SHVETS, A.S.

Iodine in iodized salt and measures contributing to the stabilization of iodine in iodized salt. Vop.pit. 14 no.2:49 Mr-Ap '55. (MLRA 8:6)

1. Iz kafedry biokhimii Chernovitskogo meditsinskogo instituta.

(IODINE,
iodized salt)
(SODIUM CHLORIDE,
iodized salt)

SHVETS, A.S., assistent

A short study of the Vashkovtsy and Kel'mentsy Districts of Chernovtsy Province area in connection with iodine content in the water and incidence of goiter. Gig. i san. 23 no.4:71-72 Ap '58. (MIRA 11:6)

1. Iz kafedry biokhimii Chernovitskogo meditsinskogo instituta.
(IODINE, determ.
in water, relation to incidence of goiter (Rus))
(GOITER, etiol. & pathogen.
relation to iodine content in water (Rus))

KOVALEV, M.M.; ZAMANSKIY, L.N.; YUKHIMETS, A.D.; SHVETS, A.S.; RUSNAK, I.K.

Pre- and postoperative oxidation-reduction processes in nodular endemic goiter. Probl. endok. i gorm. 10 no.5:37-40 S-O '64. (MIRA 18:6)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. M.M. Kovalev) i kafedra biologicheskoy khimii (zav. - dotsent L.N. Zamanskiy) Chernovitskogo meditsinskogo instituta.

POPOVSKIY, V. G.; GIDALEVICH, M. G.; DUL'NEVA, I. P.; ZASLAVSKIY, A. S.;
Prinimali uchastiye: UL'YANKIN, M. G.; ZELENSKAYA, M. I.;
SHCHELOKOVA, I. M.; DANILOV, M. A.; SHVETS, A. T.

Improving the technology of grape juice manufacture. Trudy MNIIPP 1:9-37 '61. (MIRA 16:1)

(Moldavia—Grape juice)

GASYUK, G.N.; TSVETKOVA, L.M.; Prinimali uchastiye: SHVETS, A.T.; LAGUNOVA, G.A.

Effect of ultrasonic waves on the microflora in the process of grape juice production. Trudy MNIIPP 2:75-80 '62. (MIRA 16:4)
(Ultrasonic waves—Industrial applications)
(Wine and wine making—Microbiology)

KOROBOVA, K.I., SHAROV, M.G.; SHVETS, A.V.

Introducing the manufacture of percale on automatic looms.
Tekst. prom. 24 no.2:32-33 F '64. (MIRA 17:3)

1. Glavnyy inzh. Novo-Tkatskoy fabriki Glukhovskogo khlopchatobumazhnogo kombinata (for Korobova). 2. Zaveduyushchiy tkatskim proizvodstvom Novo-Tkatskoy fabriki Glukhovskogo khlopchatobumazhnogo kombinata (for Sharov). 3. Nachal'nik tkatskogo tsekha Novo-Tkatskoy fabriki Glukhovskogo khlopchatobumazhnogo kombinata (for Shvets).

SHVETS, B.I.

Treating fractures of the clavicle by surgery and subsequent fixing of the splints with Rud'ko's apparatus. Vrach.delo no.8:823-825 Ag '57. (MLRA 10:8)

1. Khirurgicheskoye otdeleniye (zav. - B.I.Shvets) Karbonitskoy bol'nitsy Popasnyanskogo rayona Vorshilovgradskoy obl.
(CLAVICLE--SURGERY)

GANTSKE, A.K.; SHVETS, B.S.; SOKOLOVA, G.S., red.; SAYTANIDI, L.D., tekhn. red.

[Official republic-wide norms and estimates for building, assembling, and repairing work. Collection VR-4; repair of transformer substations in the electric system of the Rural Power Organization] Vedomstvennye respublikanskie normy i rastsenki na stroitel'nye, montazhnye i remontno-stroitel'nye raboty. Sbornik VR-4: remont transformatornykh podstantsii v elektrosetiakh Sel'energo. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961. 26 p. (MIRA 15:3)

1. Russia (1917- R.S.F.S.R.) Ministerstvo sel'skogo khozyaystva. (Electric substations--Maintenance and repair)

SHVETS, D.

Use speed and skill in fire extinction. Pozh.delo 9 no.8:27 Ag '63. (MIRA 16:9)

1. Nachal'nik Otdela pozharnoy okhrany g. Nikolayeva.
(Fire extinction)

BIZYAYEVA, P.S.; SHVETS, D.S.

Methods for using duodenal sounds. Med.sestra 17 no.1:39-41 Ja '58.
(MIRA 11:2)

1. Iz klinicheskogo sanatoriya "Eshchery" (Sukhumi)
(DUODENUM)
(MEDICAL INSTRUMENTS AND APPARATUS)

SHVETS, D.T.

Granular carbons for the manufacture of refined sugar. Sakh.prom. 36 no.11:34-36 N '62. (MIRA 17:2)

1. Ukrainskiy gosudarstvennyy institut po proyektirovaniyu predpriyatiy sakharnoy promyshlennosti.

L 29948-65 EWP(e)/EWT(m)/EPF(n)-2/EPR/T/EWP(t)/EWP(b) Ps-4/Pu-4 IJP(c) JD/WW/JG/AT/WH

ACCESSION NR: AP5006188 S/0226/65/000/002/0022/0026

AUTHOR: Kuz'ma, Yu. B.; Fedorov, T. F.; Shvets, E. A. 36 34

TITLE: Phase equilibria in the Zr-W-C system

SOURCE: Poroshkovaya metallurgiya, no. 2, 1965, 22-26 B

TOPIC TAGS: zirconium alloy, tungsten alloy, phase equilibrium, solid solution, x-ray crystallography, microstructure

ABSTRACT: The Zr-W-C system is studied by x-ray and microstructural analysis methods. The phase equilibria are determined in cast and annealed alloys at 1500 and 1950°C. Previous studies of this system have been devoted solely to the ZrC-WC section. It is found that 34 mol.% WC is dissolved in ZrC at 1500°C. This solubility increases to 40 mol.% at 1950°. It is found that there is a type NaCl ω-phase with cubic structure ($a = 4.25-4.30$ Å) in cast alloys based on an isoconcentrate of 50 at .% C which contain 2-10 at .% Zr. It is pointed out that there is a possibility for a still greater solubility of WC in ZrC at temperatures which are close to the melting point of the alloys. "The authors express their gratitude to Ye. I. Gladyshevskiy for discussing this work." Orig. art. has: 4 figures.

