

SHAPIRSHTEYN, Ya.A.; SENICKINA, L.G.

Semiconductor relay. Avtom. i prib. no. 1:67-68 Ja-Mr '64.
(MIRA 17:5)

ORLOV OSHIDYN, YA. A.; PULSIOVIN, V. T.

Safety measures in the manufacture of caustic soda by the
mercury electrolysis method. Khim. prom. no. 4:299-301
Ap '64. (MIRA 17:7)

SHARIFSHYLYN, Ya.A., inzh.; DAYEN, N.A., inzh.

Schematic for automatic forming of mercury-arc rectifiers.
Energ. i elektrotekh. prom. no.4:45-46 G-D '64.

(MIRA 18:3)

DALEVSKIY, A.L. [Dalevs'kyi, A.L.]; EYDEL'MAN, L.S.; SHAPIRSHTEYN, Ya.A.;
KHINKIS, M.V.

Programmed proportioning apparatus for explosive and aggressive
liquid substances. Khim. prom. [Ukr.] no.1:76-77 Ja-Mr '65.
(MIRA 18:4)

LEV, M.A., inzh.; SHAPITO, Yu.Z.

Using gunite for lining mine workings. Shakht.stroi. 6 no.2:
4-3 F '62. (MIRA 15:2)

1. ISNIIpodzemshakhtostroy.
(Mine timbering)(Gunite)

ZEMLYANSKIY, N.I.; PRIB, O., student IV kursa; SHARYPKINA, M., student IV kursa; KOSTENKO, A., student III kursa; GLUSHKO, A., student III kursa; KOZHEVNIKOVA, O., student III kursa; KRASILOVSKAYA, T., student III kursa; SEREDA, N., student III kursa; PINTOVA, N., student III kursa; TSERKEVICH, G., student III kursa; SHAPKA, V., student III kursa

Condensation of aromatic hydrocarbons with halogen derivatives of aldehydes. Nauk. zap. L'viv. un. 13:129-135 '49.

(MIRA 12:10)

1. Kafedra organicheskoy khimii L'vovskogo gosudarstvennogo universiteta im. I. Franko.

(Hydrocarbons) (Aldehydes)

SHAPKAREV, Ilija A.

On homogeneous linear differential equations of the second order.
God zbor teh Univ Skopje 5 no.5:49-64 '63.

SHAPKAROV, Petur

Problems connected with profitableness of electric power production,
Trud tseni 3 no.10:14-20 '61.

SHAPKAREY, Petur

International colloquium on the application of mathematics
in economics. Spisanie BAN 8 no. 3: 95-97 '63.

SHAPZAREV, Petur

Possibilities of using the technical coefficients of the input-output balances of the interrelated industries in current planning. Spisanie BAN 9 no. 1/2:77-88 '64.

SHAWAROVA, K.

Journal (in caps); Given Names

Country: Bulgaria

Academic Degree: not indicated

Affiliation: Member of the staff of Sreden Meditsinski Rabotnik, Editor:
S. AVRAMOV; Scientific Collaborator at the Scientific
Research Institute for the Protection of Infants (NIID)

Source: Sofia, Sreden Meditsinski Rabotnik, No 1, 1961, pp 19-24

Data: "Bronchopneumonia in Infants."

SHAPKAREVA, K. (DR)

Sofia, Stefan Muzinska: Buletin, No 7, 1961

1. "The Role of the ~~Scientific~~ Medical Career in the Struggle Against Tuberculosis", Dr Zh. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) 1961, pp 13-16.
2. "Microbiology and Diagnosis", Dr Zh. ~~Shapkareva~~ K. Shapkareva and Dr Et. ~~Shapkareva~~ Et. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 17-19.
3. "Prevention and Early Recognition of Tuberculosis", Dr Zh. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 20-22.
4. "The Pathogenesis of Tuberculosis and the Role of the Tubercle Bacillus", Dr Zh. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 23-25.
5. "Pediatric Tuberculosis in Bulgaria: Etiology and Pathogenesis", Dr Zh. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 26-28.
6. "The Dairy Tuberculosis in the V. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 29-30.
7. "The Role of District Surgeons and their work with Tuberculosis Patients in the Fight Against Tuberculosis", Dr Zh. ~~Shapkareva~~ K. Shapkareva, "The Scientific Research Institute of Tuberculosis" (Muzinska) pp 31-33.

(18)

S H A P R A R E V A , K .

[Faded typed text, possibly a list or report, with a circled area on the right side.]

(11)

SHAPKARIN, Anatoliy Vasil'yevich

(Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov) - Academic degree of Doctor of Historical Sciences, based on his defense, 5 July 1954, in the Council of the Inst of History of Acad Sci USSR, of his dissertation entitled: "The Stolypin Agrarian Reform."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 1, 7 Jan 56, Byulleten' MVO SSSR, Uncl.
JPRS/NY-548

S/137/62/000/004/069/201
AC52/A101

AUTHOR: Shapkariu, M. P.

TITLE: The self-adjusting system of pickling current control of the unit for electrolytic thin wire calibration

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 4, 1962, 35, abstract 4D200 (V sb. "Primeneniye vychisl. tekhn. dlya avtomatiz. proiz-va". Moscow, Mashgiz. 1961, 518-524)

TEXT: The described system was applied in the unit for the wire resistance calibration. The tests of the unit have shown that it corresponds to the technical conditions. Thin W- and Mo-wire, used in the electrovacuum industry, needs also a diameter calibration. By replacing the resistance pickup by the diameter pickup the system can be used for the wire diameter calibration. High-frequency pickups for small displacements with a sensitivity in the order of hundredths of a micron are developed at present which can be used in the system.

N. Yudina

[Abstracter's note: Complete translation]

Card 1/1

. SHAPKAYTS, M.N.

Ash, bentonite, and clay solution for preparing the surgeon's
hands. Khirurgia Supplement:64 '57. (MIRA 11:4)
(SURGERY, ASPECTIC AND ANTISEPTIC)

3/11/57, D. 17.

120-4-33/35

AUTHORS: Sidorov, P.S., Shapkin, A.A. and Dedov, V.B.

TITLE: An Automatic Fraction Collector (Avtomaticheskiy kollektor fraktsiy)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.4, pp. 101 - 104 (USSR)

ABSTRACT: The article describes a simple apparatus for automatic collection of fractions based on the principle of registering falling liquid drops. The volumes of the collected fractions can be changed over a wide range of 1 to 50 drops. Normally, the collector collects up to 50 ml of the liquid. The apparatus consists of three interconnected parts: 1) a drop counter, consisting of a telephone selector switch; 2) a collector; 3) a platinum contact. The collector, consisting of a disc carrying the receivers, is fastened to the axis of a second selector switch. Fig. 1 shows the general view of the equipment. Each drop, as it falls, wets two platinum electrodes causing the counter circuits to operate. After a fixed number of drops, the counter gives a signal to change the receiver position. Electrolytic action is negligible ($4 \mu\text{A}$ for 10^{-3} sec). The electric circuit is described in Fig. 2. There are 2 figures and 3 non-Slavic references.

Card1/2

SOV/120..59..2..4/50

AUTHORS: Belovintsev, K.A., Karpukhin, O.A., Kutsenko, A.V.,
Shapkin, A.A., and Yablokov, B.N.

