SALAM, A.

PHASE I BOOK EXPLOITATION SOV/5982

International Conference on High-Energy Physics. 9th, Kiyev, 1959.

Devyataya mezhdunarodnaya konferentsiya po fizike vysokikh energiy, Kiyev 15-25 iyulya 1959 g. (Ninth International Conference on High-Energy Physics. Kiyev, July 15-25, 1959), Moscow, 1961. 739 p. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Mezhdunarodnyy Soyuz chistoy i prikladnoy fiziki.

Contributors not mentioned.

PURPOSE: This book is intended for nuclear physicists.

COVERAGE: The collection contains 30 scientific articles presented at the 9th International Conference on High-Energy Physics, held in Kiyev from 15 to 25 July 1959. The articles presented relate mainly to the progress in nuclear physics achieved in 1959. Subjects discussed are the production of

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[illegible] International Conference (Cont.) 207/[illegible]

[illegible], [illegible] [illegible] accompany individual articles.

[illegible] OF CONTENTS:

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SALAM, A.

Elementary particles. Usp.fiz.nauk 74 no.1:141-160 My '61.
(MIRA 14:6)
(Particles (Nuclear physics))

SALAMAKA, Andrzej, inz.

New meters produced by the Lumel Works. Wiad elektrotechn 31 no. 5:111-112 My '63.

SOKOLOV, V.N.; SALAMAKHIN, A.D.

Heat transfer from the gas-liquid system to the wall of a heat-exchange element under bubbling conditions. Zhur.prikl. khim. 35 no.5:1022-1026 My '62. (MIRA 15:5)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Heat exchangers)

SOKOLOV, V.N.; SALAMAKHIN, A.D.

Heat transfer between gas-liquid systems and the heat exchange element. Zhur.prikl.khim. 35 no11:2570-2573 N '62. (MIRA 15:12)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Systems (Chemistry)) (Heat—Transmission)

S/0207/64/000/004/0155/0160

ACCESSION NR: AP4044738

AUTHORS: Mol'nikova, N. S. (Moscow); Salamakhin, T. M. (Moscow)

TITLE: On the solution of point explosion in different gases

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1964, 155-160

TOPIC TAGS: adiabatic expansion, detonation wave front, shock wave, nonsteady flow, self similar flow

ABSTRACT: An approximate method for the solution of nonsimilar explosion of gases from a point charge in planar, cylindrical, and spherical symmetry ($\nu = 1,2,3$) was considered for various values of the adiabatic index γ ((1.2 to 7). The analysis is based on the hypothesis that at any given time t the density distribution in coordinate space can be expressed as a power law. The equations of motion for an inviscid non-heat conducting gas are written with three boundary conditions on the shock front: $v(r_2, t) = v_2$, $\rho(r_2, t) = \rho_2$, $p(r_2, t) = p_2$

$$v_2 = \frac{2c}{\gamma+1}\left[1 - \frac{a_1^2}{c^2}\right], \qquad \rho_2 = \frac{\gamma+1}{\gamma-1}\rho_1\left[1 + \frac{2}{\gamma-1}\frac{a_1^2}{c^2}\right]^{-1}$$

$$p_2 = \frac{2\rho_1 c^2}{\gamma+1}\left[1 - \frac{\gamma-1}{2\gamma}\frac{a_1^2}{c^2}\right], \qquad c = \frac{dr_2}{dt}$$

where

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and r_2 - radius of shock wave, a_1 - speed of sound in undisturbed gas. The density ρ is expressed by $\rho = \rho_2 (r / r_2)^{\alpha(t)}$ where $\alpha(t) = \nu(\rho_2 / \rho_1 - 1)$.

The solution of the resulting hydrodynamic equations leads to the following expressions across the shock

$$\frac{p}{p_2} = 1 + \frac{H_1 \rho_2 r_2}{p_2 (\alpha + 2)} \left[1 - \left(\frac{r}{r_2}\right)^{\alpha+2}\right] - \frac{\rho_2 r_2}{p_2 (\alpha + 2)} \left(\frac{r}{r_2}\right)^{\alpha+2} \left(H_2'' + H_2' \ln \frac{r}{r_2}\right) \ln \frac{r}{r_2}$$

$$\frac{v}{v_2} = \left[1 - H_1 \ln \frac{r}{r_2}\right] \frac{r}{r_2}, \qquad \frac{\rho}{\rho_2} = \left(\frac{r}{r_2}\right)^{\alpha(t)}$$

$$\left(H_1 = \frac{r_2}{\rho_2 v_2} \frac{d\rho_2}{dt}, \ \alpha(t) = \nu\left(\frac{\rho_2}{\rho_1} - 1\right)\right)$$

Consequently, if $r_2(t)$ is known from experimental measurements, the above formula gives a complete solution of the charge explosion problem. If r_2 is not known a priori, the above equation must be solved simultaneously with an integral energy conservation equation. This leads to a complicated expression for $R(q)$ ($q = a_1/c$, $R = r/r_0$) which must be solved numerically. Otherwise, an approximate expression can be derived of the form $q = C_0 R^{\nu/2} \left[\cos \frac{\pi q}{2}\right]^n \quad \left(n = \frac{\nu + 1}{\nu + 2}\right)$.

ACCESSION NR: AP4044738

Some of the numerical results thus obtained are given graphically for $\gamma = 1.2$, 1.4, 1.67, 2, 2.17, 3, 4, and 7. For $\gamma = 1.4$ the approximate solution is correct to within 8%. Orig. art. has: 40 equations and 3 figures.

ASSOCIATION: none

SUBMITTED: 24Feb64 ENCL: 00

SUB CODE: ME,TD NO REF SOV: 010 OTHER: 003

Card 3/3

SALAMANDRA, E. G.

"Methods of Bacteriological Investigations of the Air of Rooms and the Significance of Hemolytic Streptococcus as an Indicator of the Sanitary Condition of the Air." Sub 11 Jun 51, Second Moscow State Medical Inst imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

Salamandra, E.G.

17(2,6) SOV/16-60-3-32/37

AUTHORS: Yakhnina, N.A., Zhitkov, I.I., Morkvinova, N.N., Kuznetsova, N.I., Shaposhnikova, A.P., Shul'man, E.A., Kasatkina, K.N., Ferova, L.V., Salamandra, E.G., Sinay, A.Ya., Shevchenkovskaya, Ya.P., Shabad, A.T., Golubeva, T.V.

TITLE: The Biological Properties of Shigella Dysenteriae, Isolated From Different Clinical Forms of Dysentery. Author's Summary.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 3, pp 128 (USSR)

ABSTRACT: The authors made a study of various strains of Shig. dysenteriae isolated from patients with different clinical forms of dysentery, checking the strain's ability to cause experimental keratoconjunctivitis in guinea pigs, its virulence for mice and its sensitivity to antibiotics. No essential differences were found between the strains, which bears out the great part played by the state of the macroorganism in determining the nature of the clinical course in dysentery.

Card 1/2

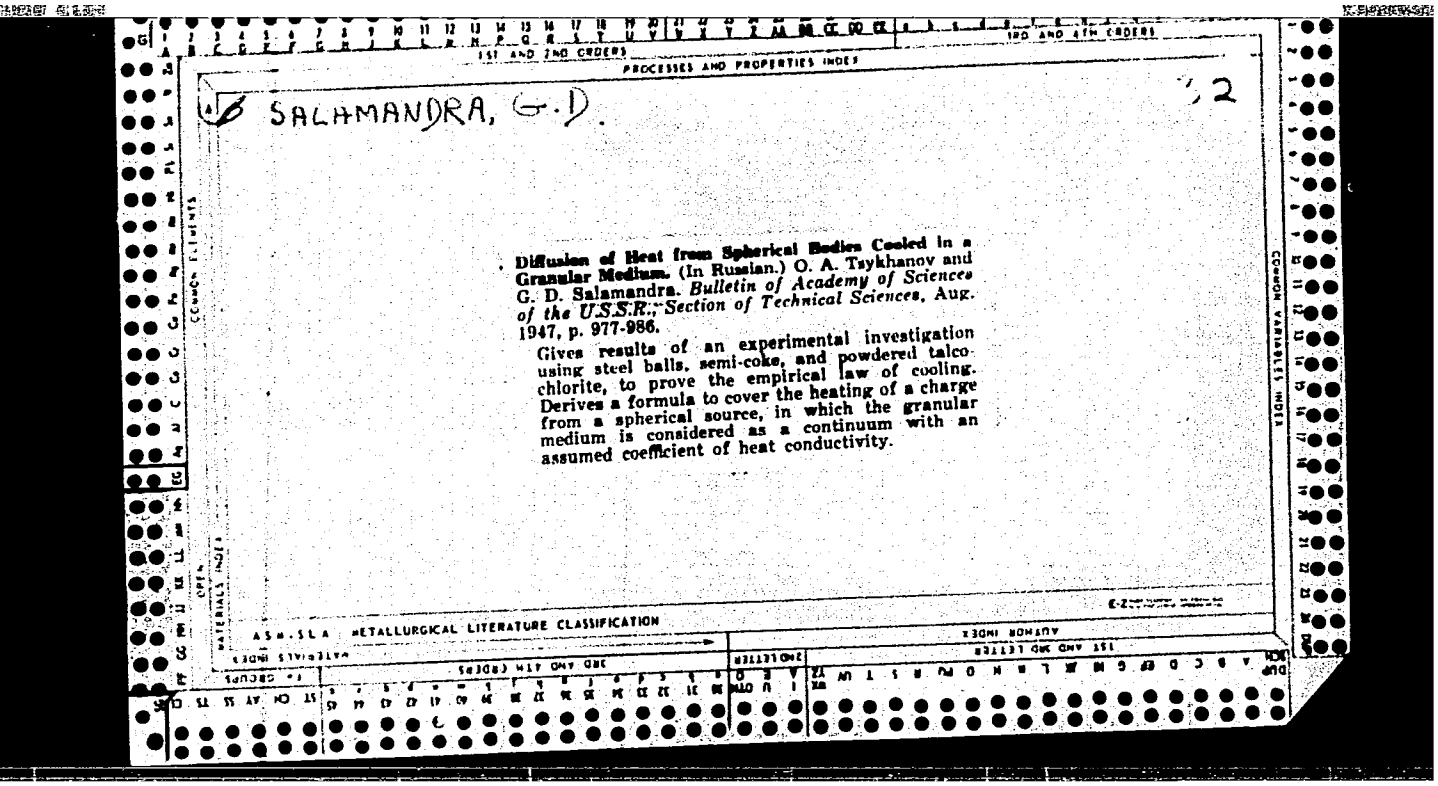
ASSOCIATION: Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR (Institute of Epidemiology and Microbiology imeni Gamaleya of the AMN, USSR); Moskovskaya gorodskaya i rayonnaya sanitarno-epidemiologicheskaya stantsiya (Moscow City and District Sanitary and Epidemiological Station).

SUBMITTED: December 24, 1958

Card 2/2

YAKHNINA, N.A.; SHATROV, I.I.; MORDVINOVA, N.B.; KUZNETSOVA, N.S.; SHAPOSHNIKOVA, R.P.; SHUL'MAN, E.A.; KAZACHINA, K.N.; PEROVA, L.V.; SALAMANDRA, E.G.; SINAY, A.Ya.; SHERISHEVSKAYA, Ye.F.; SHABAD, A.T.; GOLUBEVA, T.V.

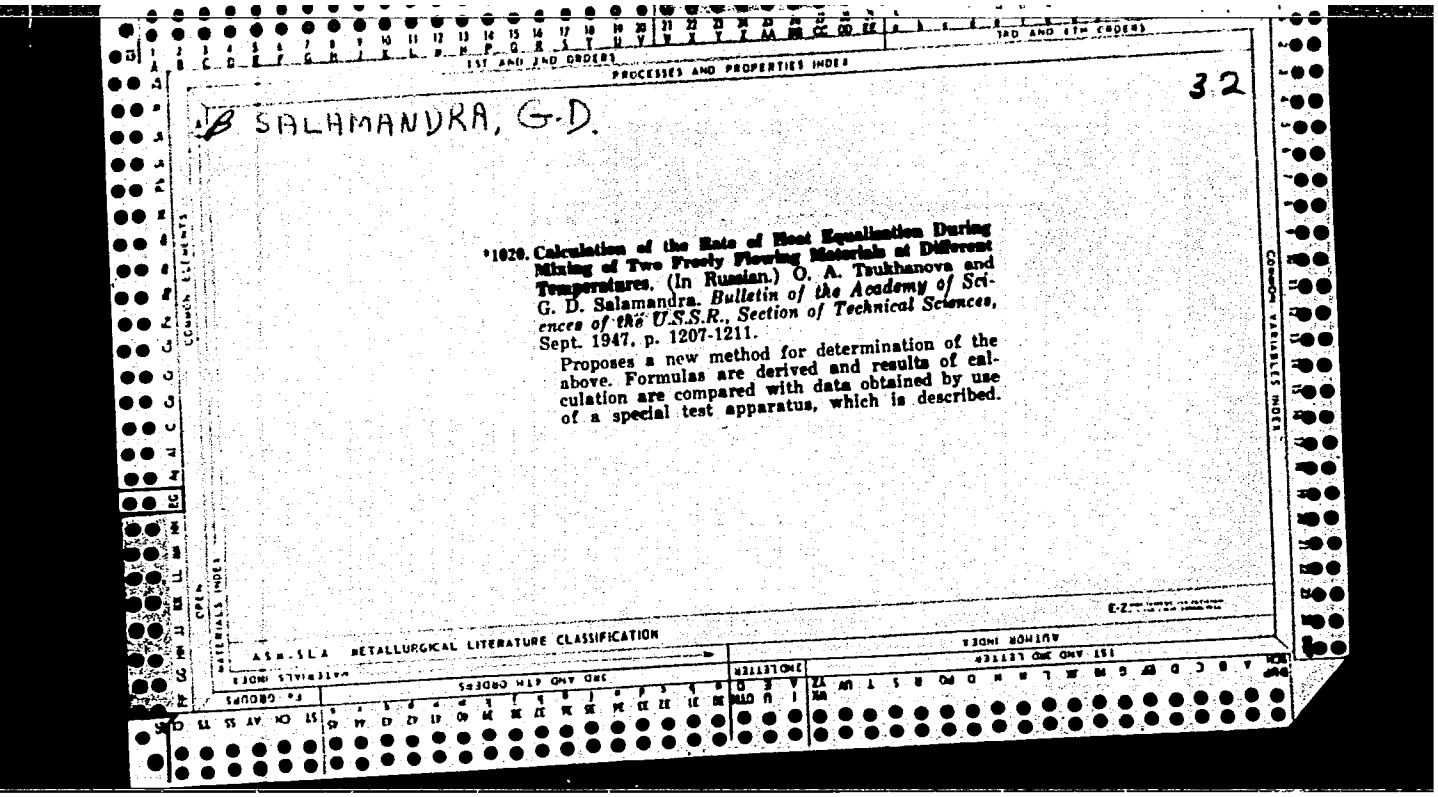
Biological properties of causative agents isolated in various clinical forms of dysentery. Zhur. mikrobiol. epid. i immun. 31 no.3:128 Mr '60. (MIRA 14:6)
(SHIGELLA PARADYSENTERIAE)



SALAMANDRA, G.D.

Diffusion of Heat from Spherical Bodies Cooled in a Granular Medium. (In Russian.) O. A. Tsykhanov and G. D. Salamandra. *Bulletin of Academy of Sciences of the U.S.S.R., Section of Technical Sciences*, Aug. 1947, p. 977-986.

Gives results of an experimental investigation using steel balls, semi-coke, and powdered talco-chlorite, to prove the empirical law of cooling. Derives a formula to cover the heating of a charge from a spherical source, in which the granular medium is considered as a continuum with an assumed coefficient of heat conductivity.



PROCESSES AND PROPERTIES INDEX

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B SALAMANDRA, G.D.

*1020. **Calculation of the Rate of Heat Equalization During Mixing of Two Freely Flowing Materials at Different Temperatures.** (In Russian.) O. A. Tsukhanova and G. D. Salamandra. *Bulletin of the Academy of Sciences of the U.S.S.R., Section of Technical Sciences,* Sept. 1947, p. 1207-1211.

Proposes a new method for determination of the above. Formulas are derived and results of calculation are compared with data obtained by use of a special test apparatus, which is described.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

SALAMANDRA G.D.

AUTHOR SALAMANDRA G.D. and NABOKO I.M. PA - 2553

TITLE Determination of Fuel Dispersion by means of capture on the Soot Covered Plate. (Ulavlivaniye na plastinku, pokrytuyu sloyem sazhi, kak metod opredeleniya krupnosti raspylivaniya topliva.- Russian.)

PERIODICAL Zhurnal Tekhn. Fiz. 1957, Vol 27, Nr 3, pp 614 - 618 (U.S.S.R.)

Received: 4/1957 Reviewed: 5/1957

ABSTRACT Since the process of the formation of traces was not with by other authors who studied the method of capture the authors thoroughly investigated a with domain of layer thicknesses of soot. In order to come as close as possible to reality, they were carried out with very small particles. Their size was 0,3 - 0,8 mm. The arrangement and the carrying out of the experiment are decribed. The photographs were taken with a high-speed camera and a cine-camera. Measuring errors were less than $\pm$ 4 μ. The experiments with the thin soot layers (smaller than the diameter of the drop) showed that the traces of the drops had one diameter and that they satisty Stocke's ralation quite satisfactority. The second group of drops with a diameter of 400 - 800 μ and a velocity of up to 5 m/sec. showed traces with two diameters, an inner and an

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Determination of Fuel Dispersion by means of capture on the Soot Covered Plate.

outer one. The third group of drops with a diameter of 250-400 μ and a velocity of 5-7 m/sec. on the soot layer of a thickness that was 1,5 to 2 times the diameter of the drop, on the occasion of sinking into the layer showed traces the measurements of which were the same as those of the drop. The essential factors of the process of trace formation are the velocity of the drop and the relative thickness of the soot layer. The number We is apparently not sufficient for the characterization of the process of trace formation on the soot layer. (With 2 illustrations)

ASSOCIATION: Energetic Institute Krzhizhanovskiy of the Academy of Science of the USSR.
SUBMITTED: July 3rd, 1956.
PRESENTED BY: -
AVAILABLE: Library of Congress.

PA - 2554

AUTHOR SALAMANDRA G.D. and NABOKO I.M.

TITLE High-Speed Microphotographing of Dispersed Liquid Drops during the Flight. (Skorostnoye mikrofotografirovaniye kapel' raspylennoy zhidkosti v polete.- Russian.)

PERIODICAL Zhurnal Tekhn. Fiz. 1957, Vol 27, Nr 3, pp 619 - 623 (U.S.S.R.)

Received: 4/1957 Reviewed: 5/1957

ABSTRACT The authors described how to determine the size of the particles of a dispersed fuel by means of high-speed microphotography of the liquid drops during flight. As it is difficult to produce a bright flash of light with a duration of less than 10^{-6} sec., the athempt was made to use a light source with a duration of 10^{-6} - 10^{-5} sec. in order to obtain clear microphotos of the fuel drops by taking the pictures not on a steady film but on one that moves in the direction in which the pictures shift. The device is described by means of which it was possible to take 7-8 microphotos 5 times enlarged during one exposure. In consisted of an electric and an photographic part and an apparatus which serves for the investigation of the disruptive strength of cables served as a high-frequency source. The current was rectified by means of a Renotron according to a oneperiodic scheme. One of the electrode of the discharger was made of Tungsten, the other of brass. Hydrogen was used as filling gas. Behind the ocular of the microscope a photo-

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PA - 2554

High-Speed Microphotographing of Dispersed Liquid Drops during the Flight.

recorder was mounted (a drum of a diameter of 19 cm). On its surface the light - sensitive film was fixed. Recording frequency was determined by the linear velocity of the film motion. Drop velocity was 16 m/sec for the five times enlarged picture. The authors were able to state that not all drops that were within the range of sight moved with the same velocity in spite of the relatively small range of sight which was 5 x 5 mm for the five times enlarged pictures.
(With 3 illustrations)

ASSOCIATION: not given.
PRESENTED BY: -
SUBMITTED: -
AVAILABLE: Library of Congress.

CARD 2/2

10(2) PHASE I BOOK EXPLOITATION SOV/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. Kosyn; 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 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:

AVAILABLE: Library of Congress

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9-21-59

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SOV/120-59-2-37/50

AUTHORS: Salamandra, G.D., Naboko, I.M. and Sevast'yanova, I.K.

TITLE: A Pulsed Source of Frequently Repeating Flashes of Light (Impul'snyy istochnik chasto povtoryayushchikhsya vspyshek sveta)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 2, pp 124-127 (USSR)

ABSTRACT: Demountable pulsed lamps of original construction are described. Using these lamps, cinephotography may be carried out at 100,000-150,000 frames/sec. The exposure does not exceed 5 x 10-7 sec. The construction of a linear source is shown in Fig 1a. The discharge takes place between the tungsten electrode, 9, and the brass plate, 10. The length of the spark gap is 20 mm. The tungsten electrode is connected to the lining of the condenser, 4, via the contact ring, 14. The high voltage is applied via the terminals, 2 and 12. The lamp was filled with hydrogen at a pressure of one atm. In the visible part of the spectrum the emission of the lamp is continuous in the interval 4000-6500 Å. The ceramic condensers used had a capacity of 0,0052 μF and the working voltage was 25 kV. Hydrogen is

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A Pulsed Source of Frequently Repeating Flashes of Light

preferred to xenon because deionisation is faster in hydrogen. The length of the lamp is about 30 cm. The lamps have been used to investigate combustion processes in explosive mixtures. The basic circuit for synchronising the explosion with the illuminating flashes is shown in Fig 2. A battery of condensers C_1, whose capacity is 1.05 μ F, is charged up to 22-25 kV. The spark gap A is so chosen that the system is in an "expectation" state. The discharge is initiated by the shutter plate, moving in the direction of the arrow, which closes the primaries of the transformers T_1 and T_2. When the primary of the transformer T_1 is closed a spark is produced across the spark gap A. The condenser battery C_1 then discharges through R_1 and charges up the ceramic condenser of the lamp. The repetition frequency of the flashes depends on the magnitude of R_1. This frequency does not remain constant: the greater the ratio of the capacity of C_1 to that of the lamp condenser the smaller is the change in the frequency and the greater is the total number of flashes in the series. In the case when this ratio is

A Pulsed Source of Frequently Repeating Flashes of Light

about 200 the total number of illuminating flashes is about 500. The closure of the secondary of the transformer T_2 fires the explosive mixture to be investigated. By adjusting the position of contacts, the flashes may be synchronised with a particular part of the explosive process. Typical photographs are shown in Figs 3-5. A.S. Predvoditelev and Kh.S. Valiyev are thanked for interest and assistance respectively.

Card 3/3 There are 5 figures and 9 references, of which 4 are Soviet and 5 are English.

ASSOCIATION: Energeticheskiy institut AN SSSR
(Power Institute, Ac. Sc. USSR)

SUBMITTED: April 13, 1958

PHASE I BOOK EXPLOITATION SOV/4913

Salamandra, Genriyetta Davydovna, Tat'yana Valerianovna Bazhenova, Sergey Grigor'yevich Zaytsev, Pem Ivanovich Soloukhin, Ideya Mikhaylovna Naboko, and Irina Konstantinovna Sevast'yanova.

Nekotoryye metody issledovaniya bystroprotekayushchikh protsessov i ikh primeneniye k izucheniyu formirovaniya detonatsionnoy volny (Some Research Methods for Transient Processes and Their Application to the Study of Detonation-Wave Development) Moscow, Izd-vo AN SSSR, 1960. 91 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut imeni G. M. Krzhizhanovskogo.

Resp. Ed.: A. S. Predvoditelev, Corresponding Member, Academy of Sciences USSR.; Ed. of Publishing House: Ya. A. Klimovitskiy; Tech. Ed.: V. Karpov.

PURPOSE: This book is intended for engineers and scientists engaged in developing research techniques and performing experimental

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studies in the field of shock and detonation phenomena in gasdynamic processes.

COVERAGE: The book contains the results of original research on methods for investigating transient combustion processes and on the development of detonations under various gasdynamic conditions. The book reviews circuits of spark discharge apparatus and circuits for synchronizing a series of illuminating flashes with the process being investigated. Pulse light sources operating in the regime of frequently repeated flashes are described. A description is also given of simple apparatus designed by the authors for obtaining series of Schlieren photographs with a frequency of 50,000 to 100,000 frames per second for exposures of the order of 10^{-7} sec permitting easy synchronization of the exposure with any gasdynamic process. The construction is shown and an analysis is given of the operation of a piezoelectric pressure transducer which permits reproducing without distortions the shape of a pressure pulse in the case of gasdynamic disturbances.

With the aid of the investigation methods developed, a detailed study was undertaken of the mechanism of a detonation occurring during propagation of a flame in a tube and of supersonic flow of gas mixtures capable of reaction in a shock tube. The first chapter was written by G. D. Salamandra; in it a detailed review of various methods used to produce spark photographs of transient processes is given. Certain difficulties which had to be met in the course of the investigations are described and methods for surmounting them are demonstrated. The second chapter, written by S. G. Zaytsev, describes methods for measuring rapidly varying pressures, developed by the Power Engineering Institute of the Academy of Sciences USSR for investigation of the state of gas in shock tubes. The methods have found wide application. The third chapter presents the results of the investigations conducted with the aid of the methods discussed on the mechanism of the development and propagation of detonation waves under various hydrodynamic conditions. These investigations were recently completed at the laboratory for combustion physics by T. V. Bazhenovaya, G. D. Salamandra, R. I. Soloukhniy, S. G. Zaytsev, I. M. Naboko, and I. K. Sevost'yanovaya. Of particular interest

are those investigations which pertain to the conditions of compatibility of the hydrodynamic state of the medium and the chemical process. A. S. Predvoditelev, Professor, Corresponding Member of the Academy of Sciences USSR, wrote the preface. There are 79 references: 41 Soviet (3 of which are translations), 22 English, 13 German, and 3 French.

TABLE OF CONTENTS:

23480

S/123/61/000/009/023/027
A004/A104

11.8300

AUTHORS: Bazhenova, T. V., and Salamandra, G. D.

TITLE: Detonation wave formation during the gas combustion in pipes

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1961, 20, abstract 9I163 (V sb. "3-e Vses. soveshchaniye po teorii goreniya. T. I.", Moscow, 1960, 175-177)

TEXT: With the aid of the schlieren-photography method the authors investigated the transition to detonation during the flame propagation in pipes. The tests were carried out with a stoichiometric hydrogen-oxygen mixture in 2 m pipes of rectangular (36 x 36 mm) and circular (42 mm in diameter) cross sections. It is shown that the transition to detonation is taking place by a continuous acceleration of the flame in a medium set in motion and heated by impact waves arising before the flame front. The detonation takes place in a gas moving at a velocity of 900 m/sec at 525°K and a pressure of 7 kg/cm^2.

I. Barskiy

[Abstractor's note: Complete translation]

Card 1/1

S/170/60/003/009/004/020
B019/B060

AUTHORS: Salamandra, G. D., Sevast'yanova, I. K.

TITLE: An Apparatus for High-speed Spark Photography

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 9, pp. 31-36

TEXT: The apparatus for high-speed spark photography described here allows as much as 100,000 pictures to be taken per second. The work was conducted at the Laboratoriya fiziki goreniya Energeticheskogo instituta AN SSSR (Laboratory for Combustion Physics at the Institute of Power Engineering of the AS USSR) under the supervision of A. S. Predvoditelev, Corresponding Member of the AS USSR. The apparatus consists of a high-voltage rectifier, an oscillatory circuit, a pulse tube, a photo-recorder, and a synchronizer. The oscillatory circuit is described with the aid of the circuit diagram shown in Fig. 1. Much space is devoted to the description of the pulse tube used as light source.(Fig. 2). The light-flashes produced therewith have a maximum duration of $5 \cdot 10^{-7}$ seconds. The power

of the pulse tube can be regulated. The photorecorder is a drum rotating around its longitudinal axis and having a cinematographic film fastened onto it. Depending on the type of processes examined, different synchronization methods are used. Piezoelectric pressure feelers were used in the study of shock waves, which performed the synchronization of the photography with the process. As an example, Fig. 4 shows the picture, taken with the described apparatus, of a flame propagation after an interaction thereof with a shock wave. There are 4 figures and 4 references: 3 Soviet and 1 German.

SUBMITTED: June 9, 1960

28355 S/124/61/000/007/027/044
A052/A101

11.8300

AUTHORS: Bazhenova, T. V., Salamandra, G. D.

TITLE: Detonation wave formation at the combustion of gas in tubes

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 7, 1961, 77, abstract 7B527 (V sb. "3-ye Vses. soveshchaniye po teorii goreniya. T. 1". Moscow, 1960, 175-177)

TEXT: The process of transition of slow combustion in a tube into detonation was investigated. Two tubes were used: one of a square section 36 x 36 mm and the other tube, a round one, 42 mm in diameter. The tubes were filled with a stoichiometric oxygen-hydrogen mixture. The time base of the process and a series of schlieren-photographs of the flame front and of shock waves are given. In the first stage following the ignition the flame front is moving with acceleration and gives rise, before itself, to a series of disturbances cumulating in a shock wave. This wave however has a small amplitude ($M \sim 1.5$) and is not in a position to ignite the mixture. As the flame propagates and the volume of the burnt out mixture increases, the expulsive action of the mixture diminishes and the flame is slowed down. Thereafter the front takes an irregular form, its

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surface increases, which leads to a new acceleration of the front. In this stage the flame front sends forth many compressive disturbances and the shock wave forms right ahead of the flame front. The flame front and the shock wave form a single set moving with the same velocity and almost undivided in space. Behind the front a long tail extends in which the afterburning takes probably place. A calculation has shown that detonation takes place in a gas moving with a velocity of ~900 m/sec and heated to 525°K at a pressure of ~ 7 at. The flame moves in the unburnt gas with a velocity near to the sound velocity in it, i.e., ~ 700 m/sec.

Yu. R.

[Abstracter's note: Complete translation]

SALAMANDRA, G. O.

BAZHENOVA, T. V. - "Evaluation of time of relaxation of carbon dioxide dissociation according to shock tube experiments", and "Determination of the dissociated CO_2 flow condition after the normal shock on the rarefaction wave arising while flowing around a protuberant angle"

GOLDENBERG, S. A. - "Ignition in the flow"

KHITRIN, Lev Nikolayevich - "Diffusion effect on ignition characteristics of gas mixtures ignited by a heated surface"

KNORRE, V. G. and KOZLOV, G. I. - "One-impulse shock tube investigation of the kinetic thermal decomposition of methane"

KOZLOV, G. I. - "Calculation of normal rate of flame propagation of methane and some other hydrocarbons"

LOBASTOV, U. S., and BAZHENOVA, T. V. - "Research on absorption of radio waves by air following the shock wave"

NABOKO, I. M. - "The problem of ignition in supersonic gas flow decelerated at an obstacle"

SALAMANDRA, G. D., and SEVASTYANOVA, I. K. - "Amplification of the shock waves during transition through the flame front", and "Formation of weak shock waves before the flame front and their role in organizing the process of explosive mixture burning in tubes."

Reports to be submitted for the 9th Intl. Symposium on Combustion, Ithaca, New York 27 Aug - 1 Sep 1962.

All affiliated with Inst. of Energetics im. G. M. Krzhizhanovskiy, Moscow.

ACCESSION NR: AR3006254 S/0124/63/000/007/B022/B023

SOURCE: RZh. Mekhanika, Abs. 7B106.

AUTHOR: Salamandra, G. D.; Bazhenova, T. V.; Sevast'yanova, I. K.

TITLE: The role of weak shock waves in the formation of detonations

CITED SOURCE: Tr. Odessk. un-ta. Ser. Fiz. n., v. 152, no. 8, 1962, 91-94

TOPIC TAGS: shock wave, detonation, combustion

TRANSLATION: The authors studied the process of transition of slow combustion into a detonation. The experiments were carried out in pipes of circular cross-section 14 to 42 mm in diameter and of square cross-section (36.5 mm x 36.5 mm). The combustible mixtures were of the hydrogen-oxygen, methane-oxygen, and acetylene-oxygen type, since in these mixtures shock waves are formed a short distance from the point of inflagration. The combustive priming was at the closed end of the pipe. Observations were made of the propagation of the flame and the process of accumulation of weak perturbations proceeding from the flame into a shock wave. The process was photographically scanned and also recorded by high-speed photography with a frequency of 100,000 frames per second. Determinations were made of the distances

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ACCESSION NR: AR3006254

from the point of inflagration to the point of impact wave formation for various mixtures and pipes of various diameters; the results were tabulated and graphed. For a given mixture, the distance increases linearly with increase of the pipe diameter. The experimental values are in good agreement with the calculated ones obtained by the method of characteristics on the basis of the experimental law of flame motion. It is shown that the formation of the shock wave does not lead to an immediate transition from slow burning to a detonation. The formation of the detonation wave takes place much later and is related to the interaction of the flame with the shock waves arising in front of the flame front in the pre-detonative stage. Yu. R.

DATE ACQ: 08Aug63 SUB CODE: PH ENCL: 00

Card 2/2

ACCESSION NR: AP4038004 S/0170/64/000/005/0096/0099

AUTHOR: Salamandra, G. D.; Fedoseyeva, I. K.; By*kova, N. M.

TITLE: Measuring gas velocity behind a shock wave

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 5, 1964, 96-99

TOPIC TAGS: gas flow velocity, shock wave, subsonic gas flow, shock wave propagation, flow velocity measurement, gas flow

ABSTRACT: A method has been developed for measuring subsonic gas velocities behind a shock wave in a shock tube. The gas velocity was measured by two independent methods: by measuring the velocity of thermal inhomogeneities formed by spark discharge in the gas moving behind a shock wave, and by determining the velocity of sound waves generated by spark discharge in the gas flow behind the wave. The high-pressure chamber of the shock tube was filled with a stoichiometric hydrogen-oxygen mixture at a pressure of 61318 n/m^2, and the low-pressure chamber, with nitrogen at 78647 n/m^2.

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ACCESSION NR: AP4038004

The distance between the contacts for spark discharge was selected in such a way that the "traces" would appear in the medium already brought in motion by the shock wave. By processing of time-resolved photographs, the motion of the gas and sound waves propagating co- or countercurrently to the flow can be determined, and the gas velocity calculated. The experiments have shown that gas velocities determined by the two methods differ by 2—3%. Gas velocities in the range from 173 to 286 m/sec were measured by the methods behind a shock wave propagating at M = 1.72. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo, Moscow (Power Engineering Institute)

SUBMITTED: 16Feb63 DATE ACQ: 09Jun64 ENCL: 00

SUB CODE: ME NO REF SOV: 005 OTHER: 006

Card 2/2

ACCESSION NR: AP4041871 S/0170/64/000/007/0047/0052

AUTHOR: Salamandra, G. D.; Fedoseyeva, I. K.

TITLE: The measurement of gas velocity in a combustible medium

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 7, 1964, 47-52

TOPIC TAGS: gas velocity, gas velocity measurement, combustible medium, optical nonuniformity, shock wave, Toepler photography, hydrogen, oxygen

ABSTRACT: A new method is described for measuring gas velocities in combustible media. It is based on the initiation of optical nonuniformities ("marks") in a stationary gas by heating small sections of the gas with thin Cr-Ni wire through which a small capacitor is discharged. The gas was set in motion by a shock wave and registered by Toepler photography, using both motion-picture and high-speed single-frame techniques. The experiments were carried out in a tube 36 x 36 mm consisting of several sections, one of which had lenses. The tube is connected to a shock tube and to the photographic equipment. The explosion (in a high-pressure chamber connected to the

Card 1/2

ACCESSION NR: AP4041871

shock tube), the discharge of the capacitors to form the "marks," and the picture taking are synchronized. The method was used to measure the gas velocity in a stoichiometric hydrogen-oxygen mixture in front of and behind the shock wave. The gas velocity in front of the flame exceeded the speed of sound. The speed of motion of the marks was lower than the speed of the flame. The method is applicable only to capacitors with discharge energies below 10 joules; at higher discharge energies, the marks become indistinct. Orig. art. has: 2 formulas and 4 figures.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo, Moscow (Power Engineering Institute)

SUBMITTED: 16Feb63 ATD PRESS: 3073 ENCL: 00

SUB CODE: ME, PR NO REF SOV: 002 OTHER: 003

Card 2/2

SALAMANDRA, Genriyetta Davydovna; PREDVODITELEV, A.S., otv. red.

[High-speed photography by the Schlieren method] Vysokoskorostnaia s"emka shliren-metodom. Moskva, Nauka, 1965. 71 p. (MIRA 18:8)

1. Chlen-korrespondent AN SSSR (for Predvoditelev).

L 34776-66 EWT(1)/EWP(m)/EWT(m) WW/JW/GD

ACC NR: AT6022665 SOURCE CODE: UR/0000/66/000/000/0203/0209

AUTHOR: Salamandra, G. D.

ORG: none

TITLE: Formation of the gas flow before the flame front

SOURCE: AN SSSR. Energeticheskiy institut. Issledovaniya po fizicheskoy gazodinamike (Studies of physical gas dynamics). Moscow, Izd-vo Nauka, 1966, 203-209

TOPIC TAGS: detonation, gas detonation, combustion, deflagration, deformation

ABSTRACT: A study was made of the deflagration to detonation transition in hydrogen-oxygen mixtures using high-speed photography (94,000 frames/sec). Data was obtained on the gas flow in the quiescent medium before the flame front by introducing artificial optical inhomogeneities into the quiescent gas mixture, and then photographing their traces. These traces were then transformed into distance vs time diagrams. Plots of the flame speed vs time were also obtained. A comparison of the experimental data with data calculated by the method of characteristics showed that the state of the gas before the flame front can be calculated by this method. It was also shown that when the flame front moves with accelerated motion, the gas velocity, density, and pressure attain their maximums very close in front of the flame front. Orig. art. has: 7 figures and 3 formulas. [PV]

SUB CODE: 21/ SUBM DATE: 31Feb66/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 5029

Card 1/1

LEVI, M.I.; SUCHKOV, Yu.G.; ORLOVA, G.M.; GERASYUK, L.G.; SHKODA, A.M.; PEYSAKHIS, L.A.; STOGOVA, A.N.; LOPATINA, N.F.; SUKHARNIKOVA, N.A.; PAK, C.Y.; MUMINOV, K.M.; DONSKAYA, T.N.; NASSONOV, L.C.; WEINBLAT, V.I.; MURTAZANOVA, E.S ; STHELMAN, A.I.; LAVRENTEV, A.F.; BASOVA, N.N.; KULOV, G.I.; GOLKOVSKY, G.M.; SALAMANOV, N.I.; ZALYGINA, N.I.

Significance of serological methods in the epizootological study of plague in wild rodents. J. hyg. epidem. (Praha) 8 no.4:422-427 '64.

1. Institute of Scientific Research, Rostov on the Don and Central Asian Institute of Scientific Research, U.S.S.R.

SALAMANOV, S. YA.; PRISADSKIY, K. M.

Tanning

New apparatus for treating hides in solutions.
Leg. prom. 12, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

SALAMANOV, S.Ya.

New equipment and technology in the Radishchev Leather Factory.
Kozh.-obuv.prom. 2 no.1:4-5 Ja '60. (MIRA 13:5)

1. Direktor kozhevennogo zavoda imeni Radishcheva.
(Leningrad--Leather industry)

SALAMANOV, S.Ya.

New developments in production techniques and equipment in the Radishchev Leather Factory. Kozh.-obuv. prom. 6 no.9; 25-26 S '64. (MIRA 17:12)

SALAMATIN, A. Ye.

Cretaceous sediments in the platform area of eastern Ciscaucasia. Trudy Groz. NII no.8:40-55 '60. (MIRA 13:8)
(Caucasus, Northern--Petroleum geology)

SALAMATIN, A.Ye.

Tectonics of the Cretaceous sediments in the Terek-Kuma Plain. Trudy VNIGNI no.32:100-107 '60. (MIRA 14:7)

1. Groznenskiy nauchno-issledovatel'skiy neftyanoy institut.
(Groznyy Province--Geology, Stratigraphic)

SALAMATIN, B.N.

Prevention and treatment of peritonitis caused by injuries of the gastrointestinal tract [with summary in English]. Khirurgiia 34 no.4:14-20 Ap '58 (MIRA 11:7)

1. Iz kliniki khirurgii dlya usovershenstvovaniya vrachey No.2 Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova (nachl'nik kliniki - prof. I.D. Zhitnyuk) i khirurgicheskogo otdeleniya bol'nitsy imeni Konyashina (glavnyy vrach V.T. Timashkova).
(GASTROINTESTINAL SYSTEM, wounds & injuries
causing peritonitis, prev. & ther. (Rus))
(PERITONITIS, etiology & pathogenesis
gastrointestinal wds. & inj., prev. & ther. (Rus))

SALAMATIN, N. S.

Tillage

New possibilities for feed production and increasing soil fertility in the southeastern drought zone. Dost. sel'khoz. No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

SALAMATIN, N. Ye., Cand Tech Sci (diss) -- "The problem of profiling the gratings of turbine profiles around which subsonic streams flow". Kazan', 1959. 11 pp (Min Higher and Inter Spec Educ RSFSR, Kazan' Aviation Inst), 200 copies (KL, No 10, 1960, 132)

SALAMATIN, N.Ye.

Designing turbine blades in a subsonic flow. Izv. vys. ucheb. zav.; av.tekh. 2 no.1:95-104 '59. (MIHA 12:3)

1.Kazanskiy aviatsionnyy institut, Kafedra aviatsionnykh lopatochnykh mashin.

(Blades)

SALAMATIN, N.Ye.

Using the electrohydrodynamic analogy method in investigating profile cascades of axial-flow turbomachines. Izv.vys.ucheb. zav.; av.tekh. 2 no.3:101-111 '59. (MIRA 12:12)

1. Kazanskiy aviatsionnyy institut. Kafedra aviatsionnykh turbomashin.
(Turbomachines--Testing) (Aerodynamics)

ACCESSION NR: AT4024393 S/2529/61/000/066/0033/0042

AUTHOR: Salamatin, N. Ye.

TITLE: The influence of the chord dimension on characteristics of turbine blade cascades

SOURCE: Kazan. oAviatsionny*y institut. Trudy*, no. 66, 1961. Aviatsionny*ye dvigateli (Aircraft engines), 33-42

TOPIC TAGS: blade, turbine blade, blade cascade, blade profile, turbine blade profile, Mach number, Reynolds number, friction loss, flow turbulence

ABSTRACT: The experimental investigations on turbine blade cascades were carried out according to agreements with the Khersonskiy sovnarkhoz (Kherson Council of National Economy). The first part of the results obtained by these investigations was earlier described in the literature by M.K.Maksutova and V.N.Zanadvorova (candidates of tech. sciences), (Issledovaniye effektivnosti korotkikh turbinny*kh polatok, "Teploenergetika," 1958, No. 1). In cooperation with these men, the second part of the results was described and discussed by the author. Five types of turbine blade cascades with blades of a different chord length were investigated. The employed blade profiles were geometrically similar to those shown in Fig. 1 of the Enclosure. The relative spacing

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ACCESSION NR: AT4024393

of blades was 0.55, and the relative length was varied from 0.5 to 3.3. It was possible to adjust the test channel height and position of the boundary layer cut-off plates on the blades (see Fig. 2 of the Enclosure). Investigation of the cascades was performed at discharge Mach numbers M_2=0.5 and 0.7, and at Reynolds numbers (1.6 to 5.4)x10^5. At M_2=0.5 the following characteristics were determined: (1) the cascade efficiency, (2) the profile efficiency n_p, (3) the wake loss coefficient ζ_w, (4) the angle of relative discharge velocity, and (5) the tangential force coefficient. At M_2=0.7, pressure distributions on cascade blades were measured. Investigation results showed that at cascades consisting of blades with a length-to-chord ratio $\geq$ 1, the profile efficiency at the middle-section of the blade drops by more than 3 % when the chord length decreases from 50 to 15 mm. A decrease of the Reynolds number from 4x10^5 to 2x10^5 led to an increase of losses not exceeding 1 %. Cascade efficiencies were consistently below profile efficiencies because of end losses. It was indicated that observed drops in profile efficiencies can be attributed to an increase of the relative surface roughness when the chord dimension decreased. Expressions were given to account for the influence of relative roughness on the friction loss coefficient ζ_f and of the trailing edge roundness radius on the wake loss coefficient ζ_w. Both of these coefficients were used in the ex-

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ACCESSION NR: AT4024393

pression for the profile efficiency $\eta_p = 1-(\zeta_p + \zeta_\omega)$. It was indicated that at a sufficiently small relative surface roughness value ($\epsilon_{Re} = \frac{5.6}{0.8}$), its influence on the profile efficiency vanishes.

It was concluded that at a given blade length, there exists an optimum value for the chord-to-length ratio, and that this ratio depends on the blade profile shape, the cascade geometry, and the flow parameters (Re, M_2, angle of incidence, and flow turbulence). At the investigated profile, and at a blade length greater than 20 mm, the optimum value for the chord length was found to be 20 mm. It was further concluded that the relative end loss coefficient (secondary losses), depends only on the blade length-to-chord ratio, the smaller loss values being at larger length-to-chord ratios. Orig. art. has: 9 figures and 3 formulas.

ASSOCIATION: Aviatsionny*y institut, Kazan (Kazan Aviation Institute)

SUBMITTED: 10Apr61 DATE ACQ: 15Apr64 ENCL: 02

SUB CODE: PR NO REF SOV: 009 OTHER: 000

Card 3/5

ACCESSION NR: AT4024393

ENCLOSURE: 01

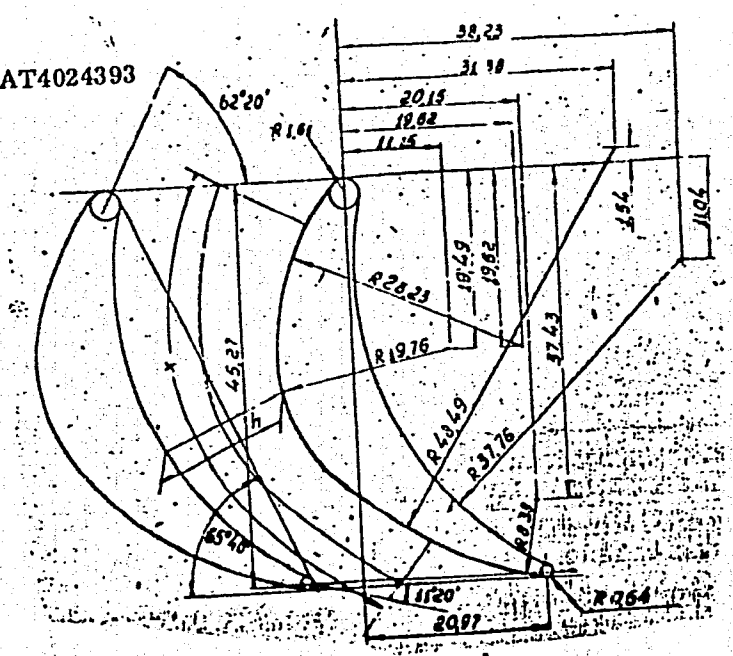

Fig. 1. Blade cascade

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ACCESSION NR: AT4024393 ENCLOSURE: 02

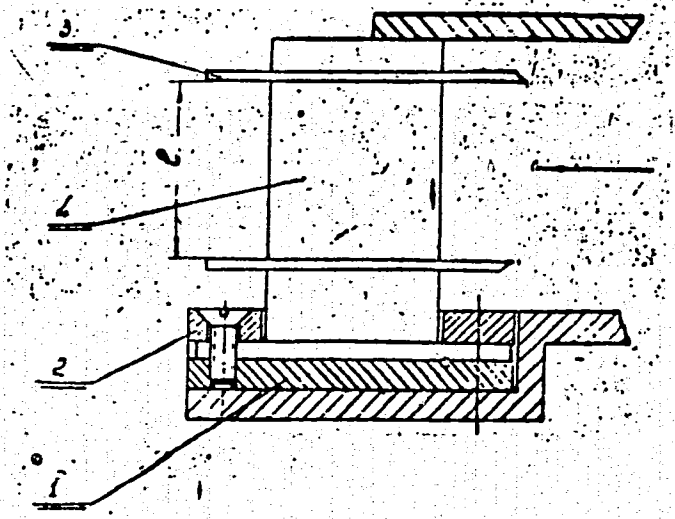

Fig. 2. A schematic illustration of a blade with end plates, showing fastening in the rig

Card 5/5

SALAMATIN, N.Ye.

Use of the electr c modeling method in solving a two-dimensional Dirichlet problem. Trudy Sem. po prikl. mat. 1 no.1:134-150 '63. (MIRA 18:2)

1. Kazanskiy aviatsionnyy institut.

L 4081-66 EWT(1)/T LJP(c) GG

ACC NR: AP5025797 SOURCE CODE: UR/0363/65/001/009/1588/1589

AUTHOR: Kozina, G. S.; Kovarskaya, Ye. S.; Salamatin, Ye. P.

ORG: none

TITLE: Effect of charge compensating Na ions on the distribution coefficient of neodymium in $CaWO_4$ single crystals grown by the Czochralski method

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1588-1589

TOPIC TAGS: tungstate, calcium tungstate, neodymium, single crystal growing

ABSTRACT: The growing of $CaWO_4:Nd^{3+}$ single crystals has been studied. It is noted that for practical applications the concentration of activator centers in these crystals should be high. To increase this concentration, Na^+ ions were added to the melt. The experiments were conducted using varibus amounts of $CaWO_4$, Nd_2O_3, and Na_2WO_4 as starting materials. The dependence of neodymium concentration on the Na:Nd ratio was established. The mixtures were melted in Rh or Ir crucibles. The pulling rate was 10 mm/hr, the rotation velocity was 25 rpm, and the crystallization temperature was 1560—1640C. The study resulted in growing mixed $CaWO_4$-Na_2WO_4 single crystals activated with 0.25 to 3 at% Nd ions using Na/Nd ratios of 4, 8, 15, and 20 in the starting mixture. The results of the study given in Figs. 1 and 2 indicate that

Card 1/3 UDC: 546.41'786:548.55

L 4081-66

ACC NR: AP5025797

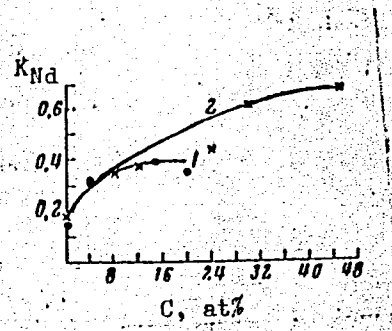

Fig. 1. Dependence of the distribution coefficient of neodymium on the concentration of sodium in the melt. Neodymium content in the melt:

1 - 1 at%; 2 - 2—3 at%.

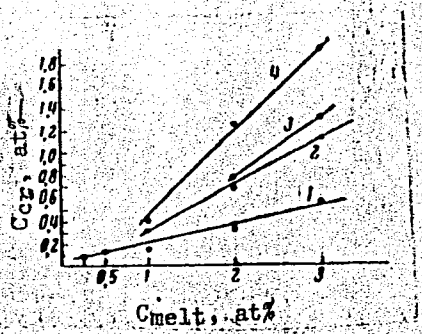

Fig. 2. Dependence of the neodymium concentration in the crystal (C_{cr}) on it concentration in the melt (C_{melt}); Na/Nd ratios:

1 - 0; 2 - 4; 3 - 8; 4 - 15.

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L 4081-66

ACC NR: AP5025797

addition of Na ions to the charge considerably increases the distribution coefficient, hence the concentration of activator centers in the crystals. Orig. art. has: 2 figures and 1 table. [BO]

SUB CODE: SS, IC/ SUBM DATE: 09Apr65/ ORIG REF: 000/ OTH REF: 001/ ATD PRESS: 4127

BNK

Card 3/3

L 4576-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(k)/EWP(t)/EWP(z)/EWP(b)/EWA(c)

ACC NR: AP5024601 MJW/JD/HM/HW/EM UR/0114/65/000/009/0037/0040

621.772.4:621.791.053

AUTHOR: Shron, R. Z. (Candidate of technical sciences); Malygina, A. A. (Engineer); Salamatina, A. I. (Engineer); Mikheyev, G. N. (Engineer)

TITLE: The operation of welded joints of austenite steam pipes (experiment at the Chelyabinsk TETs-1)

SOURCE: Energomashinostroyeniye, no. 9, 1965, 37-40

TOPIC TAGS: weld defect, weld evaluation, metal welding, austenite steel, pipe

ABSTRACT: The authors present the generalized results of an experiment concerning the operation of austenite (steel 1Kh18N12T) welded joints of the steam piping of the SVP complex of the Chelyabinsk TETs-1 over the 1959 — 1964 period. The SVP complex consists of two 68SP300/215 boilers and SVP-50-3 turbines. The vapor pressure ahead of the turbine is 210 at, temperature 555 — 560C. The number of welded joints is 342, approximately 70% of which were made on the spot during construction. The present article presents in the form of graphs and tables the accumulated number of working hours, changes in vulnerability (with time, and according to depth), comparative changes in vulnerability of austenite and nonaustenite joints, vulnerability of thick sections as compared with the vulnerability of the entire system, and the vulnerability of tube joints utilizing 10 different types of alloying. Results show that in spite of a certain increase in system's reliability the thermal processing of 1Kh18N12T steel joints does not secure a reliable operation because of the tendency of the

Card 1/2

L 4576-66

ACC NR: AP5024601

4

steel to local failures in the vicinity of joints. Tests at the TsNIITmash, TsKTI, and VTI indicate that the steel should be replaced by Kh16N9M2 which is by its composition close to the US steel AISI 316 which proved very successful in American thermal power plants with vapor temperatures up to 650C. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, MM

NO REF SOV: 006 OTHER: 000

Card 2/2 DP

38287

S/190/62/004/006/014/026
B101/B110

15.9063

AUTHORS: Salamatina, O. B., Shantarovich, P. S.

TITLE: Polymerization of α-chlorocyclohexene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 876-881

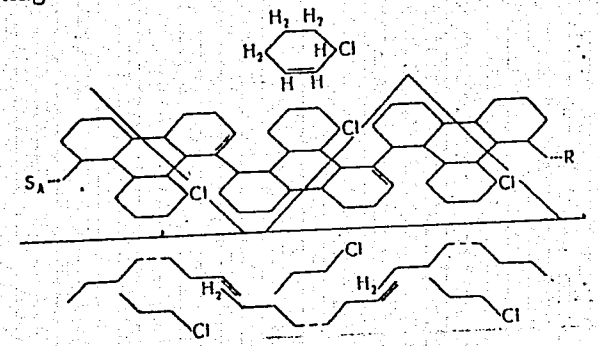
TEXT: The polymerization of α-chlorocyclohexene was studied under various conditions. Results: A linear function $\log(c_0/c)$ versus t was observed during thermal polymerization in an ampoule. The polymerization is a monomolecular reaction of the first order. The polymer forms from six monomer molecules with separation of 5HCl. The activation energy is 52.0 kcal/mole. Polymerization with Al-Ti catalysts in benzene yielded 14.4% polymer, even with pure $TiCl_4$. Addition of $Al(C_2H_5)_3$ increased the yield only up to a ratio of Al/Ti = 4(~ 45%). Further addition of R_2Al showed no effect. Al/Ti = 2 proved to be optimum. Formation of an active complex $[TiCl_3 \cdots AlR_3]$ is assumed. The activation energy is 18 kcal/mole. Dehydrochlorination of the polymer occurs even at 0°C. The polymer obtained with $TiCl_4$ alone contained 12.2% Cl, the polymer obtained with

Card 1/3

S/190/62/004/006/014/026
B101/B110

Polymerization of α-chlorocyclohexene

Al/Ti = 4-5 contained 3.07% Cl, while the content of -C=C- bonds remained unchanged: 1 double bond per 3 links. This indicates a structure of the polymer resembling hexagonal floor tiles



Dehydrochlorination during the polymerization of α-chlorocyclohexene is characteristic of this compound; it was not observed with α-chlorobutadiene. In this "polymerizational condensation" the regular formation of the double bond in the polymer molecule remains unexplained. There are

Card 2/3

Polymerization of α-chlorocyclohexene

S/190/62/004/006/014/026
B101/B110

5 figures and 4 tables. The two English-language references are: G. Thomas, J. Chem. Phys., 26, 1644, 1957; A. Simon, G. Ghymes, International Symposium of Macromolecular Chemistry, Moscow, June 1960, section II, p. 310.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: April 8, 1961

Card 3/3

SHANTAROVICH, P.S.; SALAMATINA, O.B.

Conditions of the formation of metallo-organic compounds with charge transfer. Zhur. ob. khim. 34 no.7:2298-2303 Jl '64 (MIRA 17:8)

1. Institut khimicheskoy fiziki AN SSSR.

L 38634-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM S/0190/65/007/003/0485/0490

ACCESSION NR: AP5008374

AUTHORS: Salamatina, O. B.; Bonetskaya, A. K.; Skuratov, S. M.; Fabrichnyy, B. P.; Shalavina, I. F.; Gol'dfarb, Ya. L.

TITLE: Kinetics and thermal effect of polymerization of some C-alkyl substituted lactams

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 3, 1965, 485-490

TOPIC TAGS: alkylation, polymerization, kinetics, thermal effect

ABSTRACT: A study was made of the kinetics of polymerization of 5-CH_3-, 7CH_3-, 7C_2H_5-and 7C_3H_7-caprolactams and 8-C_2H_5- and 8C_3H_7-enantholactams in the presence of water alone and with different amounts of phosphoric acid at 240C. The 7-C_3H_7-caprolactam was synthesized. The others were obtained from VNIIV. For polymerization in water it was found that the process is autocatalytic for C-alkyl substituted and unsubstituted lactams alike, that the substitution in a lactam molecule sharply lowers the reaction rate, that the degree of conversion from monomer to polymer at maximum rate also declines markedly for both alkylated caprolactams and alkylated enantholactams, and that the time of reaching maximum

Card 1/2

L 38634-65
ACCESSION NR: AP5008374

reaction rate for these monomers is increased. When phosphoric acid is present with the water the maximal reaction rate is markedly increased, the rate increasing with concentration of acid; the degree of conversion at the maximum rate decreases and does not depend on the acid concentration; and the time for reaching maximum rate is strongly reduced. It was found that the maximal rate depends on the position of the substituted alkyl in the ring, and that this rate decreases with increase in length of the substituted alkyl. Methyl substitution in caprolactams lowers the thermal effect of polymerization. Ethyl substitution increases the effect, and propyl substitution does not change it. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University); Institut organicheskoy khimii im. Zelinskogo, AN SSSR (Institute of Organic Chemistry, AN SSSR)

SUBMITTED: 30May64 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 007 OTHER: 011

Card 2/2

SAMSONOV, G.V.; KHINTS, A.A.; SALAMATINA, V.P.

Complete demineralization of streptomycin based on a molecular sieve method. Antibiotiki 3 no.6:27-29 N-D '58. (MIRA 12:2)

1. Institut vysokomolekulyarnykh soyedineniya AN SSSR, Leningrad.
(STREPTOMYCIN,
demineralization, molecular sieve method (Rus))

SALAMATINA, V.V.

Dynamics of blood serum of cholesterol in rheumatic fever. Kaz.med. zhur. 40 no.4:9-12 Jl-Ag '59. (MIRA 13:2)

1. Iz kafedry fakul'tetskoy terapii (zaveduyushchiy - prof. Z.I. Malkin) Kazanskogo meditsinskogo instituta i terapevticheskogo otdeleniya Respublikanskoy klinicheskoy bol'nitsy (glavvrach - Sh.V. Bikchurin).
(CHOLESTEROL) (RHEUMATIC FEVER)

MALKIN, Z.I.; SHCHERBATENKO, S.I.; BEREZOVSKIY, B.S.; KLYUCHAREVA, S.G.; SALAMATINA, V.V. (Kazan')

Therapeutic tactics in the treatment of rheumatic endomyocarditis and myocarditis. Vop.revm. 1 no.2:44-48 Ap-Je '61. (MIRA 16:4)

(RHEUMATIC HEART DISEASE)

SALAMATINA, V.V.

Problem of fat metabolism in rheumatism. Klin.med. 38 no.6: 1000104 Je '60. (MIRA 13:12)
(COLLAGEN DISEASES) (FATS—METABOLISM)

SMIRNOV, I.M. (Kuybyshev - obl.); SALAMATINA, V.V. (Kazan'); IVANOV, A.A. (Chistopol'); DORMIDONTOV, Ye.N.; VORONINA, A.V., studentka 6 kursa; POLISADOV, P.V. (Kazan')

Takayasu's disease. Kaz.med.zhur. 40 no.5:111-115 S-O '59. (MIRA 13:7)

(PULSE)

Salamatov, A.

27-1-4/19

AUTHOR: Salamatov, A., Director of the Sverdlovsk Technical School # 5

TITLE: The Factory Assists the School (Zavod pomogayet uchilishchu)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 1, pp 6-7 (USSR)

ABSTRACT: The article deals with the Sverdlovsk Technical School # 5 (Sverdlovskoye tekhnicheskoye uchilishche # 5) founded within the Uralmashzavod in 1954.

During 3 years the school graduated more than 900 young metal workers most of whom joined the Uralmashzavod. The school has turneries with more than 100 machine tools and milling workshops furnished with the latest equipment. Last year the Uralmashzavod spent 150,000 rubles to supply the school with different devices. The work on establishing two more turneries, two assembly shops and one for auxiliary fitting is going to be finished soon. The school has its own industrial production and is delivering screw-cutting lathe to the Uralmashzavod.

There are 6 photographs.

AVAILABLE: Library of Congress

Card 1/1

SALAMATOV, D.

Flow of an incompressible fluid from an axisymmetrical vessel. Uch. zap. Kir. zhen. ped. inst. no. 4:3-22 '59. (MIRA 14:1)
(Fluid mechanics)

SALAMATOV, D.

Flow in an axial direction around a biconnected body of rotation of the cupola type. Uch. zap. Kir.zhen. ped. inst. no. 4:23-28 '59. (MIRA 14:1)

(Fluid mechanics)

ACC NR: AT6036287 (N) SOURCE CODE: UR/0000/66/000/000/0118/0127

AUTHOR: Salamatov, D.

ORG: none

TITLE: Cavitation flow around a circular cone

SOURCE: AN KirgSSR. Institut fiziki i matematiki. Ploskoparallel'noye i osesimmetricheskoye techeniye gazov i zhidkostey (Plane-parallel and axisymmetric flow of gases and liquids). Frunze, Izd-vo Ilim, 1966, 118-127

TOPIC TAGS: cavitation, flow research

ABSTRACT: A flow around a conical body is considered analytically and the problem is formulated for the regime of flow that leads to a stagnation zone and is axisymmetric. It is shown that the computation of the resistance of the body (cone) in these conditions is given by the largest dimension of the cavity cross section. To obtain the free stream surface which determines the cross section, the method of ring vortices is utilized to obtain a set of three integro-differential equations with three unknown functions. The equations are found to be linear with respect to two of these functions. The author states that the method of iterative approximations can be used to solve the equations. The results for a large range of cavitation numbers will be published in a future paper. Orig. art. has: 1 figure, 19 formulas.

SUB CODE: 20/ SUBM DATE: 28Apr66/ ORIG REF: 002/ OTH REF: 001

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SALAMATOV, Dzholdon, Cand Phys-Math Sci (diss) - - "The axial-symmetric stabilized flow of an incompressible liquid". Frunze, 1960. 7 pp (Kirgiz State U), 150 copies (KL, No 11, 1960, 128)

SALAMATOV, G.P., inzh.

High-power equipment for argon shielded alternating current arc welding. Svar. proizv. no.5:28-30 My '61. (MIRA 14:4)
(Electric welding--Equipment and supplies)

SALAMATOV, I.I., inzhener; YEMAKOV, I.S., inzhener; SHAKHOV, F.N., inzhener; SHULIKO, Ya.V., inzhener.

Principles and methods of normalization and unification in machine construction for the chemical industry. Standartizatsiia no.3:9-22 My-Je '54. (MLRA 7:6)

1. NIIKhIMMASh. (Chemical engineering--Standards)

SALAMATOV, I.I.

BORISOGLEBSKIY, B.N., inzhener; MINKOV, V.P., inzhener, VEKSLER, G.M. inzhener, MIKHLIN, Ye.L.; SALAMATOV, I.I. inzhener, redaktor; STUPIN, A.K., redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor

[Centrifuges; a catalog and reference book] TSentrifugi; katalog-spravochnik. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1955. 90 p. (MLRA 8:11)

1. Russia(1923- U.S.S.R.)Ministerstvo mashinostroyeniya i priborostroyeniya.
(Centrifuges)

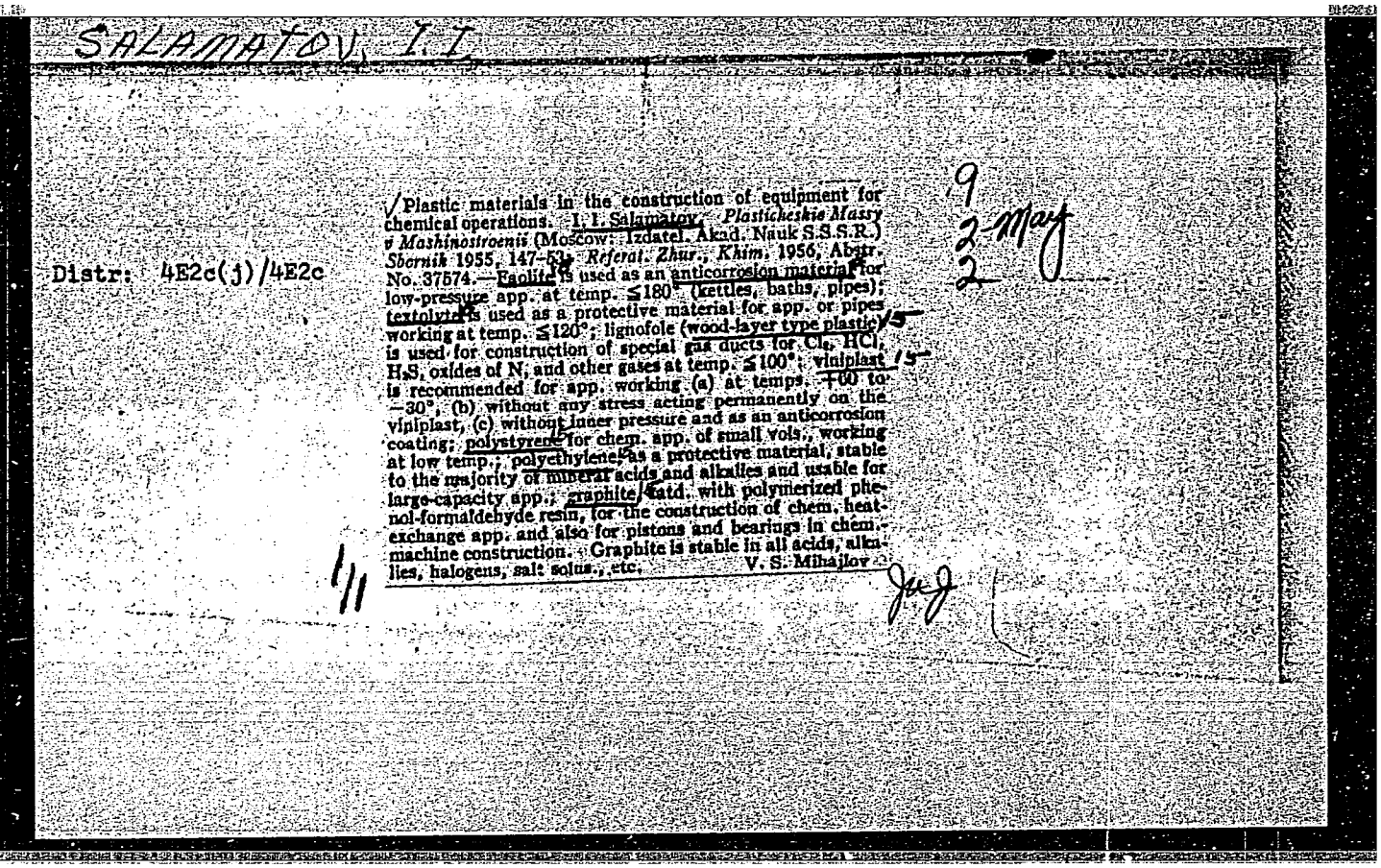
SALAMATOV, I.I.

BORISOGLEBSKIY, B.N., inzhener; GRISHINA, L.S., inzhener; KOBYASHOVA, [illegible] inzhener; SALAMATOV, I.I., inzhener, redaktor; STUPIN, A.K. [illegible]tor; POPOVA, S.M., tekhnicheskiy redaktor.

[Filters; a catalog and handbook] Fil'try; k. [illegible]chnik. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, [illegible]. 127 p. (MLRA 9:6)

1.Russia (1923- U.S.S.R.) Ministerstvo mashinostroeniya i priborostroyeniya.

(Filters and filtration)



SALAMATOV, I. I.

Distr: 4E2c(j)/4E2c

/Plastic materials in the construction of equipment for chemical operations. I. I. Salamatov. *Plasticheskie Massy v Mashinostroenii* (Moscow: Izdatel. Akad. Nauk S.S.S.R.) *Sbornik* 1955, 147–53; *Referat. Zhur., Khim.* 1956, Abstr. No. 37574.—Faolite is used as an anticorrosion material for low-pressure app. at temp. ≤180° (kettles, baths, pipes); textolyte is used as a protective material for app. or pipes working at temp. ≤120°; lignofole (wood-layer type plastic) is used for construction of special gas ducts for Cl_2, HCl, H_2S, oxides of N, and other gases at temp. ≤100°; viniplast is recommended for app. working (a) at temps. +60 to −30°, (b) without any stress acting permanently on the viniplast, (c) without inner pressure and as an anticorrosion coating; polystyrene for chem. app. of small vols., working at low temp.; polyethylene, as a protective material, stable to the majority of mineral acids and alkalies and usable for large-capacity app.; graphite impregnated with polymerized phenol-formaldehyde resin, for the construction of chem. heat-exchange app. and also for pistons and bearings in chem.-machine construction. Graphite is stable in all acids, alkalies, halogens, salt solns., etc. V. S. Mihajlov

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SALAMATOV, I.I., inzhener; SHULIKO, Ya.V., inzhener;

Reducing design workload by employing normalization techniques.
Standartizatsiia no.6:10-21 N-D '55. (MLRA 9:2)

1.Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya
(Machinery--Design) (Standards, Engineering)

SALAMATOV, I.I., inzhener; SHULIKO, Ya.V., inzhener.

Reasons for specialization in the chemical machinery industry.
Standartizatsiia no.6:23-25 N-D '56. (MLRA 10:1)

1. Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya.
(Chemical apparatus--Standards)

SALAMATOV I.I

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U.S.S.R. Glavnoye upravleniye khimicheskogo mashinostroyeniya

Obroduvaniye dlya obrabotki rezinovykh smesey i plasticheskikh mass; katalog-spravochnik (Equipment for Processing Rubber Mixtures and Plastic Materials; Catalog-Handbook) Moscow, Mashgiz, 1957. 105 p. 3,000 copies printed.

Ed.: Salamatov, I. I., Engineer; Ed. of Publishing House: Stupin, A. K.; Tech. Ed.: Tikhanov, A. Ya.; Managing Ed. of general technical literature and catalogs (Mashgiz): Ponomarev, K. A., Engineer.

PURPOSE: The catalog-handbook is intended for engineering and technical personnel employed in design organizations and plants of the Ministry of Machine Building using the equipment for processing rubber mixtures and plastic materials.

COVERAGE: The catalog-handbook describes and gives basic and technical data on Soviet equipment used for processing rubber mixtures and plastic materials. For each piece of equipment listed in the Table of Contents a diagram and specifications are given. There are no references, and no personalities are mentioned.

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TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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KANTOROVICH, Zalman Ben'yaminovich, professor; KOZULIN, N.A., professor, retsenzhot; [illegible], inzhener, retsenzent; RASSKAZOV, N.I., kandidat tekhnicheskikh nauk, redaktor; TIKHANOV, A.Ya., tekhnicheskiy redaktor

[Machinery of the chemical industry] Mashiny khimicheskoi promyshlennosti. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1. [Machinery for processing liquids and free-flowing materials] Mashiny dlia obrabotki zhidkikh i sypuchikh sred. 1957. 568 p. (MLRA 10:10)

(Chemical engineering--Equipment and supplies)

SALAMATOV, I.

More courage in solving problems. Okhr.truda i sots.strakh. no.5:56-60 M '58. (MIRA 12:1)

1. Zamestitel' direktora Nauchno-issledovatel'skogo instituta khimicheskogo mashinostroyeniya po nauchno-tekhnicheskoy chasti.
(Chemical industries--Hygienic aspects)

SALAMATOV, I.I., inzh.; VEKSLER, G.N., inzh.

Continuous centrifugal countercurrent extractor. Khim.mash. no.1: 12-14 Ja '59. (MIRA 12:7)
(Extraction apparatus)

SOV/28-59-1-2/29

AUTHORS: Salamatov, I. I., and Shuliko, Ya. V., Engineers

TITLE: The Trend of Normalization Work in Chemical Machine Construction (Napravleniye rabot po normalizatsii v khimicheskom mashinostroyenii)

PERIODICAL: Standardtizatsiya 1959, Nr 1, pp 6 - 9 (USSR)

ABSTRACT: NIIKhIMMASH studied the standardization of containers and apparatuses for various chemical functions, and their parts. They were classified according to structural features. Parts and units used were classified into a particular group of standard elements. Percussion caps and the box type caps for fractionating columns were standardized. Tubes for all types of tubular heat-exchangers were normalized in sizes: 25 x 2; 38 x 2 and 57 x 2,5 mm. Seventeen sizes of cylindric reductors were normalized. The number of gears was more than 5 times reduced. A standard for the air collectors for air compressors was created, specified and submitted for approval. The Standardization of mixers and their drives is now being studied. Nine catalogs on standardized chemical machines and accessories have been issued. The construction of new

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The Trend of Normalization Work in Chemical Machine Construction

plants for the production of chemical machinery is planned in view of the estimated 3.3 - 3.5 time production increase. A standardization plan is now being elaborated by

ASSOCIATION: NIIKhIMMASh

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SHUMSKIY, K.P.; PLEKHAN, R.I., inzh., retsenzent; SALAMATOV, I.I., inzh., red.; YEVSTAF'YEVA, N.P., red. izd-va; UVAROVA, A.F., tekhn. red.

[Vacuum condensers for chemical industries] Vakuumnye kondensatory khimicheskogo mashinostroeniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 334 p. (MIRA 14:9)
(Condensers (Vapors and gases))

LASKORIN, B.N.; SALAMATOV, I.I.; KRASOV, V.G.; SMIRNOV, V.F.

TSE-60 centrifugal tubular superextractor for the extraction recovery of nonferrous metals. Ekstr.; teor.,prim.,app. no.2.372-378 '62. (MIRA 15:9)

(Nonferrous metals) (Extraction apparatus)

POLESHCHUK, L.M., kand. tekhn. nauk; VALYAYEVA, L.A., inzh.; NESTEROVICH, A.A., inzh.; SALAMATOV, I.I., doktor tekhn. nauk, red.; KASPEROVICH, N.S., red.izd-va; UVAROVA, A.F., tekhn. red.

[Centrifuges; catalog and handbook] TSentrifugi; katalog-spravochnik. Izd.2., perer. i dop. Moskva, Mashgiz, 1963. 101 p. (MIRA 16:10)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya.
(Centrifuges)