Card 1/4

L 29948-65

ACCESSION NR: AP5006188

2

ASSOCIATION: Institut metallurgii im. A. A. Baykova, L'vovskiy ordena Lenina gosuniversitet im. Iv. Franko (Institute of Metallurgy, L'vov "Order of Lenin" State University)

SUBMITTED: 26Jul63 ENCL: 02 SUB CODE: MM, SS

NO REF SOV: 004 OTHER: 005

Card 2/4

L 29948-65

ACCESSION NR: AP5006188

ENCLOSURE: 01

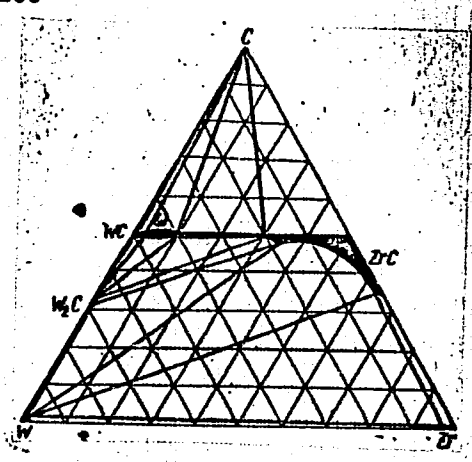


Fig. 1. Phase equilibria in cast alloys of the Zr-W-C system

Card 3/4

L 29918-65
ACCESSION NR: AP5006188 ENCLOSURE: 02

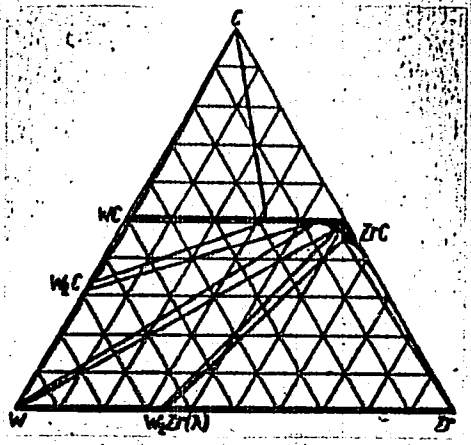


Fig. 2. Isothermic profile of the Zr-W-C system at 1500°C

Card 4/4

ZINCHEVSKIY, N.P.; SHVETS, F.V.; CHIRKOV, Yu.I.; KUCHERYAVENKO, I.A.

Concrete lining of the workings of scraper levels in ore mines. Met. i gornorud. prom. no.4:27-28 Jl-Ag '65. (MIRA 18:10)

ABRAMOV, F.A., prof., doktor tekhn. nauk; BOYKO, V.A., kand. tekhn. nauk; SHVETS, G.A., inzh.; TYAN, R.B., inzh.

Calculating complicated ventilation systems with the use of an electronic computer. Gor. zhur. no.11:61-63 N '64. (MIRA 18:2)

1. Dnepropetrovskiy gornyy institut i FIM AN UkrSSR.

ABRAMOV, [illegible], prof. [illegible] V.A. [illegible] SSSR [illegible], SHVETS, O.A., inzh.

Study of air flow interconnections in a mine ventilation system with the aid of a rapid electronic machine. Izv. vys. ucheb. zav.; gor. zhur. 8 no.2:144-150 '65. (MIRA 18:5)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema (for Abramov, Boyko, Tyan'). 2. Filial Instituta mekhaniki AN UkrSSR (for Shvets').

YERMOLIN, Nikolay Aleksandrovich, SHVETS, Grigoriy Georgiyevich;
YEVSEYEV, V. I., red.

[Design of power transformers; manual for term projects]
Raschet silovykh transformatorov; posobie po kursovomu
proektirovaniiu. Izd.2., ispr. i dop. Leningrad, Leningr.
elektrotekhn. in-t, 1964. 248 p. (MIRA 19:1)

1. Kafedra elektricheskikh mashin Leningradskogo elektro-
tekhnicheskogo instituta imeni V.I.Ul'yanova (for Yermolin).

Silva B, G. I.

Run-off Distribution of USSR Rivers According to Press of Academy of Science Ukrainian SSSR, Kiev: 1946. 108 pp with Drawings.
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

SHVETS, G. I.

"Minimum Discharges of the River Dnepr" (Hydrology of Land, Rivers) Izv. In-ta gidrol. i gidrotekhniki AN USSR, 10 (17), 1953, pp 93-106

Abs

M-31146, 1 Feb 55

SHVETS, G I

1. TROYD, N. I., SHVETS, G. I.

2. USSR (600)

4. Hydrology - Dnieper Valley

7. From the history of hydrological investigations of the Dnieper, Visnyk AN URSR 24 No. 1, 1953

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

SUKHOMEL, G.I.; SHVETS, G.I.

Development of research in hydrology, hydraulics, and hydraulic engineering in the Ukraine. Izv. Vsest. gidr. AN URSR 13:3-19 '[illegible] (Ukraine--Hydraulic engineering) (MLRA 9:2)

SHVETS, G.I.

Dniepr River high waters for a thousand-year period. Izv.Inst. gidrol. i gidr.AN URSR 13:20-48 '55. (MLRA 9:2)
(Dnieper River--Floods)

DROZD, N.I.; SHVETS, G.I.

Dnieper River levels at Lotsmano-Kamenka. Izv.Inst.gidrol.i gidr. AN URSR 13:112-121 '55. (MLRA 9:2)
(Dnieper River--Stream measurements)

SHVETS', G. I.

Hydrological investigations for the use of the water resources management. Visnyk AN URSR 26 no.5:57-58 My '55. (MLRA 8:8)
(Ukraine--Hydrology)

SHVETS', G.I.

Some conclusions about fluctuations in the water level of the Dnieper River. Visnyk AN URSR 26 no.10:64-66 O '55. (MLRA 9:1)
(Dnieper River)

SHVETS, G.I.

Basic characteristics of flow in the Dnieper River at Kremenchug.
Dop. UN URSR no.4:365-369 '56. (MLRA 9:12)

1. Institut gidrologii i gidrotekhniki Akademii nauk URSR. Predstavleno akademikom Akademii nauk USSR G.I. Sukhomelom.
(Dnieper River)

SHVETS, G. I., CHIPPING, G.Q., kandidat tekhnichnikh nauk, vidpovidal'niy redaktor; SHTUL'MAN, I.F., redaktor vidavnitstva; ZHUKOVS'KIY, A.D., tekhnichniy redaktor.