TITLE: An Apparatus for Measuring the Intensity Distribution in
an Expanded γ -Ray Pulse from a Synchrotron (Pribor dlya
izmereniya raspredeleniya intensivnosti v rastyanutom
impul'se gamma-izlucheniya sinkhrotrona)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 2, pp 15-18
(USSR)

ABSTRACT: In most cases the 280 Mev γ -ray pulse from the FIAN
synchrotron is expanded to 2-2.5 μ sec (Ref 1). When
this is done, it is necessary to know the intensity
distribution within the γ -ray pulse. It is further
desirable to be able to determine this intensity distri-
bution continuously in order to obtain the average form
of the pulse during experiments. Such measurements can
be carried out using a multichannel time analyser working
with a suitable probe whose count is proportional to the
instantaneous intensity (e.g. a scintillation counter).
However, such equipment is expensive and bulky and its
use is not always justified. Instead, a single channel
analyser may be used for this purpose. The γ -ray pulse
passes through the "window" of the analyser which looks

Card 1/3

SOV/120-59-2-4/50

An Apparatus for Measuring the Intensity Distribution in an Expanded γ -Ray Pulse from a Synchrotron

at a definite part of the pulse at a time and records it with an appropriate counter. The particular part of the pulse must then be related to the total intensity of the expanded pulse. The device described in the present paper can carry out this operation using a step-by-step switch. A NaI(Tl) crystal working in conjunction with a FEU-19 photomultiplier is used as the γ -ray detector. The amplitude of the pulse at the photomultiplier load is proportional to the instantaneous value of the intensity of the expanded γ -ray pulse. The output from the photomultiplier is fed into two channels. The first channel (integral) sums up all the pulses fed into it and is in fact simply a monitor, and the counts recorded by it are proportional to the integral intensity of the synchrotron. The second channel is a differential one and will pass only the part of the pulse defined by the analyser "window", and the counts recorded through this channel are proportional to the intensity at the given instant of time. The width of the "window" can be either 50 or 100 μ sec. The "window" may be moved along

Card 2/3

SOV/120-59-2-4/50

An Apparatus for Measuring the Intensity Distribution in an Expanded γ -ray Pulse from a Synchrotron

the time scale either by hand using a time delay circuit, or the whole pulse is split into n sections and the instrument automatically covers the whole time interval using a step-by-step switch. The circuits of the two channels are shown in Fig 2 and the time delay circuit is shown in Fig 3. The step-by-step switch is shown in Fig 4. The apparatus has been used in studying elastic scattering of γ quanta on protons (Ref 4), photo-production of π^0 -mesons (Ref 3) and electron distributions associated with radial-phase oscillations. There are 4 figures and 4 Soviet references.

Card 3/3

ASSOCIATION: Fizicheskii Institut AN SSSR (Physical Institute of the Academy of Sciences of the USSR)

SUBMITTED: March 31, 1958

ТОЛЧЕНКО, В. А.; ДИПКИ, А. И.; Engg.

Steam Boilers

Condenser pipes made from corrosion resistant alloys. Elek. sta. 24, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

L 32907-65 EWT(1)/EED-2/EWA(h) Feb

ACCESSION NR: AP5006630

S/0146/65/008/001/0013/0018

AUTHOR: Karpov, R. G.; Shapkin, B. D.

TITLE: Electronic phase shifter

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 1, 1965, 13-18

TOPIC TAGS: phase shifter, electronic phase shifter

ABSTRACT: Existing electron-tube phase shifters do not lend themselves easily to cascade connection and have an undesirable variation of the output voltage with phase. A new circuit is suggested in which a double triode 6N1P tube is used; one triode operates as an amplifier feeding into an LCR load; a semiconductor diode and the other tube triode work as a cathode follower. The latter combination, controlled by an applied d-c voltage, acts as a variable resistor whose value determines the phase shift between the input and output a-c voltages. The circuit permits a theoretical phase shift of 180° in response to $0 - \infty$ resistance variation.

13
12
8

Card 1/2

L 32907-65

ACCESSION NR: AP5006630

A $140-150^\circ$ shift is reported as practically possible. An experimental model consisting of three cascade-connected phase shifters (6N9 tube, D203 diode) provided a phase shift within $0-400^\circ$ in response to a d-c voltage control within $0-30$ v. An approximately 300° -long segment of its characteristic was linear. Orig. art. has: 3 figures and 10 formulas. [03]

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan Radiotechnical Institute)

SUBMITTED: 02Mar64

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 000

ATD PRESS: 3206

Card 2/2

1. SHAPKIN V.N.
2. USSR (600)
4. Sorghum- Main Turkmen Canal Region
7. Growing sorghum in the northern irrigation zone of the Main Turkmen Canal
Korm.baza 4 no.1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

SOV/20-127-5-34/58

5(4)
AUTHORS:

Murin, A. N., Lur'ye, B. G., Shapkin, G. N.

TITLE:

On the Transfer Heats of the Complexes $[Cd^{++}Ag^{\square}]$ in $AgBr + CdBr_2$ -Crystals

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 1055-1057 (USSR)

ABSTRACT:

In a solid solution of cadmium bromide in silver bromide Cd^{++} -ions take the place of Ag^+ -ions in the crystal lattice of $AgBr$ under production of Ag^{\square} -cation vacancies. The reaction between Cd^{++} (with an excess charge $+e$) and the vacancies Ag^{\square} (excess charge $-e$) leads to the association of neutral complexes of the form $[Cd^{++}Ag^{\square}]$. If a temperature gradient becomes effective in the system $AgBr + CdBr_2$, a thermodiffusion of cadmium occurs, the Cd -ions moving only as a complex $[Cd^{++}Ag^{\square}]$. In the steady state the relative concentration $\Delta C/C$ is described by the equation (Ref 2): $\frac{\Delta C}{C} = \frac{-(1+p)C_k^* + (1-p)\chi}{2kT^2} \Delta T$ (T - temperature difference between the cold and the hot end of the sample;

Card 1/3

SOV/20-127-5-34/58
On the Transfer Heats of the Complexes $[Cd^{++}Ag^{\ominus}]$ in $AgBr+CdBr_2$ -Crystals

Q_k^* - transfer heat of the complex $[Cd^{++}Ag^{\ominus}]$, χ = association heat of the complex according to reference 3 0.16 ev). $\Delta C/C$ was measured. A finely dispersed mixture of $AgBr$ and $CdBr_2$, marked by Cd^{115m} , was pressed into tablets under a pressure of 4000 at. The said tablets were homogenized by annealing, and were then heated in a furnace with constant temperature gradient for 315 hours, batches of 5 tablets being separated by mica plates; the temperature difference between the hot and the cold end of the furnace amounted to 100° ($210-310^\circ$), so that a temperature difference of 20° corresponded to each tablet. Figure 1 shows the linear dependence of $lg C/C_0$ on $1/T$ (C_0 - concentration of cadmium before the experiment). In the case of the mentioned duration of the experiment, only the tablet at the hot end attained the equilibrium concentration, although the diffusion coefficient calculated by other authors (Ref 7) made it appear probable that equilibrium concentration would be attained by all 5 tablets. An experimental determination of the diffusion coefficient proved, however, that the data of reference 7 are too high by one order of magnitude,

Card 2/3

On the Transfer Heats of the Complexes $[Cd^{++}Ag^{\ominus}]$ in $AgBr \rightarrow CdBr_2$ -Crystals

SOV/20-127-5-34/58

and that the duration of the experiment actually sufficed only for the temperature interval of 310-290°C in order to attain equilibrium concentration. Q_k^* was calculated as amounting to -0.54 ev. There are 1 figure and 9 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova
(Leningrad State University imeni A. A. Zhdanov)

PRESENTED: April 16, 1959 by A. F. Ieffe, Academician

SUBMITTED: April 13, 1959

Card 3/3

L 3549-66 FSS-2/EWT(1)/EWA(d)/T/EED(b)-3/EWA(c) IJP(c)

ACCESSION NR: AP5024434

UR/0286/65/000/015/0146/0146

AUTHORS: Nerobkov, V. P.; Belevich, G. M.; Shapkin, G. A.; Yefimenko, I. I.; Ulitskiy, A. R.

