diamino-1,1'-binaphthyl-6,6'-disulfonic acid (VII). Instead of authentic VII the 4,4'-diamino-1,1'-binaphthyl-7,7'-disulfonic acid (VIII) was prepd. (by the method of Bogoslovskii, cf. C.A. 41, 104i) which gave spot of the same R_f (0.87) and of similar color reactions as VII. Aq. soln. of 11.15 g. III and 20 ml. 2.5N Na₂CO₃ was dild. to 500 ml. with H₂O; adding 20 ml. 2.5N NaNO₂, pouring the mixt. into 100 ml. 2.5N HCl and ice, pouring the suspension formed with vigorous stirring into a mixt. prepd. from 12.5 g. cryst. CuSO₄ in 50 ml. H₂O, 20 ml. 23% aq. NH₃, and an aq. soln. of 3.5 g. NH₂OH.HCl, pptg. the product with NaCl, filtering off, dissolving the ppt. in a large vol. of very dil. NaOH, treating the soln. with C, cooling, filtering off the orange glistening plates of the azo compd. (3.4 g.), dissolving in aq. HCl, and reducing with SnCl₂ gave sparingly sol., hairlike needles of VIII. Jih Pflm

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STAJNFI, Gustav, sanitetski potpukovnik d-r; ERCEGOVAC, Nedeljko, sanitetski potpukovnik d-r

Considerations and therapy of fractures of the spine with neurological manifestations (indications for laminectomy).
Voj.san.pregl., Beogr. 17 no.4:447-451 Ap '60.

1. Klinika za hirurške bolesti.
(SPINE fract. & disloc.)
(NEUROLOGICAL MANIFESTATIONS)

STANFL, Gustav, dr

Surgical treatment of cerebral apoplexy. (Indications for cerebral angiography). Med. glas. 16 no.1:21-25 Ja '62.

1. Vojna medicinska akademija u Beogradu, klinika za hirurske bolesti
(Nacelnik: general-major prof. dr I. Papo)

(CEREBRAL HEMORRHAGE surg)
(CEREBRAL ANGIOGRAPHY)

STAJNFL, Gustav, sanitetski pukovnik, dr.

Trends in the treatment of brain injuries. Commotio-contusional syndrome. Vojnosanit. pregl. 21 no.11:732-738 N '64

1. Klinika za hirurske bolesti, Vojnomedicinska akademija u Beogradu.

STAJNFI, Oustav, sanitetski pukovnik, doc. dr.; LEDIC, Stanko, sanitetski
pukovnik, dr.

Advantages of suboccipital pneumoencephalography in the diagnosis
of intracranial diseases with increased intracranial pressure.
Vojnosanit. pregl. 22 no.3:171-174 Mr'65.

1. Radioloski institut i Hirurska klinika, Vojnomedicinska
akademija u Beogradu.

BRKIC, Dorde; GLISIC, Ljubisa; BABIC, Dusan; MICIC, Jovan; STAJNFL, Sonja

Pancreatic diseases. A 6-year experience. Srpski arh. celok. lek.
88 no.11:1057-1067 N '60.

1. Interna klinika A Medicinskog fakulteta Univerziteta u Beogradu.
Upravnik: prof. dr Branislav Stanojevic.

PANCREAS dis)

DURIC, D.S.; MICIC, J.V.; STAJNFI, S.

Lipidogram in diabetic patients. Acta med. iugosl. 15 no.3:307-316 '61.

1. Medical Clinic "A" Medical Faculty, University of Belgrade.
(DIABETES MELLITUS blood) (LIPIDS blood)

STAJNIAK, J.

"Transportation of wood by the use of the TL-3 drawing machine with a radius stretched to 500 m." p. 22 (lis polski, Vol. 26, No. 2, Feb. 1952, Warszawa)

SO: Monthly List of ~~Russian~~ Accessions, East European Vol. 3, No. 3, Library of Congress, March ⁴ 1953, Uncl.

STAJNIAK, J.

A TI-3/II winch for loading lumber. p. 29

LAS POLSKI. (Ministerstwo Lesnictwa oraz Stowarzyszenie Naukowo-Techniczne Inżynierów i Techników Lesnictwa i Drzewnictwa) Warszawa, Poland. Vol. 29, no. 1, Jan. 1955

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960

Uncl.

STAJNIAK, J.

An attempt to determine the usefulness of the TL-3/11 winch in operations on timber storage sites.

P. 205 (Roczniki Nauk Lesnych. Vol. 13, Warszawa, Poland)

Monthly Index of East European Accessions (EPAI) LC. Vol. 7, no. 2,
February 1958

TARASS, Nasser; STAJNIAK, Jozef

Special aspects of the geoelectric survey at Mrzyglod near Zawiercie;
the problem of vertical resistivity. Kwartalnik geol 3 no.4:807-826
'59. (EEAI 10:1)

1. Zaklad Geofizyki I.G. i Przedsiębiorstwo Poszukiwan Geofizycznych
(Poland--Geophysics)

STAJNIAK, K.

Analysis of factors influencing the quality of knitted fabrics made with hooked needles. p. 266.

Vol 6, no. 12, Dec. 1955. OZINEZ, Lodz, Poland.

So: Eastern European Accession. Vol 5, no. 4, April 1956

STAJNIAK, K.

Measurement for the placing of a frictional driving wheel in
a spooler. p. 44. ODZIEZ, Lodz. Vol. 7, no. 2, Feb. 1956.

SOURCE: East European Acession (EEAL) Library of Congress
Vol. 5, no. 8, August 1956.

COUNTRY : POLAND H
CATEGORIES : Chemical Technology. Chemical Products and
Their Applications. Artificial and Synthetic*
ABST. JOUR. : RZKhim., No. 23 1959, No. 84300
AUTHOR : Stejniak, K.
INST. :
TITLE : Terilen in the Knitting Industry
ORIG. PUB. : Techn. włokienn., 1958, 7, No 11-12, 380-382
ABSTRACT : No abstract.

*Fibers.

CARD: 1/1

H - 140

STATISTICS

516. IMPROVED WORK IN FOUNDRIES AS RESULT OF TEMPERATURE MEASUREMENTS
WITH INVERSION PYROMETER. Štejskal, J. (Slavenství, 1954, vol. 2, (6),
170-173). An inversion pyrometer of recent Czechoslovak construction is
described and compared with a similar instrument of British manufacture.
I.S.I.