[Dnieper run-off below Kiev] Stik Dnipra nyzhche Kyieva. Kyiv, Vyd-vo Akad.nauk URSR, 1957. 126 p. (MIRA 10:11)
(Dnieper River)

SHVETS', G.I., DROZD, N.I.; LEVCHENKO, S.P.; MOKLYAK, V.I., vidpovidal'niy redaktor; ZISINDER, Ye.A., tekhnicheskiy redaktor

[Catalog of rivers of the Ukraine] Katalog richok Ukrainy. Kyiv, 1957. 191 p. (MLRA 10:7)

1. Akademiya nauk URSR, Kiyev. Institut gidrologii ta gidrotekhniki (Ukraine--Rivers)

[illegible], S. L. and K. P. [illegible]

Reported on the secular fluctuations of the amount of water in the Dnepr and on historical floods at the lower parts of the Daugava.

report presented at the 3rd All-Union Hydrological Congress, 7-17 Oct 1957, Leningrad.

(Izv. Ak Nauk SSSR, ser geograf., 3, pp3-9, '58)

MOKLYAK, Vladislav Ivanovich; SHVETS', G.I.[Shvets', H.I.], kand.tekh.nauk, vidpovidal'nyy red.; PECHKOVSKA, O.M. [Pechkovs'ka, O.M.], red. vidavnitstva; RAKHLINA,N.P., tekhn.red.

[Maximum discharge of snow waters by rivers of the Ukraine] Maksymal'ni vytraty vid talykh vod na richkakh URSR. Kyiv, Vi-vo Akad. nauk URSR, 1957. 162 p. (MIRA 11:2)
(Ukraine--Runoff)

SAVEIS, G.I.

On the results of the conference. Trudy OGMI no.15:223-224 '58. (MIRA 12:7)

(Runoff)

ZHELEZNYAK, Iosif Aronovich [Zhelezniak, I.A.]; SHVETS', G.I. [Shvets', H.I.], kand.tekhn.nauk, otv.red.; PECHKOVSKAYA, O.M. [Pechkovs'ka, O.M.], red.izd-va; MIL'OKHIN, I.D., tekhn.red.

[Annual distribution of river discharges in the Ukraine] Vnutririchnyi rozpodil stoku richok Ukrainy. Kyiv, Vyd-vo Akad.nauk URSR, 1959. 135 p. (MIRA 13:1)
(Ukraine--Rivers)

SHVETS, Grigoriy Ivanovich [Shvets', H.I.]; MOKLYAK, V.I., kand.tekhn. nauk, otv.red.; PECHKOVSKAYA, O.M. [Piechkovs'ka, O.M.], red. izd-va; BUNIY, R.A., tekhn.red.

[Stream flow rate of the Dnieper River] Vodnist' Dnipra. Kyiv, Vyd-vo Akad.nauk URSR, 1960. 180 p. (MIRA 14:4)

(Dnieper River--Hydrography)

SHVETS, G.I. [Shvets', H.I.]; ZIL'BAN, M.S.; KOBERNIK, S.G. [Kobernyk, S.H.]; OLEYNIK, A.Ya. [Oliinyk, O.IA.]; PIVOVAR, N.G. [Pyvovar, M.H.]; ROZOVSKIY, I.L. [Rozovs'kyi, I.L.]; SLOBODYAN, R.T.; DIDKOVSKIY, M.M. [Didkovs'kyi, M.M.], kand.tekhn.nauk, otv.red.; KRSHTSEL', Sh.G. [Krshtsel', Sh.H.], red.-leksikograf; SHIKAN, V.L., red.izd-va; BURIY, R.O., tekhn.red.

[Russian-Ukrainian hydraulic-engineering dictionary; 13000 terms] Russko-ukrainskii gidrotekhnicheskii slovar'. 13000 terminov. Kiev, Izd-vo Akad.nauk USSR, 1960. XIV, 192 p. (MIRA 13:7)
(Hydraulic engineering--Dictionaries)
(Russian language--Dictionaries--Ukrainian)

SHVETS, G.I.

Information on the water volume of the Dnieper in prehistoric time.
Izv.Vses.geog.ob-va 92 no.5:443-449 S-O '60. (MIRA 13:9)
(Dnieper River--Hydrology)

SHVETS, G.I.

Water supply indicators for the Northern Donets River. Trudy Ukr-NIGMI no.34:68-75 '62. (MIRA 15:7)
(Donets River--Runoff)

SHVETS, G.I. [Shvets', H.I.]

Water resources of the Ukraine and their utilization. Geog. abir. no.6:100-108 '62. (MIRA 15:9)
(Ukraine--Water resources development)

SVEC, G.I. [Shvets, G.I.], C.Sc.

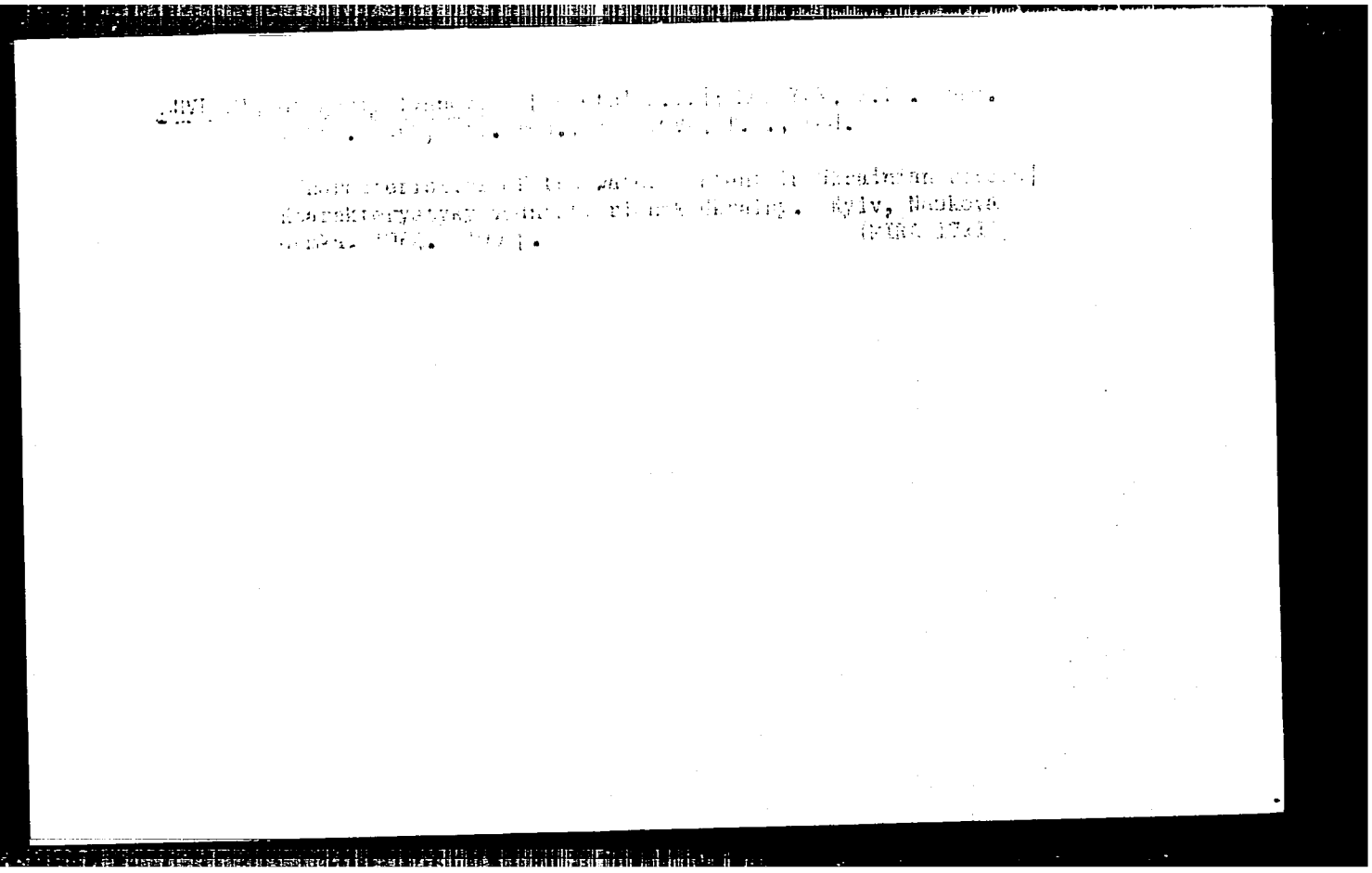
An attempt at reconstructing the hydrological data of the Dnieper River. Vodohosp cas 10 no.1:3-10 '62.