TITLE: Photocopying equipment for contact printing of copies. Class 57, No. 173607

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 146

TOPIC TAGS: photographic equipment, photographic printer

ABSTRACT: This Author Certificate presents photocopying equipment for contact printing of copies from various negatives onto one common backing for bulk preparation of superimposed negatives or printed circuits. To increase the productivity and to improve the production quality, a negative mounting unit, a manipulator, a preliminary mounting unit, a unit for precise superposition of negative and backing contour, and an illumination unit for exposure are mounted in a single case (see Fig. 1 on the Enclosure). The negative mounting unit is in the form of several revolving coordinate tables whose position is fixed in the range of the superposition unit and in the exposure zone. The manipulator is mounted on a horizontal plate which moves on prismatic guides into the zone of preliminary

Card 1/3

L 3549-66

ACCESSION NR: AP5024434

backing mounting and is provided with a coordinate-rotary table movable in any direction. This table is connected by a ball support to a magnetic table intended for fastening an auxiliary table-satellite. All of the units of the photoequipment are connected to one common control unit. To increase the accuracy of superimposing negative and backing contour by two points removed from each other with a minimum expenditure of time, the precise superposition unit is provided with a two channel optical system. Two different portions of the superimposed surface are visible in the field of view of the ocular. Orig. art. has: 1 diagram.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i organizatsii proizvodstva (Central Scientific Research Institute of Technology and Production Organization)

SUBMITTED: 01Apr64

ENCL: 01

SUB CODE: ES

NO REF SOV: 000

OTHER: 000

Card 2/3

L 3549-66

ACCESSION NR: AP5024434

ENCLOSURE: 01

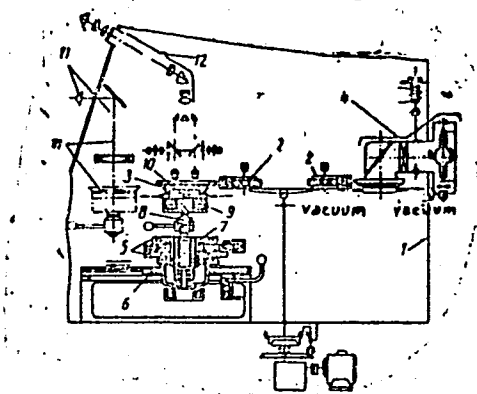


Fig. 1.

1- photoequipment case; 2- rotary coordinate tables of negative mounting unit; 3- superposition unit; 4- exposure unit; 5- manipulator; 6- horizontal plate with prismatic guides; 7- manipulator coordinate-rotary table; 8- ball support; 9- magnetic table; 10- table-satellite; 11- preliminary backing unit; 12- precise superposition unit

Card 3/3

MURIN, A.N.; NEFEDOV, V.D.; KIRIN, I.S.; GRACHEV, S.A.; GUSEV, Yu.K.;
SHAPKIN, G.N.

Beta decay of bromine isotopes as a possible method of
synthesizing krypton compounds. Zhur.ob.khim. 35 no.12:2137-
2140 D '65. (MIRA 19:1)

1. Fiziko-tehnicheskii institut imeni A.F. Toffe AN SSSR.
Submitted February 25, 1965.

SHAPKIN, I.

MELNIK, A. & SHAPKIN, I.

Types of armor repairs. No 12.

Tankist, No 12, 1948.

PROCESSES AND PROPERTIES INDEX

2

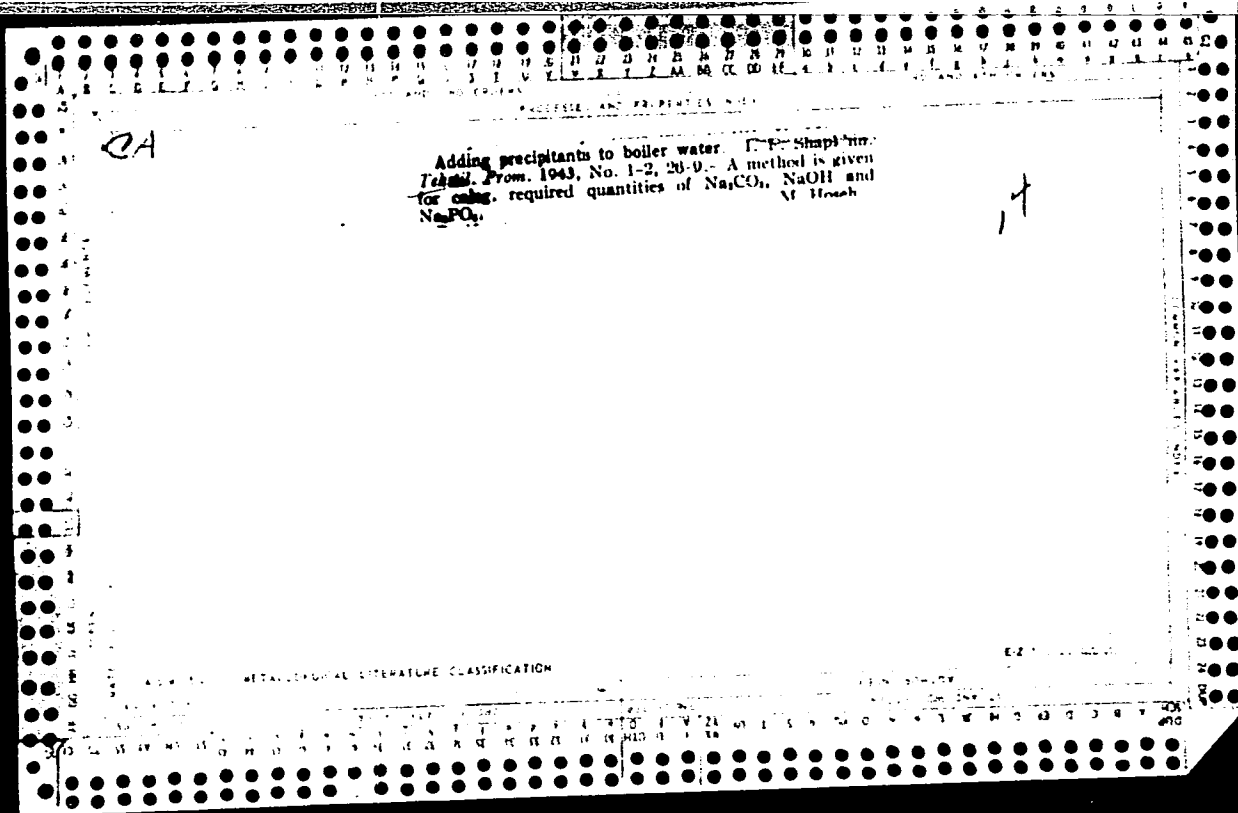
Analysis of the phenomenon of precipitation of solid particles in a viscous medium of small Reynolds' number. I. P. Shapkin. *J. Tech. Phys. (U.S.S.R.)* 10, 1010-25 (1940); *Chem. Zvest.* 1941, II, 1947. -- An increase in the temp. of water from 0 to 274° markedly improves the conditions for settling of particles of silt under otherwise comparable conditions. Highly dispersed particles of silt exhibit ~~marked settling~~ at high temps. For particles that follow Stokes' law the relation of velocity of settling, w , to particle diam., d (in m.), is $w = (-3.48 + 0.274 t) d^2 \times 10^6$ ($t = \text{temp.}$). For particles of silt in the range of Reynold's no. greater than 0.5 but less than 20 the relation is $w = (0.2 + 0.165 t) d^{1.5} \times 10^6$. P. L. Browne.