STAKALYUK, A.M.

Five observations on cases of Meckel's diverticulum. *Khirurgia*
no.7:79-80 J1 '55. (MLRA 8:12)

1. Iz Mel'nitsa-Podol'skoy rayonnoy bol'nitsy Ternopol'skoy
oblasti.

(INTESTINES---DISEASES)

STAKAN, G. A.

G. A. Stakan: "The significance of selection & matching in the modification of correlation dependencies." (p. 317)

SO: Journal of General Biology Vol. 5, No. 5, 1944

STALAN, C. A.

"The Effect Of Periodical Starvation On The Natural Selection In Fat-Tailed Sheep".
(p. 73) by Stalan, C. A.

SO: Journal of General Biology, Vol. VIII, No. 1 (Issues 1-6 for 1947)

STAKAN, G. A.

Stakan, G. A. and Pastukhov, S. F. - "The characteristics of the pedigreed Merino sheep-breeding sovkhos 'Sovetskoye runo'," Sbornik nauch. rabot (Vsesoyuz. rauch.-issled. in-t ovtsevodstva i kozovodstva), Issue 17, 1948, p. 56-86, - Bibliog: 11 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

STAKAN, G. A.

Mbr., Hosp. Therapeutics Clinic, Naval Med. Acad., -c1948-. "Blood Indicators of Local
Kurd Sheep of Uzbekistan-Dzhaidara," Dok. AN, 61, No. 5, 1948; " Vitamin C in the Duodenal
Content," Klin. Med., 26, No. 7, 1948.

STAKAN, G. A.; PASTUKHOV, S. F.

Feeding and Feeding Stuffs

Increasing wool clip and wool quality of fine-wooled sheep of different physical types. Sov. zootekh. 7 no. 9, 1952

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

USSR/Farm Animals. Sheep and Goats. Q

Abs Jour: Ref Zhur-Biol., No 17, 1958, 78750.

Author : ~~Stakun, G. A.~~ Guglya, Z. I.

Inst : All-Union Scientific Research Institute of Sheepbreeding
and Goatbreeding.

Title : Experimental Breeding Work on the Sheep-Breeding Farm
of the "Kuban" Sovkhoz.

Orig Pub: Byul. nauchno-tekhn. inform. Vses. n.-i. in-t ovtsevodstva
i kozovodstva, 1956 (1957), No 3 (25), 20-29.

Abstract: No abstract.

Card : 1/1

USSR/Farm Animals - Small Horned Stock

Abs Jour : Ref Zhur - Biol., No 15, 1958, 69333

Author : Stakan, G.A.

Inst :

Title : Forage Base and System of Maintenance of Sheep under
Conditions of Extensive Tillage of Land

Orig Pub : Ovtsevodstvo, 1957, No 6, 33-36

Abstract : With a limited number of sown pastures, the most rational way of utilizing them is stall-feeding of mown grass to animals from cribs in a camp. With this mode of feeding, the utilization of green fodder mass attained 87-88% as against 46-76% when grazing on a standing green mass, and if leftovers were dried for hay, then utilization equalled 100%. Mixture of oats and barley increased the productiveness of forage lands by 41%, corn by 58%, Sudan grass by 39%, its aftermath by 36% and alfalfa aftermath by 48%. -- A.D. Musin

Card 1/1

STAKAN, G.A.; SOSKIN, A.A.; VOVCHENKO, F.Ya.

Method of rating herd rams by the quality of the progeny. Izv.
Sib. otd. AN SSSR no.11:103-113 '61. (MIRA 15:1)
(Rams)

STAKAN, G.A.; SOSKIN, A.A.

Effect of environmental conditions on the inheritance of
characters. Izv. Sib. otd. AN SSSR no.12:145-148 '62.
(MIRA 17:8)

1. Institut tsitologii i genetiki Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

STAKAN, G.A.; SOSKIN, A.A.; VOVCHENKO, F.Ya.

Heritability of some characters in fine-wool sheep. Biul.
MOIP. Otd. biol. 68 no.6:122-132 N-D '63. (MIRA 17:1)

STAKAN, G.A.; SOSKIN, A.A.; VOVCHENKO, F.Ya.

Heritability of live weight in fine-wool sheep. Izv. SO AN SSSR
no.8 Ser. biol.-med. nauk no.2:109-116 '64 (MIRA 18:1)

1. Institut tsitologii i genetiki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

STAKAN, G.A.; SOSKIN, A.A.; MIKORO, Z.S., otv. red.; GREBENNIKOVA,
M.M., red.

[Heritability of economically useful indices in fine-wool
sheep] Nasleduemost' khoziaistvenno poleznykh priznakov u
tonkorunnykh ovets. Novosibirsk, Redaktsionno-izdatel'skiy
otdel Sibirskogo otd-niia AN SSSR, 1965. 158 p.
(MIRA 18:9)

SPARKANOV, A.V., SHCHERBOLEVA, V.A.

Chimneys

Chimney installation by rising. Biul. stroi. tekhn. 9 no. 6 (1952)
Inzh.; Trest Uralstal'konstruktsiya

SO: Monthly List of Russian Accessions, Library of Congress, August 195²1, Uncl.

STAKANOVA, Ye.P.

Flotation of antimony ores. Obog.rud. 4 no.3:3-5 '59. (MIRA 14:8)

(Flotation) (Antimony ores)

STAKANOVA, Ye.P.

Depression of fluorite in the flotation of molybdenum ores.
Obog. rud 5 no.1:49 '60. (MIRA 14:8)
(Flotation--Equipment and supplies)
(Molybdenum ores)

STAKENAS, A.

Apropos of the treatment of prostatic adenoma. Sveik. apsaug.
9 no.2:23-27 F'64.

1. Respublikine Siauliu ligonine. Vyr. gydytojas: K.Knizkevicius.

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VANAG, G.Ya.; STAKEVICH, E.I.; GREN, E.Ya.

Imins of di- and poly-ketones. Part 3: Benzalindandione. Zhur.ob.
khim. 27 no.10:2733-2736 0 '57. (MIRA 11:4)

1.Latviyskiy gosudarstvennyy universitet.
(Indandione)

STAKEVICH, O.F.