1. Ustav hydrologie a hydrotechniky Akademie vied Ukrajinskej SSR, Kijev [Kiev].

VISHNEVSKIY, Palladiy Fedorovich[Vyshnevs'kyi, P.F.]; DROZD, Nafanail Iosipovich; ZHELEZNYAK, Iosif Aronovich; KRYZHANOVSKAYA, Ariada Borisovna[Kryzhanivs'ka, A.B.]; KUBYSHKIN, Geo.giy Pimenovich[Kubyshkin, H.P.]; LYSENKO, Klara Arkhipovna; MOKLYAK, Vladislav Ivanovich; CHIPPING, Galina Aleksandrovna [Chippinh, H.O.]; SHVETS, Grigoriy Ivanovich[Shvets, H.I.]; PECHKOVSKAYA, O.M.[Pechkovs'ka, O.M.], red.izd-va; RAKHLINA, N.P., tekhn. red.

[Hydrologic calculations for rivers of the Ukraine]Gidrologichni rozrakhunky dlia richok Ukrainy; pry vidsutnosti sposterezhen'. [By]P.F.Vyshnev'kyi ta inshi. Kyiv, Vyd-vo Akad.nauk URSR, 1962. 385 p. (MIRA 16:2)

(Ukraine--Rivers)



SHVETS, G.I.

Beginning of hydrologic observations on the rivers of the Ukraine. Trudy UkrNIGMI no.51:105-115 '65. (MIRA 18:9)

KEPERSHA, L.M.; GAYDUKOV, I.M.; BOVIN, Ye.I.; DENISOVA, V.P.; PANOV, A.M.; SHVETS, G.I.

Rubber coating of metal-cord cloth in a cord calender unit. Kauch. i rez. 24 no.8:29-33 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i Omskiy shinnyy zavod.

L 55855-65 EWT(1)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b) Pi-4 IJP(c) JD/JG/GG
ACCESSION NR: AP5013114 UR/0370/65/000/002/0120/0127
669.017.13

24
B

AUTHOR: Gladyshevskiy, Ye. I. (L'vov); Shvets, G. N. (L'vov)

TITLE: The equilibrium diagram and crystal structures of V-Fe-Si ternary compounds

SOURCE: AN SSSR. Izvestiya. Metally; no. 2, 1965, 120-127

TOPIC TAGS: phase equilibrium, vanadium compound, iron compound, silicon compound

ABSTRACT: The purpose of the article was to determine the ternary equilibrium diagram for V-Fe-Si and to specify the boundaries and crystal structures of single phase regions of ternary compounds. Alloys were examined in the cast state and annealed at 1200, 1000 and 800°C. X-ray and metallographic ($HF-HNO_3$ etchant) analysis of phase boundaries were used. The existence of four ternary compounds (χ, R, δ, and δ_1 phase) was established. The χ-phase has a wide homogeneity region at temperatures close to the melting point (40-55 at. % Fe and 15-30 at. % Si), which narrows as the temperature is reduced. This phase has a body-centered cubic crystal structure; the lattice period in the homogeneity region varies from 8.81 to 8.86 Å when the V content is increased. The narrow region of homogeneity which includes

Card 1/2

L 55855-65

ACCESSION NR: AP5013114

the $V_3Fe_5Si_2$ composition (a = 8.843 ± 0.001 Å) corresponds to this phase at 1000°C. The R-phase region at 1000°C has a trigonal crystal structure, includes the composition $ViFe_2Si$ and is analogous to the R-phase in the Mo-C-Co system. The δ-phase at 1000°C is tetragonal, includes the composition $V_5Fe_4Si_4$ and approximates the structure δ-MoNi. In alloys annealed at 800°C in the central portion of the diagram including VFeSi, δ (unknown crystal structure) forms. Tables of interplanar spacings, hkl indices and relative intensities are given for the R-phase. Due to the stabilizing effect of silicon, the σ-phase of V-Fe forms at much higher temperatures than the 1200°C solid state formation temperature of the binary σ. Solubilities are given at 1000°C for Si and V in Fe, and for the addition of Si, Fe, or V to a binary compound containing the remaining two elements. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 19Jun63 ENCL: 00 SUB CODE: MM, SS

NO REF SOV: 009 OTHER: 007

Card 2/2

SHVETS, G.V.

Concerning the consultation "Use of grounding conductors."
Energetik 11 no.11:40-41 N '63. (MIRA 16:11)

SHVETS, I.