A S M - I S A METALLURGICAL LITERATURE CLASSIFICATION

E-2

AUTOMATIC INDEXING

ELECTRIC INDEXING



101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX

CA

Chemical inspection in water conditioning inside the boiler. I. F. Shapkin. *Legkaya Prom.* 4, No. 12, 13 (1944).--A simplified method of chem. inspection is given, covering the amt. of softening chemical to add, the analysis of carbonate and total hardness of the water and the detn. of the alky. of the water in the boiler. S. Pakswer

14

ASHTON-SLA METALLURGICAL LITERATURE CLASSIFICATION

OPEN

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

PROCESSES AND PROPERTIES INDEX

CA

Arrangement to eliminate boiler deposits. I. F. Shapkin. *Lagaya Prom.* 5, No. 1, 2, 17(1945). A description of feeding and sepg. app. S. Pakswar

14

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ASB-SLA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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QA

Calculating the quantity of alkaline precipitation re-

agents for in-boiler water treatment. I. F. Shapkin. *Vestnik Inzhenera i Tekhn.* 1946, No. 6, 179-82.—The quantity of reagents required for pptg. noncarbonate scale formers, plus that carried away by steam, and that carried away by blow-down is $G = D[N + \varphi(A + N) + a]$ ton degrees per hr., and the quantity needed per hr. is $g = D[N + \varphi(A + N) + a]k$ g. per hr., where D is the av. hourly load of boiler in tons, N is the noncarbonate hardness of water in German degrees, φ is degree of blow-down, i.e., the ratio of av. hourly quantity of blow-down water to D , A is total alky. of steam in German degrees, a is total alky. of steam in German degrees, k is the equiv. in g. of ton degrees of a given reagent, and φ is the degree of purity of the reagent. For NaOH k is 14.27, for Na_2CO_3 18.9, for NaHCO_3 50.0, and for $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$ 15.2 g. a should be detd. directly, or assumed to be 0.5 for fire-tube boilers and 1.0 German degrees for water-tube boilers. If the losses through steam and blow-down are considerably smaller than N , the formula is simplified to $G = DN$ ton degrees per hr. or $g = DN(k/e)$ g. per hr. When the precipitant is added as a soln., its quantity is calcd. from $Q = D[N + \varphi(A + N) + a]1000/e$, where Q is the vol. of the reagent in l. per hr. and e is the total alky. of the reagent in German degrees detd. by titrating a very dil. soln. with a 0.1 N acid to methyl orange. If part of the water is softened by passing it through a base exchanger, the part of water to be thus treated (y) in order to ppt. the hardness in the

rest (untreated) the water is given by $y = (N + a + 1 - \varphi) + \varphi A) / H$, where H is the total hardness of the raw water in German degrees. When losses through steam and the blow-down are negligible, $y = N/H$. The frequency of adding the reagent (τ) is given by $\tau = (A_1 - A_2)W\gamma / D[N + \varphi(A + N) + a]$, where A_1 and A_2 are the upper and lower limits of admissible alky. in German degrees, W is the water capacity of the boiler in cu m., and γ is the wt. of the water at the given temp. in tons per cu m. The simplified formula is $\tau = (A_1 - A_2)W\gamma / DN$. If τ is less than 10 hrs., it is advisable to feed the reagent continuously. M. Hirsch

SHAPKIN, I. F.

Author: Shapkin, I. F.

Title: Auxiliary equipment used in thermo-electric stations' machine plants.
(Vspomogatel'roe oborudovanie mashinnykh tsekhov.Khoziaistvo.)223 p.

City: Moscow

Publisher:

~~Издательство~~ State Printing House of Literature pertaining to Power Engineering Technique

Date: 1949

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 3, No. 2, Page 101

SHAPKIN, I. F.

USSR/Engineering
Water Softeners
Boilers, Low-Pressure

Mar 49

"Economy of Alkali Reagents and Their Substitutes as Water Softeners in Low-Pressure Boilers," S. M. Gurvich, I. F. Shapkin, Engineers, 3 pp

"Za Ekonomiyu Topliva" Vol VI, No 3

Possible measures for economy in expenditure of alkali reagents are: preventing enterprises from dumping alkaline wastes which might be used for water-purification, use of water extracts or leachings from the ash of wood and plant fuels burned in furnaces, processing part of the water in sodiumionizing filters, and reducing losses of alkali in the blowoff water.

PA 42/49T36

SHAPKIN, I.F.: KUZNETSOV, N.I.

Pumping Machinery

Metering plunger pump. Energ. biul. no. 2, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, May 195⁵²1, Uncl.

SHAPKIN, I.F., KOCHNEVA, YE.G., CHESNOKOV, YE.YE.

Feed Water Purification

Testing of soda regenerative water softening equipment with a tubular reactor.
Energ. Biul. No. 3, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, June 19~~52~~⁵², Uncl.

1. SHAPKIN, I. F.
2. USSR (600)
4. Feed Water Purification
7. Use of sodium regenerative water softeners.
Energ. biul. No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. SHAPAIN. I.F.
2. USSR (600)
4. Water - Analysis
7. New method for measuring hardness and alkalinity. Energ.biul. no.8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

SHAPKIN, I. F.

SHAPKIN, I. F. and KUZNETSOV, N. I. Selection of Sludge Samplings for Analysis
(Otbor Prob Shlame dlya Analiza), pp. 11-12

The author describes a device for systematic extraction of sludge for chemical analysis during the steam-boiler operation. Special apparatus successfully tested with a 32-atm boiler assured fair sampling of sludge. (Drawings).

SO: ELECTRICHSKIYE STANTSII, No. 12, Dec. 1952, Moscow (1614306)

SHAPKIN, I. F.

AID - P-82

Subject : USSR/Engineering
Card : 1/1
Author : Shapkin, I. F., Kand. of Eng. Sci., Moscow
Title : Prevention of Formation of Deposits in Locomobile Boilers (Consultation)
Periodical : Izv. V.T.I., v. 21, #3, 27-28, Mr 1952
Abstract : Description of installation and operation of thermo-chemical soda-generating apparatus for softening of feed water in connection with the formation of deposits in the locomobile low-pressure boilers. 2 drawings. 5 Russian references (1947-51).
Institution : Moscow Communal Services (M.K.Kh) (Electric Power Plant) of the Russian Soc. Fed. Soviet Republic (RSFSR)
Submitted : January 12, 1952

SHAPKIN, I.F.

Preventing scale deposits in water heaters. Energetik 1 no.3:33 Ag '53.
(MLRA 6:8)
(Boilers)

FRANCE, ... MAINTENANCE ...

Item: Boiler

Examine internal process of a two-drum, vertical water-tube boiler of small capacity.
Tech. Min. No. 3, 1959.

Monthly List of Russian Accessions, Library of Congress
June 1959. P. 31.

1. SHAPKIN, I. F.
2. USSR (600)
4. Water - Analysis
7. New unit for measuring hardness and alkalinity. Energ. biul. No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

SHAPKIN, I. F.

B. T. R.
Vol. 3 No. 4
Apr. 1954
Heat Power

(2) 114
5068* Top Drum of a Double Drum Low Power Boiler.
(Russian.) K. F. Beldatis and I. F. Shapkin. *Energeticheskii
Bulletin*, 1953, no. 9, Sept., p. 20-26.
Discusses defects in design and construction of the top drum.
Tables, diagrams. 3 ref.

S. I. V. V. V. V. V.

Feed - Water Purification

Small water softening apparatus. Mor. plot 13 No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SHAPKIN, Il'ya Fedorovich; BELOSEL'SKIY, B.S., redaktor; SKVORTSOV, I.M.,
rekhnicheskiy redaktor.

[Water preparation in thermal electric power plants] Vodopodgotovka
na teplovykh elektrostantsiyakh. Moskva, Gos. energ. izd-vo, 1954.
279 p. [Microfilm] (MIRA 8:2)
(Steam power plants) (Feed water purification)

Shapkin, I. F.