Application of N.S. Kurnakov's law to binary systems on a powder
compact base. Trudy Khim.-met. inst. Sib. otd. AN SSSR no. 14:11-15
'60. (MIRA 14:10)
(Powder metallurgy)

BOCHAROV, F.; DOBRA, A.; ZAYTSEV, N.; KALUTSKIKH, N.; KOMOGORTSEV, N.;
KOPANITSA, Ya.; MIKHAYLENKO, I.; PLIKHIN, P.; PODZHAROV, P.;
RUZOV, M.; SEMENOV, N.; ~~STAKHANOV, A.~~; USKOV, A.

Foma Evgen'evich Tiurin; an obituary. Mast. ugl. 7 no.11:32 N '58.
(MIRA 11:12)

(Tiurin, Foma Evgen'evich, 1898-1958)

STAKHANOV, A.

Heavy duty machinery. NTO 3 no. 1:51-53 Ja '61. (MIRA 14:2)

1. Predsedatel' Luganskogo oblastnogo pravleniya Nauchno-Tekhnicheskogo obshchestva gornoye.
(Lugansk Province--Coal mining machinery)

~~STAKHANOV, A.A.~~
STAKHANOV, A.A.; OSOKIN, M.F., redaktor; KRASIL'SHCHIK, S.I., redaktor;
MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Reference booklet on safety measures for operators of automatic cranes in loading and unloading lumber] Pamiatka po tekhnike bezopasnosti dlia mashinistov avtokranov na pogruzke i razgruzke lesa. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekure, 1954. 36 p.

(MIRA 8:4)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva SSSR. Otdel tekhniki bezopasnosti i promyshlennoy sanitarii.
(Lumber--Transportation) (Cranes, derricks, etc.)

STAKHANOV, Aleksei Grigor 'evich, 1905-

(We shall restore the Donets Basin) Moskva, Gospolitizdat, 1944. 62 p.
(50-411491)

HD9555.R83D688

STAKHANOV, Aleksandr Ivanovich, gornyy inzh.; POLYAKOV, Ye.M., gornyy
inzh.; ALEKSEYEV, N.M., tekhn.red.

[Fight against the formation of dust in mines of the Lugansk
Economic Council] Opyt bor'by s pyleobrazovaniem na
shakhtakh Luganskogo sovnarkhoza. Lugansk, Luganskoe obl.
pravlenie nauchno-tekhn.gornogo ob-va, 1960. 34 p. (MIRA 14:11)

(Lugansk Province--Mine dusts)

STAKHANOV, A.I., inzh.

Eliminate causes of accidents in mines of the Lugansk Economic Council. Bezop. truda v prom. 4 no. 5:3-6 My '60. (MIRA 14:5)

1. Nachal'nik upravleniya Luganskogo okruga Gosgortekhnadzora USSR.
(Lugansk Province—Coal mines and mining—Safety measures)

STAKHANOV, A.I., inzh.; POLYAKOV, Ye.M., inzh.

New means for dust control in coal mines. Bezop.truda v
prom. 4 no.8:23-25 Ag '60. (MIRA 13:8)

1. Upravleniye Luganskogo okruga Gosgortekhnadzora USSR.
(Voroshilovgrad Province--Mine dusts--Safety measures)

GRIGOR'YEV, V.L., gornyy inzh.; SHEVCHENKO, V.F., gornyy inzh.;
STAKHANOV, A.I., gornyy inzh.

Application of the method of roof caving without the use of
battery stulls in the Donets Basin mines. Ugol' Ukr. 6
no.2:14-16 F '62. (MIRA 15:2)
(Donets Basin--Mine timbering)

STAKHANOV, A.I., inzh.; GRIGOR'YEV, V.L., kand.tekhn.nauk, starshiy
nauchnyy sotrudnik; SHEVCHENKO, V.F., inzh., starshiy nauchnyy
sotrudnik

Longwall mining with roof caving on stope timber. Bezop.truda
v prom. 6 no.6:26-27 Je '62. (MIRA 15:11)

1. Nachal'nik Upravleniya Luganskogo okruga Komiteta po nadzoru
za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru
pri Sovete Ministrov UkrSSR (for Stakhanov). 2. Institut gornogo
dela im. A.A.Skochinskogo (for Grigor'yev). 3. UkrNIIGidrougol'
(for Shevchenko).

(Donets Basin--Coal mines and mining)

STAKHANOV, A.I.; ROPAKOV, S.A.

Analysis of the causes of industrial injuries in mines of
the Lugansk Economic Council in 1960. Nauch. trudy KHGI 11:
45-49 '62. (MIRA 16:11)

KEKIN, A.A.; SHILENKOV, V.N.; V'YUGOV, G.I.; STAKHANOV, A.N.; SOLONITSYN, B.P.

Effect of air pressure in boreholes on pneumatic hammer performance.
Izv. AN Kazakh. SSR. Ser. gor dela no.2:89-92 '58.

(MIRA 12:10)

(Boring machinery)

KEKIN, A.A.; SHILENKOV, V.N.; STAKHANOV, A.N.; SOLONITSYN, B.P.; V'YUGOV, G.I.

Dust suppression with a water and air mixture during pneumatic
impact boring. Izv. AN Kazakh. SSR. Ser. ger. dela no.1:104-108
'59. (MIRA 12:9)

(Boring) (Drilling fluids)

KEKIN, A.A.; TSOY, S.; STAKEANOV, A.N.; SOLONITSYN, B.P.

Dust removal in underground mechanical ore crushing plants. Izv. AN
Kazakh. SSR. Ser.gor.dela no.2:88-95 '60. (MIRA 13:10)
(Mine dusts) (Dust--Removal)

STAKHANOV, A.N.

Dust measuring devices and dust control in West German mines.
Trudy Inst. gor. dela AN Kazakh. SSR 6:211-216 '60.

(MIRA 13:12)

(Germany, West--Mine dusts)

EGKIN, A.A.; SOLONITSYN, B.P.; STAKHANOV, A.N.

Methods of mine dust control and their classification. Trudy
Inst. gor. dela AN Kazakh SSR 4:148-157 '60. (MIRA 13:9)
(Mine dusts) (Dust collectors)

KEKIN, A. A.; TSOY, S.; STAKHANOV, A. N.

Determining the dust content of air by the weighing method.
Izv. AN Kazakh. SSR. Ser. gor. dela no. 1:79-85 '61. (MIRA 15:2)
(Mine dusts)

KEKIN, A.A.; TSOY, S.; STAKHANOV, A.N.

Determination of the statistical pressure in the operation of a
dust collector consisting of a venturi with a cyclone. Izv.AN
Kazakh.SSR.Ser.gor.dela no.2:85-90 '61. (MIRA 15:2)
(Dust collectors)

KEKIN, A.A.; TSOY, S.V.; STAKHANOV, A.N.

Results of studies of a dust collector with preliminary coagulation
of dust. Trudy Inst.gor.dela AN Kazakh.SSR 8:137-149 '61.
(MIRA 15:4)

(Dust collectors)

KEKIN, A.A., kand.tekhn.nauk; TSOY, S., kand.tekhn.nauk; STAKHANOV, A.N.

Dust collector made of a Venturi tube and a cyclone. Bor'ba s sil.
5:195-202 '62. (MIRA 16:5)

1. Institut gornogo dela Kazakhskoy SSR.
(Dust collectors)

KEKIN, A.A.; TSOY, S.; STAKHANOV, A.N.

Results of studying cloth filters for dust removal. Trudy Inst.
gor. dela AN Kazakh. SSSR 10:157-167 '63. (MIRA 16:8)

(Filters and filtration) (Mine dusts--Removal)

KEKIN, A.A.; STARHANOV, A.N.; NENASHEV, N.V.

Establishing the optimal size of the drops in hydraulic dust
removal. Trudy Inst.gor.dela AN Kazakh.SSR 15:73-76 '64.

Effect of the water flow on the efficient performance of water
curtains. Id.:77-83 (MIRA 18:2)

KOLONIYSTO, A.P., and. s. Makokhoryayevykh nauk: STYKHANOV, A.P., 1958;
CHUCHUKIN, P.P., mekhanik

Mechanizing the spreading of fertilizers while pricking out
vegetable seedlings. Izbor. i rate. 3 no. 4:17-18 Ap '58. (MIRA 11:7)
(Fertilizer spreaders)
(Vegetable gardening)

SOV/112-57-9-18492

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 9, p 57 (USSR)

AUTHOR: Sherskov, V. Ya., Stakhanov, G. A.

TITLE: Experience with Deep Water-Table Lowering at the Construction Site of the Kakhovka Hydroelectric Station (Opyt glubinnogo vodoponizheniya na stroitel'stve Kakhovskoy GES)

PERIODICAL: V sb.: Opyt iskusstv. ponizheniya urovnya grunt. vod na str-ve gidroelectrostantsiy, M.-L. Gosenergoizdat, 1956, pp 30-38

ABSTRACT: Bibliographic entry.

Card 1/1

STAKHANOV, I.D., inzh.

Designing barrel-shaped teeth for gear clutches. Konstr.i
tekh.mash.mosk.195-193 '61. (MIRA 15:2)
(Clutches)

STAKHANOV, I.D., inzh.

Toothed clutch with a elliptic dog and an air-chamber sealing.
Vest.mashinostr. 42 no.8:12-15 Ag '62. (MIRA 15:8)
(Clutches (Machinery))

Stakhanov, I.P.

Distr: 4E3d

3952

ELASTIC SMALL ANGLE SCATTERING OF NEUTRONS
BY HEAVY NUCLEI. V. S. Barashenkov, I. P. Stakhanov,
and Yu. A. Aleksandrov. Soviet Phys. JETP 5, 144
(1957) Aug.

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RML 11

STAKHANOV, I.P.

AUTHOR: BARAŠENKO, V.S., STACHANOV, I.P., ALEKSANDROV, JU.A. PA - 2076
TITLE: Elastic Small Angle Scattering of Neutrons by Heavy Nuclei.
 (Uprugoe rassejanie neutronov tjaželymi jadrami na malye
 ugly, Russian)
PERIODICAL: Zhurnal Eksperimental'noi i Teoret. Fiziki, 1957, Vol 32, Nr 1,
 pp 154-156 (U.S.S.R.)
 Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT:

The latest works on the scattering of fast electrons by hydrogen confirm the conclusions of the meson theory concerning the extensive distribution of the electric charge in the nucleon. This charge distribution is due to a "cloud" of charged mesons round a central nucleus. Under the influence of an exterior field the distribution of electric charge in the nucleon will change. Above all, a polarization of the homologously charged meson cloud and of the nucleus in the nucleon can be expected and the neutron will then probably receive an induced electric dipole moment $\vec{p} = \alpha\vec{E}$, a fact which becomes apparent by an abnormal behavior of the differential cross section of the scattering of neutrons by heavy nuclei into small angles. If it is assumed in first rough approximation that the meson field of a neutron in an exterior electric field $\vec{E} = kV/z$ (with $\mathcal{E} = 1$) can be

Card 1/3

PA - 2076

Elastic Small Angle Scattering of Neutrons by Heavy Nuclei.

described by the statistical equation:

$[\nabla^2 + (e/c\hbar)^2 E^2 z^2] \varphi - (mc/\hbar)^2 \varphi = (4\pi/c) g \delta(\vec{r})$, it applies for the induced electric dipole moment that

$$\vec{p} = - \frac{e^2 \kappa^2}{\hbar^2 c^2} E \int z^2 \frac{\exp(-2mcr/\hbar)}{r^2} d^3 x + O(E^2).$$

Therefrom it further results that

$$\alpha(\hbar c/g^2) = (e \hbar / mc^2)^2 \pi / 3m = 2,1 \cdot 10^{-41}.$$

In consequence of electric polarization the neutron is subjected to an additional scattering of the COULOMB field of the nucleus. Polarization scattering attains its maximum if the collision parameter is restricted by the condition $R \ll a$.

Here $R = 1,5 \cdot 10^{-13} A^{1/3}$ denotes the radius of the nucleus and

$a = 0,53 \cdot 10^{-8} Z^{1/3}$ the radius of the electron cloud. For the energy of the interaction between neutron and nucleus it is in this case true that

$$H(\vec{r}) = U(\vec{r}) - \mu (1Z/2r^3) (\hbar e/mc)^2 \sigma [\vec{r} \nabla] - \alpha Z^2 e^2 / r^4.$$

The first term denotes the pure nuclear forces and the second

Card 2/3

creasing θ .

ASSOCIATION: Not given
PRESENTED BY:

APPROVED FOR RELEASE: 08/25/2000
AVAILABLE: Library of Congress

CIA-RDP86-00513R001652810015-2"

Card 3/3

STAKHANOV, I. P.

20-1-16/42

AUTHORS: Stupochenko, Ye, V., Stakhanov, I. P.

TITLE: On the Theory of Unsteady Discontinuity Points in **Relaxing** Media (K teorii nestatsionarnykh razryvov v relaksiruyushchikh sredakh).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 1, pp. 65 - 67 (USSR)

ABSTRACT: On the occasion of the medium passing through the surface of discontinuity in supersonic flows conditions with incomplete statistical equilibrium develop for the description of which additional parameters must be introduced. In this case the system of the equations of the hydrodynamics must be completed by equations which describe the relaxation processes. It is referred to preliminary papers on unidimensional steady flows (reference 1, 2). The following case is of theoretical interest: With sufficiently small intensity of the shock wave the propagation velocity of this shock wave (with regard to the undisturbed medium) is smaller than the velocity c_{∞} of the high frequency sound. From simple considerations on the properties of the Hugoniot (Gugoniot)-curve. the following can be concluded: In this case there is no surface of discontinuity and the condition of the medium is continuously modified in a certain transition area. But the possibility of initial conditions is given, in which in the **relaxing** medium a surface of discontinuity of small intensity is developing. The present paper analytically investigates the be-

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On the Theory of Unsteady Discontinuity Points in Relaxing Media.

20-1-16/42

haviour of such a point of discontinuity and the process of its decay in the area of the continuous transition. First the solutions of the hydrodynamical equations completed by the equations of the relaxation processes are given. The authors here investigate a certain disturbance satisfying initial conditions. These conditions correspond to a disturbance which propagates in a resting medium in a cylindrical tube. The course of the computation (complex integration) is followed here step by step. A disturbance, which decreases according to an exponential law (here given), propagates in the medium at the velocity c_{∞} . Then the disturbance is investigated in a long distance from the plunger. The analysis here discussed was carried out within the frame of the linearized equations for extremely small disturbances. In a plain supersonic flow there are steady discontinuous solutions with whatever small intensity of the point of discontinuity. The lack of such solutions is only characteristic for unidimensional solutions. There are 2 figures, and 3 Slavic references.

ASSOCIATION:

Moscow State University im. M.V. Lomonosov (Moskovskiy gos - udarstvennyy universitet im. M. V. Lomonosova).

PRESENTED:

June 3, 1957, by M. A. Leontovich, Academician

SUBMITTED:

May 5, 1957

AVAILABLE:

Library of Congress

Card 2/2

^{AV}
STUPICHENKO, E. V., STACHANOV, I. P.

"On the Theory of Second Order Acoustic Effects in Media with Relaxation."

paper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - ⁴~~2~~ Jun 58.

STANIMIR
STUPOCHENKO, Ye. V., and I. P. STAKHANOV.

The Relaxation theory of Nonlinear Effects."

report presented at the 6th Sci. Conference on the Application of Ultrasound in
the Investigation of Matter, 3-7 Feb 1958, organized by Min of
Education RSFSR and Moscow Oblast Pedagogic Inst. im N. K. Krupskaya.

STAKHANOV I. P.
PRÉDVODITEL'Y, Aleksandr Savvich, prof.; STUPOCHENKO, Yevgeniy Vladimirovich,
prof.; SAMUYLOV, Yevgeniy Vasil'yevich; STAKHANOV, Igor' Pavlovich;
PLESHANOV, Aleksandr Sergeyeovich; ROZHDESTVENSKIY, Igor' Borisovich;
ZHELENKOVA, Ye.V., tekhn. red.

[Tables of thermodynamic functions of the air (for temperatures from
6,000° to 12,000° K and atmospheric pressure from 0.001 to 1,000)]
Tablitsy termodinamicheskikh funktsii vozdukh (dlya temperatur ot
6000° do 12000° K i davlenii ot 0,001 do 1000 atmosfer). Moskva,
Izd-vo Akad. nauk SSSR, 1957. 301 p. (MIRA 11:3)

1. Vychislitel'nyy tsentr laboratorii fiziki goreniya energeticheskogo
instituta im. G.M. Krzhizhanovskogo Akademii nauk SSSR i
Fizicheskii fakul'tet Moskovskogo gosudarstvennogo universiteta im.
M.V. Lomonosova (for Stupochenko, Samuylov, Stakhanov, Pleshanov,
Rozhdestvenskiy)
(Thermodynamics--Tables, calculations, etc.)

10(2)

PHASE I BOOK EXPLOITATION

80V/2162

Akademiya nauk SSSR. Energeticheskiy institut.

Fizicheskaya gazodinamika (Physical Gas Dynamics) Moscow, 1959. 167 p. 3,000 copies printed.

Resp. Ed.: A.S. Predvoditelev, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: R.I. Kosykh; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This collection of articles is intended for scientific workers, instructors, engineers, and advanced vuz students specializing in the field of gas dynamics and the physics of combustion.

COVERAGE: This collection of articles is concerned with the results of work performed at the Power Institute, Academy of Sciences, USSR, during the years 1952-1955. Problems of gas dynamics and thermodynamic properties of air at high temperatures (up to 12,000° K) in a wide range of pressures from 0.001 to 1,000 atm. are discussed. Methods are presented for calculating a normal shock with

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SOV/2162

Physical Gas Dynamics

consideration of the dissociation and ionization of air. Some of the papers of the collection deal with hydrodynamic phenomena associated with electric discharges in water. References follow most of the papers.

TABLE OF CONTENTS:

Stupochenko, Ye. V., I.P. Stakhanov, Ye. V. Samuylov, A.S. Pleshanov, and I.B. Rozhdestvenskiy. Thermodynamic Properties of the Air in the Temperature Range Between 1,000 and 12,000° K and the Pressure Range Between 0.001 and 1,000 atm 3
Quantum-mechanical methods of statistical physics along with spectroscopic data are used as a basis for the theoretical calculation of the thermodynamic properties of gaseous systems and mixtures of gases, such as air, which at high temperatures are capable of reacting chemically with one another. The problem is divided into two parts: 1) calculation of the thermodynamic functions of air from the thermodynamic parameters of its components, and 2) calculation of the composition of air and the thermodynamic functions of the mixture. The paper includes methods for calculating statistical sums for atoms, molecules, and their ions. Determination of the effect of ionization, cou-

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Physical Gas Dynamics

lomb interaction, and the degeneration of the electron gas on the magnitudes of the thermodynamic functions, calculation formulas for enthalpy, and other thermodynamic aspects are covered.

Stupochenko, Ye.V., B.B. Dotsenko, I.P. Stakhanov, and Ye. V. Samuylov. Methods for Calculating the Kinetic Coefficients of Air at High Temperatures 39

This paper presents theoretical calculations of the kinetic coefficients of air, particularly the viscosity and thermal-conductivity coefficients, for the temperature range between 2,000 and 8,000° K and pressures between 0.001 and 1,000 atm. In determining the viscosity of air in connection with molecular dissociation, consideration is given to the interaction between the molecules and the viscosity of the molecular component of the mixture as well as to the gas kinetic diameters of atoms and the viscosity of the atomic component of the air. In studying the thermal conductivity in a binary mixture of chemically reacting gases, the heat flow is first determined for a binary gas mixture and then for a reacting gas mixture under equilibrium conditions. Calculated

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Physical Gas Dynamics

SOV/2162

curves are presented for the coefficients of viscosity and thermal conductivity as functions of the temperature with the pressure as parameter.

Samuylov, Ye. V. Effect of Internal Degrees of Freedom of Particles on the Transfer Coefficients for a Multicomponent Gas Mixture 59

This paper makes use of the probability of various types of collisions of molecules to determine the coefficients of thermal conductivity and viscosity of multi-component gas mixtures. The solution of the system of generalized kinetic equations is performed by the method of Enskov.

Rozhdestvenskiy, I.B. Thermodynamic and Gas-dynamic Properties of the Air Flow Behind a Normal Shock With Consideration of the Dissociation and Ionization of Air 70

The range of conditions considered includes flow velocities between 4,500 and 15,500 m/sec and pressures ahead of the shock between 1 and 0.00001 atm. These conditions lead to temperatures behind the shock of up to 12,000° K and pressures up to 1,000 atm. The air ahead of the shock is assumed to be an equal mixture of reacting gases subject to Clapeyron's equation of state. Numerical

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B019/B067

10.7200

AUTHORS: Stupochenko, Ye. V. and Stakhanov, I. P.

TITLE: Equations of Relaxation Hydrodynamics

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4,
pp. 782 - 785

TEXT: The setting-up time τ of the local thermodynamical equilibrium widely varies in different processes. If the hydrodynamical quantities strongly change during the time τ the relaxation processes must be changed in the equations of hydrodynamics. The authors set up the following fundamental equations of relaxation hydrodynamics:

$$dq/dt + q \operatorname{div} \vec{v} = 0 \quad (3); \quad q d\vec{v}/dt + \operatorname{grad} p = 0 \quad (3'); \quad ds/dt = \frac{K}{T} (\epsilon_{\xi})^2 \quad (3'');$$

$$d\xi/dt = -K \epsilon_{\xi} \quad (3''').$$

Here, pressure p and temperature T are determined from the equations $p = q^2 \epsilon_{\xi}$, $T = \epsilon_{\xi}$. Furthermore, the following relation holds between the phenomenological coefficient K and τ : $\tau = 1/K \epsilon_{\xi}$. The properties of system (3) are then studied. First, it is shown that $\operatorname{curl} \vec{v}$


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Equations of Relaxation Hydrodynamics

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B019/B067

changes with time. The authors demonstrate that the differential equation $\frac{\partial}{\partial t}(\partial^2 \vec{v} / \partial t^2 - c_\infty^2 \Delta \vec{v}) + \partial^2 \vec{v} / \partial t^2 - c_0^2 \Delta \vec{v} = 0$ (6) describes the propagation of weak disturbances in a relaxing medium. Similar equations may be obtained for other hydrodynamical quantities. The differential equation (16)

$\frac{\partial f_0}{\partial q} \rho \operatorname{div} \vec{v} = \frac{1}{\tau} \xi^{(1)}$ is then obtained by methods of nonlinear mechanics and statistical physics with an accuracy to the terms with μ^2 for (3'''); $\mu = \nu \tau / L$. The equation of motion $\rho d\vec{v}/dt = -\operatorname{grad} p_0 + \operatorname{grad}(\xi \operatorname{div} \vec{v})$ is obtained

in second approximation from this differential equation. Here, 

$\xi = -(\partial p / \partial \xi)_{\xi=f_0} \tau \frac{\partial f_0}{\partial q} \rho$ and $\xi = \tau \rho (c_\infty^2 - c_0^2)$, which quantities have the

significance of a second coefficient of viscosity. The survey given under the condition that $\mu \ll 1$ is not concluded and equations in a better approximation may be obtained in this manner. There are 6 references: 5 Soviet and 1 US.

Card 2/3

54680

Equations of Relaxation Hydrodynamics

S/020/60/134/004/003/023
B019/B067

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: March 17, 1960, by G. I. Petrov, Academician

SUBMITTED: March 15, 1960

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Card 3/3

84824

10.5800 also 2207

S/020/60/134/005/007/023
B019/B060

AUTHORS: Stakhanov, I. P. and Stupochenko, Ye. V.

TITLE: Structure of Mach Lines in Relaxing Media

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5,
pp. 1044 - 1047

TEXT: The authors studied, from the viewpoint of relaxation hydrodynamics, the Mach lines observable in a flow around a cone (approach angle 0).

Proceeding from flow equation $1(\partial/\partial x)\{(M_{\infty}^2 - 1)\partial^2 v/\partial x^2 - \partial^2 v/\partial y^2\} + (M_{\infty}^2 - 1)\partial^2 v/\partial x^2 - \partial^2 v/\partial y^2 = 0$ (1) of relaxation hydrodynamics they state that similar equations may be set up for the disturbances of other hydrodynamic quantities (pressure, temperature, etc). The following considerations are restricted to $M_{\infty} > 1$, and solution

$$v(x,y) = (au/2\pi i) \int \frac{\exp[i\xi(x' - c(\xi)y')]}{\xi} d\xi \quad (6)$$

is written down. $c(\xi)$ is defined as follows:

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Structure of Mach Lines in Relaxing Media

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$c(\xi) = \sqrt{\frac{i(M_{\infty}^2 - 1)\xi + (M_o^2 - 1)}{i\xi + 1}}$, $x' = x/l$, $y' = y/l$. Characteristic (9):
 $x - \sqrt{M_{\infty}^2 - 1} y = 0$ is found to separate the disturbed flow from the undisturbed one, and the behavior of the solution along the characteristic (9) is examined. The following relation is obtained for the solution on characteristic (9):

$$v(x,y) = \begin{cases} 0 & \text{at } y > \frac{1}{\sqrt{M_{\infty}^2 - 1}} x \\ \text{ave}^{-\lambda^2 y/l} I_0(z) & \text{at } y < \frac{1}{\sqrt{M_{\infty}^2 - 1}} x \end{cases} \quad (10)$$

X

$\lambda^2 - \frac{1}{2} \frac{M_o^2 - M_{\infty}^2}{\sqrt{M_{\infty}^2 - 1}} > 0$. The Bessel function $I_0(z)$ in the vicinity of

characteristic (9) is found to be about equal to unity. Thus a discontinuity appears near the cone vertex, whose intensity decreases ex-

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84824

Structure of Mach Lines in Relaxing Media

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ponentially on a propagation along the characteristic. In regions being fairly remote from characteristic (9), $v(x,y) = 0$, and $v(x,y) = au$ (13), respectively, for solution (6) if the same inequalities hold for y as in (10). This approximate equation from relaxation hydrodynamics coincides with the analogous equation from equilibrium hydrodynamics. If, in the expansion of $c(\xi)$ in a series, the terms taken into account are by one more than in the derivation of (13), one obtains:

$$v(x,y) = \frac{\alpha u}{2} \left\{ \Phi \frac{x - \sqrt{M_0^2 - 1} y}{\sqrt{\beta^2} y} + 1 \right\} \quad (14).$$

Equation (14) determines the disturbances observable along the direction $y = x/(\sqrt{M_0^2 - 1})$, viz., the Mach lines. The steady disturbance of a steady flow is examined in the final part. There are 4 references: 3 Soviet and 1 US.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: March 17, 1960, by G. I. Petrov, Academician

SUBMITTED: March 15, 1960

Card 3/3

24.2120 (1163, 1532, 1538)
10.2000

28773

S/057/61/031/010/006/015
3104/3125

26.730
AUTHORS:

Lobedev, S. Ya., Staviaskiy, Yu. Ya., Bondarenko, I. I.,
Mayev, S. A., Stskhanov, I. P., and Stumbur, E. A.

TITLE: Plasma oscillations in ion-beam neutralization

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 10, 1951, 1202-1208

TEXT: The consequences of the condition that the total ion current in a plasma vanishes have been studied. Electrons and ions are assumed to be emitted orthogonally from a conductor surface at the velocities v_{10} and v_{20} . Equations of motion and continuity for electrons and ions are studied. For the potential φ in the interval $0 \ll x \ll \infty$, the condition that electrons and ions do not reverse the direction of their motion reads: $d\varphi/dx = 0$. (The conductor surface lies in the $x = 0$ plane.) The inequality $v_{10} \ll 2v_{20}$ holds for the velocities. If $d\varphi/dx \neq 0$ on the conductor surface, the admissible velocity range, in which no reversal of the direction of motion will occur, is smaller. If the electron and ion currents in plasma do not compensate each other, a steady, periodically distributed

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Plasma oscillations in...

28773 2/057/61/021/010/006/015
B104/B125

charge will occur in the plasma. The period of charge distribution, the velocity and the acceleration of electrons in this optically periodic charge are studied. Theoretical results were experimentally verified by measuring the electromagnetic radiation emitted by the electrons while traveling through the periodic charge. The experimental setup is shown in Fig. 2. Positive cesium ions reach the operating part from the incandescent tungsten plate 5. Grid 3 accelerates the ions and simultaneously emits electrons that neutralize the positive ions. The potential of the ion source relative to the earth ranged between 0 and 10 kv. Grid 3 had a zero potential. The emission of electromagnetic waves was measured with a radiotechnical installation. Very high-frequency oscillations were produced between 80 and 120 Mc/sec, and between 126 and 200 Mc/sec as dependent on the current density and ion energy. Experimental results are in good agreement with theoretical data. Professor A. I. Leypunskiy is thanked for his interest, and S. I. Chubarov for advice. There are 4 figures and 11 references: 6 Soviet and 5 non-Soviet. The three most important references to English-language publications read as follows: J. Feinstein et al., Phys. Rev., 82, 405, 1951; H. K. Sen, Phys. Rev., 92, 849, 1955; P. L. Auer et al., J. Appl. Phys., 30, no. 2, 161, 1959.

Card 2/3

СТАКХАНОВ, И. Р.

AID Nr. 981-2 3 June

PROBLEMS OF HYDRODYNAMICS OF RELAXING MEDIA (USSR)

Stakhanov, I. R., and Ye. V. Stupochenko. Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, Mar-Apr 1962, 3-20.

S/207/63/000/002/001/025

Some general properties of equations of motion of the thermodynamically non-equilibrium fluid are studied, including the possibility of transition to equilibrium hydrodynamics in the limiting case of small relaxation time. The law of propagation of small disturbances in relaxing media is studied and two different cases are considered: 1) weak shock wave and 2) steady two-dimensional supersonic flow past a slender wedge at zero incidence. It is shown that, with respect to the order of "relaxation length," the propagation occurs along the characteristics of the equations of relaxation hydrodynamics. Therefore, weak discontinuities whose directions do not coincide with usually observed Mach lines occur near the obstacles. A detailed study is presented of the variation of the disturbance character downstream from its origin, and an equation describing the law of propagation is established.

[ANB]

Card 1/1

DOIL'NITSYN, Ye.Ya.; NOVIKOV, A.G.; STAKHANOV, I.P.; STEPANOV, A.S.

Temperature relaxation of a neutron gas. Atom. energ. 15 no.3:
255-258 S '63. (MIRA 16:10)

(Neutrons—Spectra)

ACCESSION NR: AP3014914

S/0207/63/000/005/0003/0010

AUTHORS: Karmazin, V. P. (Moscow); Stakhanov, I. P. (Moscow)

TITLE: Calculation of the volt-ampere characteristics of a thermoelectric converter at working diffusion conditions

SOURCE: Zhurnal prikl. mekhaniki i tekhn. fiziki, no. 5, 1963, 3-10

TOPIC TAGS: thermoelectric converter electrical characteristic, thermoelectric converter volt characteristic, thermoelectric converter diffusion condition, thermoelectric converter

ABSTRACT: A cesium thermionic converter with electron mean free path l_e much less than interelectrode spacing has been considered. The interelectrode gas is assumed to be weakly ionized at 2000K. The emitted electrons and the surface contact ionized cesium ions are assumed to have a Maxwellian distribution. The plasma electron gas is also assumed to have a different temperature T_e than the cathode, whereas the ion temperature is the same as the cathode surface. Expressions for the ion and electron currents at the cathode are obtained for both negative and positive electrode potentials, and the sheath structures are discussed for $\omega \gg \nu$ where

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ACCESSION NR: AP3014914

$$\omega = (U_0 / I_0) \sqrt{M/m}$$

These are substituted into the three-component diffusion equations for ions and electrons where average values are used for ion and electron temperatures, transforming the differential equations to algebraic equations and solving them in successive approximations. The volt-ampere characteristics of the cell are then determined numerically for various plasma temperatures, cathode work functions, and values of ω . Orig. art. has: 33 equations, 7 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 26Apr63

DATE ACQ: 27Nov63

INCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 001

Card 2/2

BONDARENKO, I. I.; STAGHANOV, I. P.

"Theoretical and experimental investigation of thermionic method of direct heat to electricity conversion."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

L 14036-55 EWT(1)/EWP(a)/EPA(s)-2/SWG(k)/EWI(m)/EPI(c)/EED(k)-2/Y/EWP(t)/EWP(k)/
EPA(bb)-2/EWP(b)/EWA(h)/FS(b) Pz-5/Pf-4/Pr-4/Pt-10/Peb/Pk-4 IJP(c)/ASD(m)-3/SSD/
ACCESSION NR: AP4045315 SSD(b)/ASD(d)/AFETR/AS(mp)-2/ S/0048/64/028/009/1530/1533
ASD(a)-5/AEDC(a)/AFWL/ESD(gs)/ESD(t) JHB/JD/TT/WW/ST

AUTHOR: Gus'kov, Yu. K.; Lebedev, M. A.; Stakhanov, L. P.

TITLE: Effect of a longitudinal magnetic field on a low-voltage arc (in cesium va-
por) [Report, Tenth Conference on Cathode Electronics held in Kiev from 11 to
18 Nov 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 9, 1964, 1530-1533

TOPIC TAGS: electric arc, cesium, thermionic converter 25

ABSTRACT: In high-power thermionic converters, the heavy current may induce a
transverse magnetic field which can significantly reduce the output power. It has
been suggested (A. Schock, J. Appl. Phys. 31, 1978, 1960) that a longitudinal mag-
netic field might be applied to the converter to compensate for the transverse
field. However, there are no reports in the literature on any experimental studies
of the effect of a longitudinal field on the parameters of arc-type converters.
The present paper gives the results of investigation of the effect of a longitudinal
field H on a low-voltage arc in cesium vapor. A diagram of the thermostated,
solenoid-jacketed arc chamber used in the experiments is given in the text. Longi-
tudinal fields from zero to 430 oe were applied. A set of curves showing the

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variation of the discharge current at different Cs vapor pressures with H is presented; these were obtained at a cathode temperature of 800C and an anode temperature of 350C. At low vapor pressures (5×10^{-4} mm Hg) the current first increases with H, goes through a maximum, then falls off; at higher pressures (5×10^{-2} to 1.0 mm Hg) no initial rise is evidenced, instead, the current decreases linearly with H. Other figures show the variation of I with H at different cathode temperatures at $p = 5 \times 10^{-4}$ mm Hg, and the variation of I_H/I_0 (I_0 is the zero field value of the current) and of the relative arc potential with H (both the last two are characterized by almost straight lines with negative slope). An interpretation of the observed effects is proposed. It would appear that, in general, the effect of a longitudinal magnetic field is not favorable. "The authors are grateful to the late Prof. I. I. Bondarenko for his constant interest in the work and useful discussions." Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, EM

NO REF SOV: 001

OTHER: 002

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L 10610-65 EWT(1)/EWG(k)/EPA(sp)-2/EPF(n)-2/EPR/EPA(w)-2/T/EEC(b)-2/EWA Ps-4/
Pu-4/Pz-6/Pab-24 IJP(c)/AEDC(b)/SSD/ASD(f)-2/AFWL/ASD(p)-3/AFETR/ASD(d)/RAEM(a)/
ASD(a)-5/ESD(gs)/ESD(t) AT

ACCESSION NR: AP4045316

S/0048/64/028/009/1534/2536

AUTHOR: Mayev, S.A.; Stakhanov, I.P.TITLE: Use of the Grad method for design calculations for thermoelectronic energy converters [Report, Tenth Conference on Cathode Electronics held in Kiev, 11-18Nov63]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.9, 1964, 1534-1536

TOPIC TAGS: thermoelectronic converter, plasma, kinetic gas theory, free path, theoretical physics

ABSTRACT: To solve the kinetic equation by the method of H.Grad (Comm.pure and ap. math.2,331,335,1949) one expresses each distribution function as the product of a Maxwell distribution function and an infinite series of symmetrized Hermite polynomials in the velocity components. The kinetic equation then reduces to an infinite set of differential equations for the expansion coefficients. These are to be rendered tractable by neglecting the higher order expansion coefficients and perhaps by making special assumptions concerning the remaining ones. This method is applied to the problem of a plane diode with the assumption that the temperature is uniform in the interelectrode region and is, consequently, discontinuous at the electrodes.

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