For effective competition. Blok.agit.vod.transp. no.16:16-22 S '56.
(MLRA 9:11)

1. Sekretar' partorganizatsii teplokhoda "Kapitan Antipov" Dunayskogo parokhodstva.

(Shipping)

SHVETS, I., inzh. sdatochnyy mekhanik

Maintenance and repair of the crankshafts of type D-50 engines.
Mor.flot 21 no.2:31-34 F '61. (MIRA 14:6)

1. Zavod imeni 61 kommunara.
(Marine engines--Maintenance and repair)

BRENNER, V.A., kand. tekhn. nauk; VAS'KIN, N.I., gornyy inzh.; DANDZBERG, L.K., brigadir; ZAKON, Ya.A., inzh.; SHVETS, I.A., inzh.; YUDIN, N.P., kand. tekhn. nauk

New record for mining development workings in coal with the "Karaganda 7/15" cutter-loader. Ugol' 40 no.6:7-11 Je '65. (MIRA 18:7)

1. Giprouglegormash (for Brenner, Yudin). 2. Kombinat Karabandaugol' (for Vas'kin). 3. Shakhta No.122 tresta Sarar'ugol' (for Dandzberg, Zakon). 4. Trest Sarar'ugol' (for Shvets).

DOBROVOL'SKIY, V.N., inzh.; LUTAN, N.F., inzh.; SHVETS, I.L., inzh.

Some remarks on marine power plants used on whalers. Sudostroenie 24 no.9:40-42 S '58. (MIRA 11:11)
(Marine engines) (Whalers)

SHVETS, I.L., inzh.

Crankshaft straightening without a complete disassembly of the D-50 motor. Sudostroenie 27 no.3:52-54 Mr '61. (MIRA 14:3)
(Cranks and crankshafts)

SHVETS, I.N.

Dependence of the magnetic properties of powdered magnetite on grain size. Zap. Ukr. otd. Min. ob-va [no.1]:140-145 '62. (MIRA 16:8)

1. Pedagogicheskiy institut, kafedra fiziki, Krivoy Rog.

SHVETS, I.N.

Magnetic properties of the ores of the Krivoy Rog Basin Mining and Ore Dressing Combines. Sbor. nauch. trud. KGRI no.17:201-208 '63.

Changes in the magnetic properties of oxidized ores of the Southern Mining and Ore Dressing Combine following magnetizing reduction roasting. Ibid.:209-212 (MIRA 17:1)

SHVETS, I.T.

35180. Teoreticheskie Osnovy Issledovaniya Gazovykh Potokov. V SB: 50 Let Kievsk. Politekhn. In-Ta. Kiev, 1948, s. 325-37

SO: Letopis' Zhurnal'nykh Statey, Vol, 48, Moskva, 1949

SHVETS', I.T., professor.

Analytical determination of the optimal rate of pressure increase in the TVRD unit. Dop.AN URSR no.2:50-54 '48. (MLRA 9:9)

1.Predstavlene Vchenoyu radoyu Institutu teploenergetiki AN URSR.
(Gas turbines)

SHVETS, I.T., professor.

Calculation of combustion chamber processes in jet engines. Sbor.trud.Inst.energ.AN URSR No.3:47-64 '48. (MLRA 9:1)
(Airplanes--Turbojet engines)

SHVETS', I.T., professor.

Problems in the over-all utilization of natural and industrial gases in the national economy of the Ukrainian S.S.R. Visnyk AN URSR 21 no.1:64-68 Ja '49. (MLRA 9:9)

(Ukraine--Gas industry)

SHVETS, I.T., deystvitel'nyy chlen; SHVETSOV, P.D., professor [editors].

[Thermodynamic installations of small and medium capacity; a reference book. Teploenergeticheskie ustanovki maloi i srednei moshchnosti; spravochnoe rukovodstvo. Pod red. I.T.Shvetsa i P.D.Shvetsova. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry [Ukr.otd-nie] 1952. 514 p. (MLRA 6:7)

1. Akademiya nauk Ukrainskoy SSR (for Shvets). (Thermodynamics)

1. SHVETS, I. T.

2. USSR (600)

4. Russia - Public Works

7. Aiding communism's great construction projects. Trudy Inst. teol. AN URSR No. 6, 1952.

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

PALLADIN, O.V.; SEMENENKO, M.P.; SAVIN, G.M.; SHVETS, I.T.; PATON, Ye.O.; KAVETS'KIY, R.Ye.; STRAZHESKO, M.D.; FILATOV, V.P.; PROTOPOPOV, V.P.; FOL'BORT, G.V.; VOROBYOV, A.M.

Grigorii Ivanovych Markelov; obituary. Medych.zhur. 22 no.3:101 '52. (MARKELOV, GRIGORII IVANOVYCH, 1880-1952) (MIRA 11:2)

ROMANENKO, S.V.; SHVETS', I.T., diysnyy chlen.

Flow of gas in conditions of convective heat exchange and friction. Dop. AN URSR no.3:208-214 '53. (MLRA 6:6)

1. Kiyivs'kyy politekhnichnyy instytut (for Romanenko). 2. Akademiya nauk Ukrayins'koyi RSR (for Shvets'). (Gases, Flow of) (Thermodynamics)

SHVETS, I.T.

The Communist Party in the Soviet Union's electrification program.
Visnyk AN URSR 24:10-19 D '53. (MLRA 7:3)
(Ukraine--Electrification) (Electrification--Ukraine)

1. Diysniy chlen AN URSR.

SHVETS', I.T.; DIBAN, E.; KONDAK, M.M.

The problem of contact heat exchange. Dop. AN URSR no.5:345-350 '54. (MLRA 8:7)

1. Diysniy chlen AN URSR (for Shvets'). 2. Institut teploenergetiki AN URSR. (Heat--Conduction)

Shvets, I. T.

87/114 536.241 :621.438-253

The Study of Contact Heat Exchange Between Parts of Machines

Izv. Akad. Nauk, Otd. Tekh. Nauk. (9), 63-79 1954

E.P. Dybas, N.M. Kondak and I.T. Shvets

U.S.S.R.

Contact heat exchange was studied on a turbine wheel with blades made of different steels and alloys and anchored in different ways. The effect of the following factors on contact heat exchange was studied: surface finish, mechanical properties of materials involved, compression of the contact, existence of oxide layer, insulation layer and thermal treatment of the surface of contact. As a result of experiments, an appreciable effect of heat conductivity of the surrounding medium on the contact heat exchange was established. (Bibl. 1)

SHVETS', I.T.

Utilizing brown coal of the Ukraine for over-all power production.
Visnyk AN URSR 25 no 12:34-37 D '54. (MIRA 8:4)

1. Diysniy chlen AN URSR.
(Ukraine--Coal)

SHVETS, I.T.

Cooperation of Russian and Ukrainian scientists in the development of power engineering in the Ukraine. Nar. z ist.tekh. no.2:5-13 '55. (Ukraine--Power engineering) (MLRA 9:4)

FEDOROV, V.I.; SHVETS', I.T.; SHEL'MENKO, N.N.

On temperature distribution in turbine rotors. Dop.AN URSR no.6: 533-536 '55. (MLRA 9:7)

1.Diysniy chlen AN URSR (for Shvets').2.Institut teploenergetiki AN URSR. (Impellers)

AID P - 3885

Subject : USSR/Power Eng.