②
✓ 676. BEHAVIOR OF OIL AND PETROLEUM PRODUCTS IN STEAM BOILERS.
Shapkin, I. F. (Energ. Byull. Minist. Neft. Prom. (Pvr Bull. Minist. Oil,
Moscow), Mar. 1954, 14-16). Oil in boiler water, in quantities exceeding
0.2 mg/l, is determined by extraction with ether, benzene, carbon
tetrachloride, etc. The causes and ill effects of its presence and the
need for a more accurate and rapid method of determination are discussed.
(L).

10-14-54

SHAPKIN, I.F.

Design of check valves in feeder pumps. Energ.biul. no.1:16-18 Ja '54.
(MLRA 7:1)

(Pumping machinery)

SHAPKIN, I. F.

Subject : USSR/Engineering AID P - 793
Card 1/1 : Pub. 28 - 3/11
Authors : Kot, A. A. and Shapkin, I. F.
Title : Study of the effect of separator devices on the quality of steam in high pressure boilers
Periodical : Energ. byul., #7, 14-18, J1 1954
Abstract : Various arrangements for the separation of contaminated feed water and steam in the high pressure boiler drum are described. The study is conducted by boilers with and without separator baffles. Contamination by salt and silicic acid is reduced about three times. 3 drawings and 1 table.
Institution : None
Submitted : No date

SHAPKIN, I.F.

AID P - 812

Subject : USSR/Engineering
Card 1/1 Pub. 28 - 4/7
Author : Shapkin, I. F.
Title : Problems of pre-boiler feed water softening in industrial installations
Periodical : Energ. byul., #9, 16-18, S 1954
Abstract : Two types of water softening processes, the sodium carbonate and cation, exchange method (zeolite), described with formulas for computation of alkalinity and salinity. One diagram.
Institution : None
Submitted : No date

SHAPKIN, I.F.

What to read about feed water preparation. Tekst.prom.14 no.2:55
F 154. (MLRA 7:5)
(Feed water)

SHKROB, M.S., doktor tekhnicheskikh nauk; SHAPKIN, I.F., redaktor;
FRIDKIN, A.M., tekhnicheskii redaktor.

[Problems in designing and operating water processing apparatus
in thermal electric power stations] Voprosy proektirovaniia i
ekspluatatsii vodopodgotovitel'nykh ustanovok na teplovykh
elektrostantsiakh, Moskva, Gos. energ. izd-vo, 1955. 189 p.
(Feed water) (MLRA 8:8)
(Electric power plants)

Илья Федорович

CHERKINSKIY, Boris Mendeleyevich; TOKAREV, Dmitriy Georgiyevich; SHAPKIN, Il'ya Fedorovich; ZOTOV, Petr Petrovich; SIMKIN, M.Ye., redaktor; PLEMYANNIKOV, M.N., redaktor; BAKASTOV, V.N., retsenzents; BRAZHKIN, M.I., retsenzents; MOTORIN, I.V., retsenzents; RATTEL', K.N., retsenzents; SHVYREV, S.S., retsenzents; NEKRASOVA, O.I., tekhnicheskii redaktor

[Manual of power engineering for the textile industry] Spravochnik energetika tekstil'noi promyshlennosti. Moskva, Gos.nauchno-tekhn. izd-vo Ministerstva tekstil'noi promysh. SSSR. Vol.2.[Thermotechnics] Teplo tekhnika. Pod red.M.E.Simkina. 1955. 510 p. (MIRA 9:2)
(Thermodynamics)

Subject : USSR/Engineering AID P - 2865
Card 1/1 Pub. 28 - 5/7
Author : Shapkin, I. F.
Title : Soda treatment of feed-water
Periodical : Energ. byul. 9, 21-27, S 1955
Abstract : The author describes the design and operation of a typical small-size soda-softener used for treatment of feed-water of low pressure boilers. Three diagrams and 2 tables are provided.
Institutions: All-Union Scientific Research Institute of the Alcohol Industry (VNIISP), All-Union Heat Engineering Institute (VTI), Central Planning and Design Bureau of the Ministry of the River Fleet (TsPKB MRF).
Submitted : No date

Subject : USSR/Electricity AID P - 3365
Card 1/1 Pub. 29 - 23/27
Author : Shapkin, I. F.
Title : Prevention of scale formation on the wall of Diesel
motors
Periodical : Energetik, 9, 38, S 1955
Abstract : Replying to a question by a reader, the author
briefly explains how to prevent scale formation by
the cooling water.
Institution : None
Submitted : No date

AKOL'ZIN, Pavel Alekseyevich; SHAPKIN, Il'ya Fedorovich; BELOSEL'SKIY, B.S.,
redaktor; MINASYAN, Ye.A., redaktor izdatel'stva; KONYASHINA, A.,
tekhnicheskiiy redaktor

[Water preparation in communal steam power installations] Vodopodgotovka v kommunal'nykh parosilovykh ustanovkakh. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1956. 135 p.
(Feed-water purification) (MIRA 10:2)

SHAPKIN, I.P.

New literature on water treatment and water in boilers.
Energ.biul.no.3:3 of cover Mr 156. (MIRA 9:7)
(Bibliography--Water)

SHAPKIN, I.F.

Removal of scale from boilers. Energetik 4 no.3:38-39 Nr 156.
(Boilers--Icrustations) (MIRA 9:6)

SHAPKIN, I.F.

Calculating the amount of reagents needed by soda-regenerative water
softeners. Energ.biul. no.10:30-31 0 '56. (MLBA 9:11)
(Water--Softening)

SHAPKIN, Il'ya Fedorovich; VESELOV, Mikhail Petrovich; TUV, I.A., retsenzent;
ALEKSANDROV, A.S., redaktor; SHLENNIKOVA, Z.V., redaktor izdatel'stva;
TSVETKOVA, S.V., tekhnicheskii redaktor

[Soda regenerative water softeners for steam equipment in river
transportation] Sodoregenerativnye vodoumagchiteli dlia rechnykh
parosilovykh ustanovok. Moskva, Izd-vo "Rechnoi transport," 1957.
49 p. (MIRA 10:7)

(Feed-water purification)

SHAPKIN, I.F.; PSHEMENSKIY, A.A.

Magnetic treatment of water. Energ. biul. no.5:25-28 My '57.
(Feed-water purification) (MLRA 10:6)

SHAPKIN, I.F.

Operation of a sodium zeolite softening system. Energetik 5 no.1:
39 Ja '57. (MLRA 10:2)

(Water--Softening)

SOKOLOV, Ye.Ya.; SHAPKIN, I.F.

Making up the loss of water in heating systems and the prevention of scale formation in water-heating boilers. Energetik 5 no.1:39-40 Ja '57. (MLRA 10:2)

(Hot-water heating) (Boilers--Incrustations)

SHAPKIN, I.F.

Determining the acidity of wash solutions. Energetik 5 no.9 S '57.
(MIRA 10:10)

(Cleaning compounds)

AUTHOR: Shapkin, I.F. SOV/90-58-2-5/9

TITLE: On the Agressive Character of the Alkalis in Boiler Water
(K voprosu o shchelochnoy agressivnosti kotlovoy vody)

PERIODICAL: Energeticheskiy byulleten', 1958, Nr 2, pp 24-27 (USSR)

ABSTRACT: To lower the corrosion-causing alkali contents of natural waters used in boilers, the author advocates the use of soda-recovering softeners. He then describes and illustrates another water-softening installation for use in boiler-houses equipped with sodium-cationite units. This installation works on the principle of precipitation. There are 2 graphs, 1 diagram and 3 Soviet references.

1. Water--Impurities 2. Water softeners--Equipment
3. Boilers---Corrosion prevention 4. Sodium hydroxide---Properties

Card 1/1

SOV/91-58-2-26/31

AUTHOR: Shapkin, I.F.

TITLE: On Feeding the Locomobile Boiler with Chlorinated Water (Pitaniye lokomobil'nogo kotla khlorirovannoy vodoy)

PERIODICAL: Energetik, 1958, Nr 2, p 37 (USSR)

ABSTRACT: The author answers a question asked by A.A. Guzeyeva from the town of Georgiyevsk, Stavropol'skiy kray, on the necessity which has compelled the technicians of the brick-and-tile plant at Georgiyevsk to feed the boilers of locomobiles with chlorinated water.

Card 1/1

AUTHOR: Lapotyshkina, N.P., and Shapkin, I.F. SOV-90-58-10-5/9

TITLE: The Experimental Testing of an Instrument for the Magnetic Processing of Water (Experimental'noye oprobovaniye pribora dlya magnitnoy obrabotki vody)

PERIODICAL: Energeticheskiy byulleten', 1958, Nr 10, pp 14 - 16 (USSR)

ABSTRACT: The authors describe an experiment to determine the efficiency of an instrument (designation SERI) produced by a Belgian firm for the magnetic processing of water to prevent scale formation in heat exchanging devices. The experiment was carried out by the water department of VTI (The All-Union Power Engineering Institute imeni Dzerzhinskiy) with two different types of water; water from the Moscow water supply and the more highly mineralized water from the Terny water reservoir (Donbass). There are 3 tables and 1 diagram.

1. Water--Processing 2. Instruments--Performance 3. Instruments
--Testing equipment 4. Heat exchangers--Scale 5. Magnetic fields
--Applications

Card 1/1

AUTHOR: Shapkin, I.F. SOV-91-58-10-29/35

TITLE: The Addition of Chemically Purified Water to the Supply (0
dobavke khimicheski ochishchennoy vody v pitatel'nyu)

PERIODICAL: Energetik, 1958, Nr 10, pp 35 - 36 (USSR)

ABSTRACT: A.S. Savel'yev (City of Vol'sk, Saratov oblast') asked the
author by what means it is possible to determine how much
chemically purified water may be added to the condenser
of the turbine used to feed TM-35 boilers. The author
answers this question.

1. Turbines--Operation 2. Water--Applications

Card 1/1

SMIRNOV, Vladimir Petrovich. Primalni uchastiye: LADITSKIY, V.F.,
kand.tekhn.nauk; SHAPKIN, I.F., kand.tekhn.nauk; MIKHAYLOVICH,
A.M., inzh.. KNORRE, G.F., prof., doktor tekhn.nauk, zaslu-
zhennyi deyatel' nauki i tekhniki, red.; VORONIN, K.P.,
tekhn.red.

[Boiler units] Kotel'nye ustanovki. Pod red. G.F.Knorre.
Moskva, Gos.energ.izd-vo, 1959. 303 p. (MIRA 12:8)
(Boilers)

AUTHOR: Shapkin, I. F. SOV/91-59-2-29/33

TITLE: About Cleaning the Boilers from Scale
(Ob ochistke kotlov ot nakipi)

PERIODICAL: Energetik, 1959, Nr 2, pp 39-40 (USSR)

ABSTRACT: Replying to a reader's question, the author shortly describes the methods of cleaning steam boilers from scale, approved by the Technical Administration of the Ministry of Power Plants. He notes their complexity and uncertainty as to securing the desired effect and suggests to by-pass the necessity to clean steam boilers of scale by way of preparations of water for boilers prior to its feed-in. He then refers the inquirer to a series of special literature. There are 2 Soviet references.

Card 1/1

.SHAPKIN, Il'ya Fedorovich; BELOSEL'SKIY, B.S., red.; VORONIN, K.P.,
tekh.n.red.

[Small-capacity plunger and piston pumps used in heat-power
engineering] Plunzhernye i porshnevye nasosy maloi proizvo-
ditel'nosti v teploenergetike. Moskva, Gos.energ.izd-vo, 1960.
94 p. (MIRA 14:1)

(Pumping machinery)

(Power engineering--Equipment and supplies)

SHAPKIN, I.F.

Quantitative evaluation of the effectiveness of the magnetic treatment of feed water for steam boilers. Gaz. prom. 6 no.11:28-30 '61. (MIRA 15:1)

(Boilers) (Feed-water purification)

S/193/60/000/005/007/012
A004/A001

AUTHOR: Shapkin, I.M.

TITLE: The "Meteor" Passenger Submerged Hydrofoil Motor Craft

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 5, pp.
56 - 58

TEXT: In 1959 the "Krasnoye sormovo" im. A.A. Zhdanov Plant launched the 150-passenger submerged hydrofoil motor craft "Meteor", designed by the chief designer R.Ye. Alekseyev. The author claims this craft to be the biggest in the world of this type. She is intended for service on inland waterways and can also be used for coastal navigation. Fuel and oil supply ensure a cruising range of 600 km at a speed of 70 km/h. Two M-50 diesel engines, actuating the propeller shaft through a reversing reducer, are used as main drive. The main engines are remote-controlled. Start, reversing and fuel supply control are effected from the wheel house. A combined diesel-generator-compressor-pump setup serves as auxiliary power plant. Besides, four lead-acid accumulator batteries of 256 amp.h capacity, two 1 kw generators of 25 v and an auxiliary 4.5 kw generator are used as power sources on the craft. Radio communication with the coast is ensured by a shortwave telephone radio station. The craft has two welded hydrofoils of anti-

Card 1/3

S/193/60/000/005/007/012
A004/A001

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The "Meteor" Passenger Submerged Hydrofoil Motor Craft

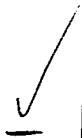
corrosion steel. Their profile and shape ensure high hydrodynamic properties and an adequate sea stability when the craft is traveling on the foils clear of the water. In coastal navigation the superstructure of the ship can hold 130 passengers in three saloons and one stateroom. The overall glazing of the saloons ensures a good view for the passengers. The embarkation deck and passenger baggage room are located between the bow and midship saloons. The wheelhouse is on the upper deck flush with the superstructure. The passenger saloons are equipped with aircraft-type seats with collapsible backs. The inland waterway version of the craft can carry 150 passengers; in this case the distance between the passenger seats is reduced. The hull of the craft is a riveted duraluminum structure. Some structures are welded of aluminum-magnesium alloy parts. The hull is divided into compartments by bulkheads reaching up to the deck. Superstructure and hull are one single unit. The structural elements, the side plating and deck plating ensure the stability of the hull. The craft is controlled from the wheelhouse, two steering wheels are power-operated by a hydraulic system, while one emergency steering wheel is intended for manual hydraulic control. The following technical data are given: overall length - 34.4 m; breadth at the deck - 6.0 m;

Card 2/3

The "Meteor" Passenger Submerged Hydrofoil Motor Craft

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A004/A001

Freeboard - 2.2 m; overall depth when cruising on hydrofoils - 1.2 m; overall depth when floating - 2.3 m; displacement under full load - 52.15 tons; passenger holding capacity: coastal line traffic version - 130, suburban traffic version - 150; service power of the main engines - 2 x 850 HP; cruising speed at full displacement - 70 km/h; top speed - 80 km/h. There is 1 figure.



Card 3/3

SNAPKIN, I.M., Arch.

Passenger motorship "Sputnik" on underwater wings. Sudostroenie
27 no.10:22-24 0 '61. (MIRA 14:12)
(Planing hulls)
(Merchant ships--Passenger and cargo)

SHAPKIN, K.D., dots.; NIKOLAYEV , L.A., prof., red.

[Preparation, properties, and uses of polymers] Poluchenie, svoistva i primeneniye polimerov; uchebnoe posobie. Pod red. L.A.Nikolaeva. Moskva, Mosk. in-t inzhenerov zhel-dor. transporta, 1962. 45 p. (MIRA 16:4)
(Polymers)

SHAPKIN, K.M.

New design of 900 x 700 mm. four-roll crushing machines.
Proizv.opyt v tiazh.mash. no.3:82-88 '55. (MLBA 10:2)

(Crushing machinery)

SHAPKIN, M.Ya., mayor meditsinskoy sluzhby, kandidat meditsinskikh nauk

Method for inverting the appendix stump in appendectomy. Voen.med.

zhur. no.12:67 D '56.

(MLBA 10:3)

(APPENDIX (ANATOMY)--SURGERY)

SHAPKIN, M.Ya., kandidat meditsinskikh nauk (Novograd-Volynskiy, Zhitomirskoy oblasti, voyenny gospital' no.412)

Appendix stump inversion in appendectomy. Vest.khir. 77 no.10:103-104
O '56. (MLBA 9:12)

(APPENDIX, surg.
stump immersion after appendectomy)

10(4); 21(5); 24(8) PHASE I BOOK EXPLOITATION SOV/2457

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniya v narodnom khozyaystve i nauke. 24, Moscow, 1957

Teplotekhnika i gidrodinamika: trudy konferentsii, tom. 4 (Heat Engineering and Hydrodynamics: Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, Vol. 4). Moscow, Gosenergoizdat, 1958. 88 P. Errata slip inserted. 2,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR, and USSR. Glavnoye upravleniye po ispol'zovaniyu atomnoy energii.

Eds.: M. A. Strykovich (Resp. Ed.), G. Ye. Kholodovskiy, and E. S. Pashchenko. Ed. of Publ. House: L. N. Sinel'nikova; Tech. Ed.: N. I. Boranov.

PURPOSE: This collection of articles is intended for scientists and laboratory workers concerned with the use of radioactive and stable isotopes.

COVERAGE: This collection of papers deals with the application of radioactive and stable isotopes as measuring tools in various types of scientific investigation. No personalities are mentioned. References are given after some of the articles.

2. Bartolomey, G. G., Ye. G. Vinobur, V. A. Kalokolitsey, and V. L. Farnitskiy. Use of Gamma Rays for Studying the Process of Diffusion 9

3. Kutateladze, S. S., and V. M. Moskvichova. Use of Gamma Radioscopy for Studying the Hydrodynamics of a Multifluid System 12

4. Poltavkin, P. G., and N. A. Shapkin. Method of "Tagged" Atoms for Investigating Water and Steam Content in Surface Boiling of a Fluid 16

5. Kudryavtsev, V. S. Determining the Specific Surface Area of Quartz and Cement Powders by the Sorption Method With the Use of "Tagged" Atoms 20

6. S. Moskvin, Y. M., and I. I. Kurbatova. Use of Radioactive Isotopes for Studying Sulfate Corrosion of Concrete 28

7. Raylovich, M. A., V. I. Ferronskiy, and V. A. Likhin. Methods for Determining the Density and Moisture Content of Soils With the Aid of Radioactive Emissions 33

8. Polozova, L. O., and R. P. Reyzman. Study of the Processes of Moisture Transfer in Building Materials by Means of Gamma Radioscopy 38

9. Strykovich, M. A., I. Kh. Khaybullin, and L. K. Khokhlov. Use of Radioactive Isotopes for Investigating the Solubility of Salts in Water Vapor at High Pressures 41

10. Sterman, L. S., A. Ya. Antonov, and A. V. Surnov. Investigation of the Characteristics of Vapor at a Pressure of 185 atm. With the Aid of Radioactive Isotopes 46

11. Dubrovskiy, V. A. Use of Radioactive Isotopes for Observing the Motion of the Molten Glass Mass in Glass Furnace Tanks 52

12. Ruzhitskiy, V. V. Use of Radioactive Isotopes in Studying the Filtration of Fluids Through Porous Media 57

13. Leypunskaya, D. I., and A. Ya. Prulin. Radioisotope Methods for Investigating Flow Processes of Fluids in a Porous Medium 62

14. Bortz, M. A., L. S. Zarubin, V. S. Karimskiy, and L. J. Korasik. Investigation of the Hydrodynamics of a Fluid in the Conical Rotor of a Settling Centrifuge With the Aid of Radioactive Isotopes 67

15. Volgarovich, M. P., M. V. Churayev, and B. Ya. Minkov. Investigations of the Motion of Water in Peat Under Laboratory and Field Conditions With the Use of Radioactive Isotopes 72

16. Arkhangelskiy, M. M. Use of Radioactive Isotopes for Investigating Suspensions of River Silt 78

17. Yeznik, A. I., and A. S. Shubin. Use of Radioactive Isotopes for Investigating the Mechanism of the Drying Process 85

51

CC-4-10/24
AUTHORS: Poletavkin, P. G., Cand.Tech.Sc. and Shapkin, I.A., Eng.
TITLE: Water and steam content during surface-boiling of water.
(Vodo-i parosoderzhaniye pri poverkhnostnom kipenii vody).
PERIODICAL: Teploenergetika, 1958, No.4, pp. 54-58 (USSR).

ABSTRACT: In water-cooled reactors, the water acts as a moderator as well as a cooling medium. Therefore, the reactivity of the reactor and the distribution of neutron flux in the reactor depend on the volume and density of the water in the active zone. In non-boiling-water reactors only the water density can change, and the volume of water in the active zone is constant. But in the boiling-water type of reactor the quantity of water in the active zone may change as well as the density, because of steam formation. It is important to know the relationship between the volume and density of the heat-transfer medium, or the water and steam contents, as functions of the thermal loading, the rate of circulation etc. In boiling-water reactors there may be simultaneous boiling of steam that is heated up to the saturation temperature of the liquid, and of underheated steam (by which is meant water the main mass of which is not heated up to the saturation temperature at the given pressure).

Card 1/4

96-4-10/24

Water and steam content during surface-boiling of water.

This article is concerned with study of the relationship between the water and steam content and the magnitude of the heat flow, the rate of motion, underheating of the liquid and so on. In the process of surface heating, steam bubbles form continuously on the heating surface, grow to a certain size and then leave the surface. The gamma-radiation method is often used to measure the water and steam content during boiling. This method is useful only when there are thick layers of water. It is only applicable to surface boiling of water if very sensitive devices, such as scintillation counters or photo-multipliers, are available. The best method for accurate measurement of water and steam content during surface boiling is that of marked atoms, employing a dilute solution of a radioactive salt. Theoretical equations used in the method are derived. The requirements that have to be met by the radioactive salt and solution are summarized. The salt must be pure, easily soluble, and of low concentration; its radiation activity must be suitable and of short half-life. A great advantage of using marked atoms is that by this method the water and steam content can be determined in different parts of the

Card 2/4

96-4-10/24

Water and steam content during surface-boiling of water.

experimental heater. The experimental installation, illustrated in Fig.1, serves simultaneously to investigate heat-transfer and water and steam content. It is an ordinary closed circuit with a pump; the experimental conditions are described. To measure the water and steam content, the experimental section of the installation was provided with a lead chamber of wall thickness 5 - 6 cm containing two radiation counters, as depicted in Fig.2. The lead chamber could be moved along the experimental heater so as to measure the steam and water content at different places. The radioactive salt used was sodium fluoride, NaF, with radioactive Na^{24} having a half-life of 14.8 hours. This salt meets the various requirements postulated. Several groups of tests were made and, whenever practicable, only one parameter was changed in each test. Because of the short half-life of Na^{24} and the fact that tests sometimes lasted for a week, the time of measuring the impulses was recorded, making appropriate allowance for the reduced intensity of radiation from the salt. Tests on water and steam content with surface boiling were made under the following conditions: pressure, 7, 16 and

Card 3/4

Water and steam content during surface-boiling of water.^{96-4-10/24}

41 atms; rate of heat flow up to 2.5×10^6 kcal/m² hr; underheating of liquid 3 - 120°C; and water speed of 0.7 - 11.5 m/sec. Hitherto there has been no means of collecting experimental data on this subject, so the aim was to formulate the results as a relationship between the water content and the other parameters investigated, expressed in simple non-criterial form. Empirical formulae were obtained for the water and steam content during boiling of water in a tube 5.6 mm diameter with the range of variables already given. The general graphs of the results are given in logarithmic coordinates in Fig. 3. All the points lie within + 20% of a straight line. The scatter of the points is apparently due not so much to errors of measurement as to the instability of the actual process of steam formation. The empirical formulae are valid for tubes and channels heated over the entire perimeter and with geometrical dimensions similar to those of the experimental tube. Further work will be needed to establish the influence of tube dimensions and geometry on the results.