Card 1/1 Pub. 110-a - 6/17

Authors : Fedorov, V. I., Kand. Techn. Sci., I. T. Shvets, Dr. Tech. Sci., and N. N. Shel'menko, Eng.

Title : Research on temperature distribution in some turbine rotors at unstable heat transfer

Periodical : Teploenergetika, 11, 27-31, N 1955

Abstract : The article deals with research on deformations in rotors which occur during start and stoppage of operations due to increased heat loads. Different makes of rotors are discussed. The results of the research are presented with 7 figures. The use of welded, disc-shaped rotors is advocated.

Institution : None

Submitted : No date

SHVETS, I.T.; SHVETSOV, P.D., professor; DYBAN, Ye.P., mladshiy nauchnyy sotrudnik.

Study of heat transfer around the base of moving blades in turbines. Trudy Inst.tepl.URSR no.12:13-20 '55. (MLRA 9:7)

1.Deystvitel'nyy chlen AN USSR (for Shvets)
(Heat--Transmission) (Blades)

SHVETS, I.T.; DYBAN, Ye.P., mladshiy nauchnyy sotrudnik; KONDAK, N.M., kandidat tekhnicheskikh nauk.

Research on contact heat exchange between parts of heat engines. Trudy Inst.tepl.UkSSR no.12:21-53 '55. (MLRA 9:7)

1.Deystvitel'nyy chlen AN USSR (for Shvets).
(Heat--Transmission) (Heat engines)

Shvets, I.T.

Distr: 4E4f

915. Dorfman, A. Sh., and Shvets, I. T., Certain particular cases in solving equations for the boundary layer in a compressible fluid (in Russian), *Prikl. Mat. Mekh.* 19, 4, 509-512, July/Aug. 1955.

Authors say equations for the boundary layer in a compressible fluid have been solved only for constant stream velocity, i.e, zero pressure-gradient.

They give a solution for a further class of stream velocity distributions, assuming, always, that Prandtl number = 1, viscosity is proportional to temperature, and no heat transfer to body.

They introduce new variables ξ, η, (5) said to be analogous to Dorodnitsin's variables. Variables ξ, η are related by integral relations with coordinates X, Y and with gas arguments. With help of ξ, η, and a stream function ψ, authors obtain, from general equations, a special form of equation in partial derivatives (16) having the property that for the particular stream velocity distribution $U = c\xi^m$ (17) which can be transformed into the common differential equation

$$\Phi''' + \Phi'' \Phi = \frac{2m}{m+1} (\Phi'^2 - 1) \quad (20)$$

where $\Phi(r)$ and r are new variables related to ξ, η, ψ. Authors say (20) is of the same form as the known boundary-layer equation for incompressible fluid for $U = CX^m$, whose solutions are tabulated.

In the exceptional case $m = -1$, equation (20) degenerates into

4

1

1/2

DORFMAN, A. Sh.

$$\Phi''' - \Phi'^{-1} + 1 = 0 \quad (22)$$

also equal to that of incompressible fluid (having solutions only for $C > 0$, accelerated stream.)

Finally, authors give a transformation permitting a return to the old arguments X, Y. For integer atomicity of the gas, specially for air $k = 1, 4$, solution takes a simple analytical form.

Reviewer notes a parameter α participating in definition of variables (5) is determinated *after* giving to velocity distribution the special shape (17), and so the constancy of α obliges to maintain that distribution. According to this, authors title their paper, "Certain particular cases ...." However, the possibility of varying C and m gives to expression (17) certain flexibility; and, therefore, reviewer believes, authors' solution may be of practical interest. Their mathematical deductions are done in an elegant manner.

Two bibliographical references in Russian are given.

N. Krivoshein, Argentina

SHVETS, I.T.

Some scientific problems in the field of heat-power engineering. Visnyk AN URSR 26 no.2:3-14 F '55. (MLRA 8:4)

1. Disniy chlen AN URSR.
(Heat engineering)

SHVETS, I.T.

Situation and problems of scientific research in the field of the history of technology in the Ukrainian S.S.R. Visnyk AN URSR 26 no.9:61-72 S '55. (MLRA 8:11)
(Ukraine--Industrial arts--History)

Abst Journal: Referat Zhur - Mekhanika, N- 3, 1957, 3165

Author: Dibal', E. P. Shvets, I. T.

Institution: None

Title: Concerning the Problem of Hydraulic Resistance and Heat Exchange in Capillary Channels

Original Periodical: Dopovidi AN URSR, 1956, N- 1, 50-53; Ukrainian; Russian resumé

Abstract: Report on the results of an experimental investigation of the hydrodynamic resistance and heat exchange in the case of motion of an incompressible liquid (air, M < 0.15) through capillary channels. It is stated that the ordinary qualitative laws that characterize the heat exchange and the hydraulic resistance remain in force.

Card 1/1

Shvets I. T.

USSR/Fluid Mechanics

Abs Jour: Ref Zhur Mekhanika, No 6, 1957; 9076

Author : Shvets, I. T., Dyban, Ye. P.
Inst :
Title : Investigation of the energy exchange in the mounting clearances of herring-bone stems of working blades.

Orig Pub: Sb. tr. In-t. teploenerg. ANSSSR, 1956, No 13, 3-19

Abstract: Results of the experimental investigation of heat-emission and hydraulic resistance to the flux of air through clearances in joints between turbine blades and herringbone stems are given. A description of apparatus and methods of measurement is included. The validity of the laws of Poiseuille and Blasius for the coefficient of resistance of a capillary tube with laminar and turbulent flow of air through it is confirmed, and certain conditions for the existence of a transition state are established. Empirical conditional dependence relationships are

Card 1/2

SOV/124-57-8-9103

Translation from: Referativnyy zhurnal, Mekhanika 1957 Nr 8 p 75 (USSR)

AUTHORS: Sheets, L.T. Dybar, Ye. P. Kozlak, N.M.

TITLE: Investigation of the Cooling of Turbine Wheels by Means of Air Blown Through the Gaps in the Swallow-tail Mountings of the Blades (Issledovaniye okhlazhdeniya diskov turbin produvkoy vozdukha cherez montazhnyye zazory khvostovykh ip rabochikh lopatok)

PERIODICAL: Sb. tr. In-ta teploenerg. AN UkrSSR 1956 Nr 13 pp 20-30

ABSTRACT: An examination of the heat distribution in a turbine wheel equipped with blades when cooling air is blown through the gaps in the swallow-tail mountings. The authors solve the heat conductivity equations and employ the well known relation for the heat transfer coefficients relative to the elements of the turbine wheel and thereby determine the temperature field in the region of the swallow-tail mountings. Equations are also adduced for the temperature of the rim in the root region and for the airflow rate when the wheel is air-cooled by means of radial flow, and the effectiveness of the two methods of cooling are compared. The comparison shows that the

Card 1/2

Investigation of the Cooling of Turbine Wheels by Means of Air Blown (cont.)

cooling effectiveness of the method employing an air flow through the swallow-tail mounting gaps is greater than that of the radial-flow method. Ref. also RZhMekh 1957, Nr 8, abstract 9104.

L. I. Kiselev

Card 2/2

FEDOROV, V.I.; SHVETS, I.T.; SHEL'MENKO, N.N.

Experimental investigation of temperature distribution in a rotor of drum design subject to nonsteady heat exchange. Trudy Inst.tepl. AN URSR no.13:53-59 '56. (MLRA 10:5)

(Turbines)

SHVETS', I.T., akademik.;DIBAN, Ye.P.;GERASHCHENKO, O.A.

Heat exchange in the herring bone blade fastening zone of rotors. [with summary in English]. Dop. AN URSR no.1:38-41 '57. (MLRA 10:4)

1. Akademiya nauk URSR (for Shvets). 2. Institut teployenergetiki AN URSR.
(Impellers) (Heat--Transmission)

AUTHOR: Shvets, I.T., Academician, Gerashchenko, O.A., Candidate of Technical Sciences and Dyban, E.P., Candidate of Technical Sciences. 96-7-4/25

TITLE: Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Issledovaniye temperaturnykh poley v zone khvostovikov rabochikh lopatok turbin na elektricheskikh modelyakh.)

PERIODICAL: "Teploenergetika"(Thermal Power), 1957, Vol.4, No.7, pp. 20 - 26 (U.S.S.R.)

ABSTRACT: The increasingly severe working conditions in steam and particularly in gas turbines make increasing demands on the preliminary design calculations of the temperature fields in the most heavily loaded parts. Determination of the temperature fields in the region of the blade roots is particularly necessary since these govern the conditions of heat exchange between the blades and the disc or drum parts of the rotor. Most blade root designs are of symmetrical profile. Therefore, the determination of temperature fields is a two-dimensional problem. This is not strictly true insofar as transition from the blade profile proper to the root is asymmetrical and it should be justified experimentally as was done in the tests

Card 1/8

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

described here.

An equation is given for the heat conduction in rectangular co-ordinates for plane steady thermal conditions. In the particular case considered this equation can only be solved by a numerical method. An analysis was made of various methods of solving the problem and this showed that the analogue method and particularly the electro-thermal analogue method is simplest.

The general principle of the electro-thermal analogue consists of observing similarity of the following conditions in the thermal original and the electrical model: 1) geometrical similarity; 2) similarity of potentials; 3) similarity of fields of conductivity, and 4) similarity of boundary conditions. The fulfilment of these conditions is briefly discussed.

Card 2/8

For the purpose of carrying out electro-model measurements use was made of an integrator ЭГДА-6/53, the circuit of which is given in Fig. 1. A step-down transformer with full wave rectifier gives an output

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

of 28 volts, the measuring device is a decade and potentiometer which permits readings to be made with an accuracy of 0.1% of the total potential difference. The boundary conditions can be set up roughly by a potential divider with steps of 10%. Boundary potentials are set up more accurately by special dividers. The conducting medium consisted of special electrically conducted paper, different kinds of which have different conductivity. The electrical non-uniformity of paper of a given quality does not exceed 5%.

The experimental procedure is as follows: a working scale (usually of the order of 20:1) is selected from the working drawings. On the basis of experience of analogous blade roots the mean temperature of the blade and rotor is roughly estimated and the ratio of their thermal conductivities is determined so that the appropriate quality of conducting paper can be selected. The two halves of the model are then cut out of the paper and joined with an electrically

Card 3/8

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

conducting adhesive. The conductivity of gaps and the additional thermal resistance of contacting surfaces are represented by further strips of conducting paper. The model is connected to the integrator and equipotential lines are found with a probe. These lines correspond to isotherms. The thermal resistance of the root is readily determined.

The coefficient of heat transfer from the gas to the working surfaces of the blade may be determined by one of the published methods. Ten equations were compared and were found to agree within ± 25%. The heat that passes through the root is removed by air in contact with the lateral surfaces of the disc and so the disc may be replaced by an equivalent resistance.

The blade roots tested were typical of those used in practice including double and single mushroom-shaped (of the Kharkov Turbine Works (XTZ) design) and fir tree-shaped (of the Neva Works (Nevskogo Zavod) design) and also fir tree-shaped with free fitting blades from

Card 4/8

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

six aviation gas turbine engines of Soviet production.

In each case the total thermal resistance and the temperature field of the root was determined. In addition separate series of tests were made to elucidate the physical nature of heat exchange processes in the region of the roots. Some of the test results in the form of charts of relative equi-potential lines are given in Figs. 2, 3 and 4. In order to check the accuracy of modelling determinations were first made of the temperature fields of roots in direct thermal experiments. Fig. 2 shows dimensionless equipotential lines in the root of the working blade of a turbine together with isotherms. The thermal test results lie between the electric model results using the two limiting assumptions in preparation of the model. The tests that have been done show that for the majority of blade roots the thermal resistance on the contacting planes is very small (for circumferential speeds of the order of 300 metres/sec the thermal resistance of contact

Card 5/8

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

does not exceed 0.0001 m^2/hr.^{o}C/kcal) and has practically no influence on the temperature distribution in the zone of the roots. This considerably simplifies the conduct of the experiments.

Until now the mechanism of heat exchange near blade roots of fir tree shape has remained unexplained. We had supposed that most of the heat is transmitted through the erection gaps. However, special tests made on the electrical model showed that when the resistance of the erection gaps was increased to infinity the temperature field was hardly changed. This showed that the main part of the heat is transmitted through the contacting surfaces and the tensile forces on the blade have no influence because with a compression of about 40 kg/cm^2 (the minimum obtained in the previous work) the heat transfer coefficient at contact exceeds 5 000 kcal/m^2hrs. ^{o}C. This result is illustrated in Fig. 4.

Card 6/8

Hence it may be concluded that the additional thermal resistance of fir tree-shaped blade roots is

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

mainly due to increase in the length of the path through which heat passes and the contraction (or expansion) of the flow lines with sudden change in the area of the conductor.

The electro-modelling procedure was used to determine the actual thermal resistance of some typical blade root designs and the results are given in Table 2.