Card 4/4

There are 3 figures.

ASSOCIATION: Institute of Atomic Energy of the Ac.Sc. USSR.
(Institut Atomnoy Energii AN SSSR).

AVAILABLE: Library of Congress.

Shapkin, N.A.

SOV/96-58-5-10/27

AUTHORS: Poletavkin, P.G., Candidate of Technical Sciences and
Shapkin, N.A., Engineer

TITLE: Heat-transfer during the Surface-boiling of Water
(Teplootdacha pri poverkhnostnom kipenii vody)

PERIODICAL: Teploenergetika, 1958, Nr 5, pp 49 - 54 (USSR)

ABSTRACT: Special attention is now being paid to boiling-water reactors in which the heat-transfer medium is ordinary water. Boiling may be classified into two types, depending on the temperature of the liquid: boiling of liquid when the whole volume has been heated to the saturation temperature; and boiling in a boundary layer, or surface-boiling, when the main mass of the liquid is not heated to the saturation temperature. Both types of boiling can occur in boiling-water reactors and, it is therefore important to know the heat-transfer relationships in both cases. The study of surface boiling commenced relatively recently and much still remains to be done. This work describes new experimental results thereon and compares the results both with those of the ENIN AN SSSR (Power Institute of the Ac.Sc. USSR) and with design formulae, which are valid over a wide range of conditions. The experimental equipment was very similar to that used to

Card1/4

Heat-transfer during the Surface-boiling of Water SOV/96-58-5-10/27

investigate steam and water contents during the same process, which was described in Teploenergetika, 1958, Nr 4. The vertical experimental section was a tube of stainless steel of internal diameter 5.6 mm, 225 mm long. The tests on heat-transfer and on water and steam content were made simultaneously. In addition to the general measurements, measurements were made of the wall temperature of the experimental tube at three places along its length. Because of the use of a long heater, the temperature of the liquid and the degree of underheating varied by some tens of degrees on the test length. Thus, the experiments were specially informative. The tests were made at pressures of 7.16 and 41 atm., heat flow rates of up to 2.5×10^6 kcal/m²hour, underheating of 3 - 120 °C, and circulation rates of 0.7 - 11.5 m/sec. Fully developed methods are not available for working out experimental data on heat transfer during surface boiling or even during ordinary boiling. It is, therefore, very difficult to compare the results of different authors. However, two empirical relationships were derived for heat transfer during surface boiling, one for the case when the temperature of the liquid is not much below the saturation temperature and the

Card2/4

SOV/96-58-5-10/27

Heat-transfer during the Surface-boiling of Water

other for large degrees of underheating. These formulae satisfy the present experimental data and also the data given by the Power Institute of the Ac.Sc. USSR, which are plotted in Figure 4. The agreement between the test results confirms that the dimensions of the equipment have little influence on heat-transfer during surface-boiling.

The data of the Power Institute of the Ac.Sc. USSR for large degrees of underheating lie above the curve corresponding to our equation. Analysis of the experimental methods showed that the diphenyl mixture which was used as an auxiliary liquid to measure the temperature of the heating surface could be cooled on the test length. This caused an error in the determination of the temperature head between the heating surface and the boiling liquid. The error can be corrected by means of the curve given in Figure 5. The results of the Power Institute of the Ac.Sc.USSR when corrected in this way are plotted in Figure 6, and show good agreement with our own test results and curves.

With high rates of heat flow, the liquid is strongly heated, so that its physical properties change; therefore, heat-transfer calculations in heavily loaded heat exchangers should

Card 3/4

SCV/96-58-5-10/27

Heat-transfer During the Surface-boiling of Water

be made at a number of sections on the heating duct. It is then possible to establish reasonably accurately the boundaries of the different types of heat exchange, namely, convective heat exchange, surface-boiling and bulk-boiling. An explanation is given of how individual factors in the formulæ affect the process of heat exchange during surface-boiling. There are 7 figures, and 5 Soviet references.

Card 4/4 1. Heat transfer--Theory 2. Water--Heat transfer 3. Homogeneous reactors--Performance

A L 11524-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6001875

SOURCE CODE: UR/0190/65/007/012/2168/2170

AUTHORS: ^{44,55}Avilova, T. P.; ^{44,55}Bykov, V. T.; ^{44,55}Marinin, V. P.; ^{44,55}Shapkin, N. P.

77

ORG: Far-Eastern State University (Dal'nevostochnyy gosudarstvennyy universitet)

76

TITLE: ^{44,55}Synthesis of chlorinated ^{744,55}polytitaniumphenylsiloxane

B

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2168-2170

TOPIC TAGS: polymer, organometallic compound, organosilicon compound, organotitanium compound, chlorinated organometallic compound, *thermal stability*

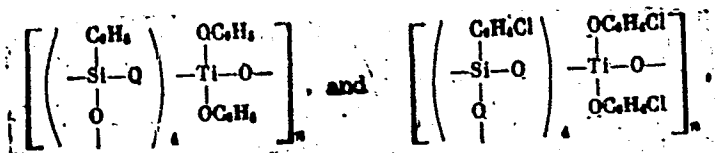
ABSTRACT: The synthesis of a chloro-derivative of polytitaniumphenylsiloxane is described. The starting material (polytitaniumphenylsiloxane) was prepared after the method of K. A. Andrianov, T. N. Ganina, and Ye. N. Khrustaleva (Izv. AN SSSR, Otd. khim. n., 1956, 798), and the chlorination was carried out in CCl_4 solution by means of activated chlorine. The resultant mixture of chlorinated polymers was subjected to a fractionation analysis. An elemental analysis and molecular weight determination for each fraction was also carried out. The thermal stability of the initial polymer and of its chlorinated derivative, and their solubility in benzene, acetone, and CCl_4 were determined. The experimental results are presented in tables. A structure for the initial polymer and its chloro-derivative is shown by

Card 1/2

UDC: 678.01:54+678.84

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ACC NR: AP6001875



The proposed structure was confirmed by IR spectroscopy. It was found that the chlorinated derivative has a slightly higher thermo-stability as compared with the initial polymer. Orig. art. has: 3 tables and 2 formulas.

SUB CODE: 011/ SUBM DATE: 03Feb65/ ORIG REF: 003/ OTH REF: 001

Card 2/2

HUSEL'TSOV, B.S. [Husel'tsov, B.S.]; SHAPKIN, O.I., agronom-entomolog

Experience in using AN-2 airplanes for spraying sugar beets. Mekh.
sil'.hosp. 9 no.3:10-12 Mr '59. (MIRA 11:4)

1. Direktor Kiselivs'koi mashinno-traktornoj stantsii, Cherkas'koi oblasti.
(Aeronautics in agriculture) (Sugar beets--Diseases and pests)

PANIN, V.; SHAPKIN, P.; POPOV, A.; DOBRYNIN, B.; RAKITIN, A.

What type of studies do we need. Sov. profsoiuzy 20 no.3:
20-21 F '64. (MIRA 17:3)

1. Organizatory profsoyuznoy gruppy Michurinskogo parovozoremontnogo zavoda, Tambovskoy oblasti.