It is concluded that if axial heat leakage may be neglected the temperature fields in the zone of the blade roots may be determined by means of electrical paper models. The method is simple and the results are in good agreement with those of thermal experiment. The procedure can also be used to study the influence of such factors as the rate of supply or removal of heat, the type of joint, or the operating conditions on the temperature field of the disc.

Card 7/8

When axial leakage of heat in the zone of the roots cannot be neglected, data obtained from an electrical model for the radial thermal resistance makes it

Investigation of the temperature fields in the roots of the working blades of turbines using electrical models. (Cont.) 96-7-4/25

possible to replace the region of the root joint by a ring of equivalent resistance and dimensions. The method described by Knörnschild may then be used to determine the temperature field of a disc of this kind. There are 5 figures, 2 tables and 8 references, 6 of which are Slavic.

ASSOCIATION: Institute of Thermal Engineering of the Ac.Sc. of the Ukrainian SSSR. (Institut Teploenergetiki AN USSR)

AVAILABLE:

Card 8/8

SHVETS, I.T.; [Shvets', I.T.]; DYBAN, Ye. P.

Developing methods for engineering calculations involved in the cooling of turbine rotors. Nauk. zap. Kyiv. un. 16 no.16:43-50 '57. (MIRA 13:3)

(Turbines)

24(8);26(1) PHASE I BOOK EXPLOITATION SOV/1982

Shvets, Ivan Trofimovich, and Yevgeniy Pavlovich Dyban

Opredeleniye temperaturnogo polya okhlazhdayemogo oblopachennogo turbinnogo diska (Determining the Temperature Field of Cooled Turbine Rotors) Kiyev, Izd-vo AN USSR, 1958. 75 p. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut teploenergetiki.

Resp. Ed.: M.A. Kondak, Doctor of Technical Sciences; Ed. of Publishing House: I.V. Kisina; Tech. Ed.: I.D. Milekhin.

PURPOSE: This book is intended for engineers and scientific personnel concerned with turbine design and may also be of use to students of aeronautical and power engineering vuzes preparing diploma projects.

COVERAGE: The book presents the results of theoretical and experimental investigations on heat exchange and cooling of turbine rotor disks performed at the Institut teploenergetiki, AN USSR Heat-Power Engineering Institute, Academy of Sciences, Ukrainian SSR. A method of electrothermal analogy permitting a simple

Card 1/4

and sufficiently exact solution of two-dimensional problems of heat conductivity is presented. The effects of temperature fields during initial heating on the state of stress of an intensively cooled disk are analyzed as are the bases for hydraulic calculation of cooling systems. The book contains data necessary for engineering calculations of the temperature fields of cooled turbine disks based mainly on test results obtained by the authors in the heat-engine laboratory of the Heat-Power Engineering Institute, UkrSSR. In analyzing problems connected with the determination of the temperature field of a disk cooled by a radial blower, this book uses the material from a dissertation by Candidate O.A. Gerashchenko. Candidate of Technical Sciences N.M. Kondak participated in the analysis of results of an experimental study of heat exchange in the slit channels between the blade roots, in the construction of the test setup, and in performing the tests. There are 32 references: 28 Soviet, 3 English, and 1 German.

TABLE OF CONTENTS:

Determining the Temperature Field of (Cont.) SOV/1982

AVAILABLE: Library of Congress

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Card 4/4

26(1) PHASE I BOOK EXPLOITATION SOV/1966

Shvets, Ivan Trofimovich

Gazoturbinnyye ustanovki (Gas Turbine Installations) Kiyev, AN Ukrainskoy SSR, 1958. 122 p. 8,000 copies printed. Errata slip inserted.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR, Kiyev. Institut teploenergetiki.

Resp. Ed.: Ye. P. Dyban, Candidate of Technical Sciences; Ed. of Publishing House: T.K. Remennik; Tech. Ed.: M.I. Yefimova.

PURPOSE: This book may be useful to beginners in the study of the modern heat engine - the gas turbine.

COVERAGE: The book covers fundamentals of theory and design of various types of gas turbines. The historical development of the gas turbine from the beginning of the 20th century is given in brief. The author states that the Nevskiy Plant imeni Lenin produces turbines of 1,000 - 6,000 kw with 700°C working-gas temperature. It is also stated that the production of gas turbines has begun at the Leningrad Metal Plant, KhTGZ (Khar'kov Turbogenerator Plant) and the Kirov Plant in Leningrad. Locomotive gas-turbines are produced at the Kolomna and Lugansk

Card 1/4

Diesel Locomotive Plants, and at the Leningrad Metal Plant production of a 25,000 kw turbine is under way. A test model of a 50,000 kw stationary gas turbine is also under way at KhTGZ. The following scientists in this field are mentioned: N. Ye. Zhukovskiy, A.S. Chaplygin, B.N. Yuryev, A.S. Khristianovich, L.G. Loytsyanskiy, A.I.Sedov and G.I. Zotikov. There are 17 references: 15 Soviet, 1 English and 1 German.

TABLE OF CONTENTS

Gas Turbine Installations

AVAILABLE: Library of Congress (TJ778.S526)

Card 4/4

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SHVETS, I. T.

PHASE I BOOK EXPLOITATION SOV/3898
SOV/31-M-14

Akademiya nauk UkrSSR. Institut teploenergetiki

Teploobmen i gidrodinamika (Heat Transfer and Hydrodynamics) Kiyev, 1958. 190 p. (Series: Its: Sbornik trudov, no. 14) 2,000 copies printed.

Eds. of Publishing House: Ya.L. Kaplan and N.M. Labinova; Tech. Ed.: M.I. Yefimova; Editorial Board: I.T. Shvets (Resp. Ed.), Academician, Academy of Sciences UkrSSR; G.M. Shchegolev (Deputy Resp. Ed.), Candidate of Technical Sciences; N.M. Kondak (Resp. Secretary), Candidate of Technical Sciences; V.I. Tolubinskiy, Corresponding Member, Academy of Sciences UkrSSR; I.I. Chernobyl'skiy, Doctor of Technical Sciences; M.M. Nazarchuk, Candidate of Technical Sciences; P.I. Lavrov, Candidate of Technical Sciences; P.D. Shvetsov, Professor; and N.M. Pyatyshkin, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel in the fields of heat transfer and hydrodynamics.

COVERAGE: This collection of 18 articles deals with experimental and theoretical studies of problems in heat transfer and hydro-

Card 1/7

dynamics as they affect steam and gas turbines and heat-transfer devices. The results of theoretical investigations of heat transfer in turbine components and in elements of heat-utilizing apparatus are described, and new calculation methods are suggested. Several problems of the thermodynamics and aerodynamics of steam and gas turbines are discussed. References follow each article.

TABLE OF CONTENTS: