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(EYE—DISEASES AND DEFECTS) (HYPERTENSION)

BEREZINSKAYA, D.I. ,prof.; BAYTERYAKOVA, L.S., kand.med.nauk

Vessels of various sections of the eyeball in some pathological states of the body. Vest. oft. 76 no.1:11-15 Ja-F'63. (MIRA 16:6)

1. Glaznaya klinika Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.Vladimirskogo.

(EYE—BLOOD SUPPLY)

BAYTERYAKOVA, N.R.

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So.: Knizhnaya Letopis', No. 6, 1956.

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BAYTERYAKOVA, S. V.

22738 Baiteryakova, S. V. Znacheniye Reaktsii Maksimova So Svezneikaplei Krovi V Otolaringologii Soornik Nauch. Trudov Bashkir Med. In-Ta Im 15 Letiya Vlksm, T. IX, 1949, S. 94-98

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БАЙТИН А.А.

SAMOYLOVICH, G.G.; ANUCHIN, N.P., professor, doktor sel'skokhozyaystvennykh nauk, retsenzent; BONCH-BRUYEVICH, M.D., doktor tekhnicheskikh nauk; retsenzent; KELL', N.G., redaktor; BAYTIN, A.A., redaktor; VOLKHOVER, R.S., tekhnicheskiy redaktor

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Байтин, А. Ya.

YERMAKOV, Serafim Fedorovich; KUZ'MIN, N.I., retsenzent; KUNASHOV, A.S., retsenzent; BAYTIN, A.Ya., dotsent, kandidat tekhnicheskikh nauk, redaktor; EBERLIN, K.Z., redaktor izdatel'stva; BEGICHEVA, M.N., tekhnicheskiy redaktor

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SVIRIDA V.G., rukovoditel' raboty; KLYACHKINA, Ye.L.; ZARUBKINA, A.K.; BAYTINA, N.M.; LYUBOSHITS, A.I.; VISHNEVSKIY, S.L.; SHOLOMYANSKIY, Ye.Ya.; BAYOVA, M.P.

Experiment in increasing the productive capacity of the Minsk Lactic Acid Factory under the conditions of existing equipment and electric power systems. Trudy BNIIPPT no.4:63-66 '61. (MIRA 17:10)

BAYTINA, TS. M

AID P - 2875

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 8/16

Authors : Baldina, O. M., Kand. Tech. Sci., and Baytina, Ts. M., Eng.

Title : Formation of vertices over down-feed pipes

Periodical : Teploenergetika, 10, 45-49, O 1955

Abstract : Experiments made with cold water showing the different water levels and the forming of vertices as dependent upon the diameter of the pipe, the flow velocity and the shape of the pipe inlet are described. The experimental installation is described in detail. Reportedly, the increase in the water velocity and diameter of the pipe brings about an increase in the critical water level. Eight diagrams.

Institution : Central Boiler and Turbine Institute

Submitted : No date

BAYTINA, Ts. M.

SOV/96-58-9-7/21

AUTHORS: Baldina, O.M. (Candidate of Technical Science) and Baytina, Ts.M. (Engineer)

TITLE: The Conditions of Vortex Formation in the Drums of Steam Boilers (Usloviya obrazovaniya vikhrevykh voronok v barabanakh parovykh kotlov)

PERIODICAL: Teploenergetika, 1958, Nr 9, pp 39 - 45 (USSR)

ABSTRACT: Steam sometimes enters the downflow water-tubes of boilers along with the water, and can upset circulation in the tubes. Part is carried along with the water in the form of bubbles, but sometimes vortices or funnels of steam are drawn down into the tubes. This article describes a study of the conditions of formation of these vortices using water/air models. The amount of information that could be obtained from a single down-flow tube is limited, so tests were made with a model representing a multi-tube drum installation, which is illustrated diagrammatically in Fig 1. Investigations were made with bundles of down-flow tubes of 62 and 100 mm diameter and with single down-flow pipes of up to 250 mm diameter, the water being circulated through the system by a pump with an output of 500 cu.m/hour. Compressed air was delivered to the

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The Conditions of Vortex Formation in the Drums of Steam Boilers

headers of the rising tubes. The drum was of 1000 mm diameter, 2 m long, with ends formed of transparent plastic. Arrangements were made to control and measure the flow of water. Another smaller model was also used to study the effect of barriers of various kinds near the down-flow tubes. Longitudinal flow in the boiler could be made either turbulent or of uniform velocity field. In making tests, the necessary velocities in the down-flow tubes were established and the water-level in the drum was gradually reduced until it reached the critical value beyond which vortices of air would be drawn into the tubes. Typical photographs of vortices forming above down-flow tubes are seen in Fig 2. In the case depicted in Fig 2a the rate of longitudinal flow is small, the water contains

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no air bubbles and the vortex has sharp edges. In Fig 2b the rate of flow is greater, the water contains air bubbles which are concentrated round the vortex so that its edges are indistinct. The water velocities in the down-flow tubes and in the water space of the drum were varied over wide ranges for each diameter of tube and each type of longitudinal flow. Curves were thereby constructed of the critical levels, and are of the kind shown in Fig 3. It will be seen that the higher the longitudinal velocity the lower the critical level, but this method of preventing vortex formation can only be applied when there are no steam bubbles in the water volume. A typical graph showing the variation in critical level with velocity for various tube diameters is given in Fig 4 and the relative critical levels as functions of the rate of longitudinal flow in the drum appear in Fig 5. Besides depending on the flow in the drum, the formation of vortices is affected by the position of the tube relative to the end surfaces of the drum. Tests in which channels were fitted into the drum showed that the shape of the walls and of the bottom of the channels had no appreciable influence on the critical level. It is believed that the data of Fig 5, obtained with cold water, can be related approximately to other pressures. When the tip of the vortex reaches the mouth of the down-flow tube the pressure reduction there is equal to the weight of the columns of liquid and gas at the corresponding level. On this basis, an expression is given for correcting the values obtained from Fig 5 in cases when the pressure is altered. However, the use of tests on models to calculate what will happen in full-scale boilers still needs to be verified in practice. When water was introduced from the sides, so that flow was turbulent, waves were always set up on the surface of the water in the boiler and the formation of vortices was prevented. It is concluded that the risk of vortex formation applies only to down-flow tubes located near the ends of the drums, particularly if these are of the large diameter found in high-output boilers. Tests were made on the small installation to determine the effect on vortex formation of various kinds of barriers and protective devices. Details are given of the types of barriers used and their influence on the critical level can be seen from the results charted in Fig 6. In some cases the critical

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depth can be halved, but such barriers can only be used provided that steam/air mixtures are not formed near them. The effect of boxes, such as are used in constructing the salty sections of boilers, was studied on models, and cases in which they can promote vortex formation are described. A photograph of a vortex being drawn into a tube with a box above it is shown in Fig 7. Tests were also made with different kinds of gratings, installed above the tubes. Two photographs of vortex formation near such gratings are shown in Fig 8. Recommendations are made about the design of gratings, the use of which can halve the critical level. The results of the above tests were partially confirmed by tests made by the Central Boiler Turbine Institute on a Babcock & Wilcox boiler with an output of 165 tons/hour at a pressure of 65 atms installed in a power station. The down-flow system of this boiler consists of two stand-pipes 530 mm diameter located at the ends of the drum. Steam/water mixture from the screens is drawn into the cyclones in the drum. Calculations by the graph of Fig 5 show that the necessary height of water to prevent vortex formation

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is appreciably higher than the actual level, so that vortex formation ought to occur. It was found that the installation of gratings above the stand-pipes greatly improved the conditions of flow.

There are 8 figures, and 2 Soviet references. (Russian)

ASSOCIATION: Tsentral'nyy kotloturbinnyy Institut (Central Boiler Turbine Institute)

1. Boilers--Performance 2. Boiler tubes--Test methods 3. Water --Control systems

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SOV/96-59-9-8/22

AUTHORS: Baldina, O.M. (Candidate of Technical Sciences) and
Baytina, Ts.M. (Engineer)

TITLE: The Influence of Devices Inside the Drum on the Entrainment of Steam in Downflow Tubes

PERIODICAL: Teploenergetika, 1959, Nr 9, pp 46-50 (USSR)

ABSTRACT: To prevent steam entrainment in the downflow tubes of boilers it is necessary to disperse steam bubbles in the water in the drums, and to ensure that deep vortex funnels are not formed above the downflow tubes. These requirements are hard to fulfil and sometimes devices inside the drum hinder reliable separation of steam. Tests on models have shown that vortex funnels can form when water reaches the downflow tubes from one side only, as can occur when salty sections are provided inside the drum. When delivery is from one side only, particular care must be taken to avoid the formation of irregularities in the flow of water which encourage the formation of vertices. If unperforated plates are installed above the downflow tubes and below water level, steam accumulates beneath them and is entrained from time to time. A photograph of this effect, taken on a model, made during

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studies of the salty section of a boiler type TP-230, is shown in Fig 1. It is particularly difficult to prevent entrainment of bubbles of steam which have not separated from the water volume of the boiler. In this respect the method by which the steam/water mixture is introduced into the drum and the rates of flow towards the downflow tubes are particularly important. Attention must be paid to the point of connection of steam delivery and screen tubes to the drum, and also to the pattern of flow through the devices in the drum. The conditions of gas entrainment with several typical types of device inside the drum were investigated at atmospheric pressure on a model of a drum 2 metres long, and 1000 mm diameter, described in Teploenergetika Nr 10, 1955, and Nr 9, 1958. The arrangement of the riser tubes, that delivered a water/air mixture to the drum and of the downflow tubes, is described. Most of the tests were made with downflow tubes 100 mm diameter. Entrainment was so great in the absence of barriers or other arrangements that there was no need to study this case. The case illustrated in Fig 2a in which a vertical barrier is installed in the drum near to points of mixture delivery was first studied. This arrangement is commonly used in steam separating systems. Information is given about the results obtained with this arrangement; it was unsatisfactory unless additional arrangements were made to guide the flow to the downflow tubes. The next arrangement tried is that illustrated in Fig 2b, in which a barrier was installed below water level to prevent aerated water from flowing directly into the downflow tubes. Most of the air was separated from the water as the flow turned round the barriers. Some air was still entrained in the downflow tubes, particularly at high rates of flow. Examples are mentioned in which similar devices have operated well in service. The barriers should be installed in such a way that when the water is at the lowest level in the drum the rate of flow over the 'weir' formed by the barrier is not greater than 0.3 m/sec; otherwise the gas will be entrained from the surface, as illustrated in Fig 3. The use of a submerged perforated plate as shown in Fig 2B was also investigated; dimensional details are

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given. This device proved useful, and at all rates of flow the water surface under the plate remained calm. At high rates of flow the air was uniformly distributed over the sheet and at low rates of flow it was concentrated in particular places. A typical photograph taken with the perforated sheet in place is shown in Fig 4. If the rate of water flow is too high, severe entrainment occurs and air/water mixture enters the downflow tubes, as shown in Fig 5. A graph of the approximate experimental volumetric air content in the downflow tube as a function of the water speed in the main volume and in the tube is given in Fig 6. Rates of flow in the downflow tubes employed in modern boilers correspond to average entrainment conditions in the graph of Fig 6. However, such a comparison is necessarily somewhat arbitrary because it depends on the physical properties of the liquid and the gas. The use of cyclones inside the drum, as illustrated in Fig 2, was next investigated. The cyclones used were typical of Central Boiler Turbine Institute practice; the diameter of the cylindrical part was 290 mm and the dimensions of the outlet 250 x 60 mm. Different numbers

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and arrangements of cyclones were used. A photograph of the flow of water leaving the bottom of a cyclone at the rate of 33 m3/hour is given in Fig 7. At higher rates of flow all the water in the drum is filled with small bubbles. By directing the outflow from the cyclone along the water surface, the separation of air from the water was promoted. Some details are given of cyclone performance and it is concluded that the preliminary separation of gas from liquid that occurs in a cyclone reduces the gas content of the water of the boiler, particularly if the rate of flow through each cyclone can be kept down. A number of examples are then given of qualitative agreement between processes occurring in the model and those in actual boilers. Comparison of the resistance of downflow tubes during gas entrainment on an atmospheric pressure model and on a boiler type TP-230 at 110 atm and on a boiler type TP-240 at pressures of 120 to 185 atm shows that the resistance increases considerably with increase in pressure. As the pressure rises it becomes more difficult to separate the steam and water. From

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this fact practical conclusions are drawn about the selection of drum diameter and of water level in the drum. It is particularly important to maintain a high water level at high rates of steaming, when the rate of water flow through the drum is greatest. The use of cyclones inside the drum promises to be very helpful in reducing steam entrainment.

There are 7 figures and 4 Soviet references.

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ASSOCIATION: Tsentral'nyy kotloturbinnyy institut (Central Boiler Turbine Institute)

S/148/63/000/001/013/019
E073/E451

AUTHORS: Povolotskiy, Ye.G., Dovgalevskiy, Ya.M., Baytina, V.K.

TITLE: On the speed of cooling of magnico alloys

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.1, 1963, 120-124

TEXT: Cast specimens 15 x 15 x 35 mm of AHKO 4 (Anko 4) (13.8% Ni, 8.4% Al, 23.5% Co, 3.11% Cu, rest Fe) were used to study the relationship between the magnetic properties and the structure for different rates of cooling and different temperatures. The residual induction was measured ballistically, the coercive force was determined by the Steblein method and the microstructure was studied at magnifications of 70 to 1440 X. The dislocation densities were studied by the X-ray diffraction method of Williamson and Smallman. Two separate temperature ranges were investigated, 1280 to 800°C and 800 to 400°C, as above 800°C this alloy is single-phase at the cooling rate employed but between 800 and 400°C a two-phase structure $\beta_2 \rightarrow \beta + \beta_2$ is formed. In the experiments, the rate of cooling was varied in one temperature range, while kept constant in the

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other. A magnetic field of 1500 Oe was applied during cooling below 800°C; the maximum effect was experienced at 800 to 780°C. Whilst between 800 and 400°C the coercive force drops sharply with increasing cooling rate, the residual induction remains unchanged. At a cooling speed of 15 to 20 deg/min, the coercive force increases to its maximum value. Varying the cooling rates above 800°C, and maintaining a constant cooling rate (15 to 20 deg/min) below 800°C (the optimum from the point of view of the coercive force), bring about hardly any change in the coercive force but lead to a drop in the residual induction to 1000 gauss in the two limiting cases (very slow and very fast cooling rates). The highest residual induction is obtained with a cooling rate of about 200 deg/min between 1280 and 800°C and the maximum coercive force is obtained for a cooling rate of 15 to 20 deg/min below 800°C. Thermomagnetic treatment permits both these values to be increased, so achieving the highest possible magnetic energy $(BH)_{max}$. The basic magnetic characteristics achieved by ordinary and thermomagnetic treatment are determined by the state of the alloy in the two temperature ranges, above and below 800°C.

The cooling rate which gives the maximum residual induction (200 deg/min) reduces appreciably the coercive force if applied below 800°C, whilst the cooling rate corresponding to the maximum coercive force (15 to 20 deg/min) if applied in the temperature range 1280 to 800°C will lead to a sharp drop in the residual induction. Therefore, use of some average critical speed for the entire temperature range cannot be justified. The dislocation density results, which are in full agreement with the microstructure, show that the dislocation density is highest at high cooling rates and lowest at the intermediate cooling rate which gives the optimum residual induction. The optimum cooling rate for obtaining a maximum residual induction is the one which does not cause an excessively high density of dislocations and does not lead to decomposition along the grain boundaries. Since slow cooling leads to a more perfect alloy, it can be anticipated that alloying additions which increase the resistance of the high temperature solid solution to decomposition (for instance small amounts of titanium) will reduce the optimum cooling rate during heat treatment. It will then be possible to achieve a single critical rate throughout the entire cooling range. Its

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value will be low, thus permitting heat treatment of magnets of varying cross-section using a single set of conditions. Alni alloys are usually subjected to rapid cooling from 1150 to 1200°C in boiling water, or to normalizing, to obtain maximum coercive force. However, the residual induction is low and the critical rate governs only the extent of low temperature decomposition $\beta_2 \longrightarrow \beta + \beta_2$. It is possible that slower cooling to the temperature at which this decomposition begins would lead to an increase in the residual induction. There are 3 figures.

ASSOCIATION: Saratovskiy politekhnicheskiy institut
(Saratov Polytechnic Institute)

SUBMITTED: October 27, 1961

L 58864-65 EWP(z)/EWA(c)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) MJW/JD
ACCESSION NR: AR5015187 UR/0137/65/000/005/I059/I059

SOURCE: Ref. zh. Metallurgiya, Abs. 5I381

AUTHOR: Baytina, V. K.; Dovgalevskiy, Ya. M.; Vlaskina, K. I.

TITLE: Conditions for heat treatment of ANKoTI type alloys

CITED SOURCE: Sb. dokl. na Vses. soveshchanii po litym splavam dlya postoyan. magnitov, 1962. Saratov, 1964, 109-12

TOPIC TAGS: heat treatment, metal hardening, annealing, magnetic field, isothermal treatment, metal physical property, magnetic property, single phase/ ANKoTI alloy, YuNDK35T5 alloy

TRANSLATION: Recommendations are given for optimum hardening and annealing conditions for alloy YuNDK35T5: 1) heat hardening up to a temperature of 1240-1260° or up to 850-900°, at which temperatures the alloy is in a single phase state; 2) cooling to 660-700° at a critical speed with application of a magnetic field (1500 oersteds); 3) isothermal treatment without application of a magnetic field in the interval 700-640° with a holding time of 30 min for the

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L 58864-65
ACCESSION NR: AR5015187

temperature isotherm; and, 4) 7-3-step annealing to 530°. The following values of the magnetic properties were obtained: $B_r$ = 7500 gausses, $H_c$ = 1500 oersteds, $(BH)_{max}$ = 4.2 x $10^6$ gauss-oersteds. (From R. Zh. Elektrotekhnika.)

SUB CODE: MM ENCL: 00

Card 2/2

POVOLOTSKIY, Ye.G.; DOVGALEVSKIY, Ya.M.; BAYTINA, V.K.

Effectiveness of a magnetic field in the thermomagnetic treatment of Alnico-type alloys. Metalloved. i term. obr. met. no.11: 10-14 N '63. (MIRA 16:11)

1. Saratovskiy politekhnicheskiy institut.

L 11636-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(s)/EWP(b)/EWA(c) IJP(c) JD/HW

ACC NR: AR5018395 UR/0196/65/000/006/B002/B002

621.318.2

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 6B7

AUTHOR: Dovgalevskiy, Ya.M.; Povolotskiy, Ye.G.; Baytina, V.K.

76 B

TITLE: Mechanism of thermomagnetic processing of Magniko type alloys

CITED SOURCE: Sb. dokl. na Vses. soveshchanii po litym splavam dlya postoyan. magnitov, 1962. Saratov, 1964, 17-27

TOPIC TAGS: alloy, magnesium alloy, aluminum alloy, cobalt alloy, copper alloy, magnetic metal, magnetic field, thermomagnetic effect

TRANSLATION: A study of alloys of the Fe-Ni-Al-Co-Cu system has shown that magnetic texture (MT) is created in a series of alloys by magnetic field superposition in a narrow interval of 800-700°C, corresponding with the start of a 2-phase $\beta_2 \rightarrow \beta + \beta_2$ - disintegration. During this process there occurs a temperature hysteresis in the formation and disappearance of MT, which reflects the hysteresis of the phase transformation. It is shown that the state of single-phase $\theta$ alloys does not necessarily determine the possibility of MT formation. The alloys are susceptible to thermomagnetic processes only when the secreting $\beta$-phase immediately becomes ferromagnetic. During the thermomagnetic processing with a continuous cooling in the magnetic field,

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ACC NR: AR5018395

MT is formed in the initial moment of disintegration. A further isometric soaking or a slow cooling without a field help to form MT and to increase $H_c$ without altering $B_r$. It is shown that MT remains stable during the second annealing and will disintegrate completely only at temperatures over 850°C. 4 figures, 1 table, and 4 references.

SUB CODE: 11

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L 34066-65 EPR/EPA(s)-2/EWA(c)/EWT(m)/EPA(bb)-2/EWP(b)/T/EWA(d)/EWP(t) Pad IJP(c) MJW/JD/HW Ps-4/Pt-10/

ACCESSION NR: AP50050[illegible] S/0129/65/000/002/0011/0016

52
51
B

AUTHOR: Baytina, V. K.; Vl[illegible]kina, K. I.; Dovgalevskiy, Ya. M.

TITLE: H[illegible] treatment of [illegible] alloy

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1965, 11-16, and insert facing p. 4

TOPIC TAGS: [illegible] transformation [illegible] alloy, thermomagnetic treatment [illegible] alloy [illegible] alloy

ABSTRACT: The article [illegible] study of the transformations which [illegible] alloy undergoes during heating and cooling. The main components of this alloy are Co, Ni, Al, Cu and Ti, the percentages for which are given for three melts in tabular form. The residual induction, coercivity, and saturation magnetization were measured. Heat treatment in a magnetic field (thermomagnetic treatment) was accomplished by cooling the specimen in a special furnace situated in the gap of an [illegible] electromagnet [illegible] provided a magnetic field strength of 1500 [illegible] required temperature was maintained within ±10 [illegible] [illegible] used to investigate structural [illegible] [illegible]

ACCESSION NR: AP5005097

tion and a bath with molten tin for low-temperature $\beta \rightarrow \beta_2$ transformation. A diagram of isothermal $\beta$-transformation of the solid solution was constructed to study the kinetics of high-temperature decomposition. From these investigations, the authors concluded that, on the basis of the diagram of isothermal transformation of the $\beta$-solid solution, the [illegible] alloy [illegible] be quenched from the temperature [illegible]

[illegible]

Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

Card 2/2 NO REF SOV: 007 OTHER: 002

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"Postwar Diagnosis of Paratyphoid Rabbits, Carriers of Bact. Typhi murium (Breslau)." Cand Vet Sci, Leningrad Veterinary Inst, Leningrad, 1954. (RZhBiol, No 8, Apr 55)

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Preventing tooth damage of esophageal bougies. Vest.oto-rin 17 no.3:71 My-Je '55. (MLRA 8:9)

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(NUTRITION,
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1. Iz Tuberkuleznogo dispansera no.1 i Tuberkhleznogo Sanatoriya imeni Myasnikova, Baku.
(TONGUE--TUBERCULOSIS)

KAZHLAYEV, M.D., prof.; BAYTMAN, A.I., vrach (Baku)

Danger, potash! Zdorov'e 6 no.9:30 S '60. (MIRA 13:8)
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BAYTMAN, Ye. A.

22078 Baytman, Ye. A. Zavorot poperechno-obodochnoy Kishki Vrachev delo, 1949, No. 7, stb 649-50

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

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Mechanizing the loading of bitumen into boilers. Stroi. truboprov. no.9:22-23 S '64. (MIRA 17:10)

1. Glavnyy mekhanik Stroitel'nogo upravleniya 1 tresta Ukrgazneftestroy, Mozyr'.

SOV/97-58-11-3/11

AUTHORS: ~~Baytaur, A.I.,~~ Avotin, A.I., Bakal, M.Sh. and Samofal, S.F., Engineers

TITLE: Precast Reinforced Concrete Constructions Used for Underground Sections of Industrial Buildings (Sbornyye zhelezobetonnyye konstruktsii v podzemnykh kommunikatsiyakh promyshlennykh sooruzheniy)

PERIODICAL: Beton i Zhelezobeton, 1958, Nr 11, pp 414-417 (USSR)

ABSTRACT: At present precast reinforced concrete segments forming wells are used for the underground parts of industrial buildings. At the same time the construction serves as shuttering. The excavating work and the sinking of the well is fully mechanised. This type of construction is used in the underground parts of the Stalinskiy metallurgicheskiy zavod (Stalin Metallurgical Works) and Almaznyanskiy ferrosplavnyy zavod (Almaznyanskiy Ferro-alloy Factory) and designed by the Giprostal' Institute, Khar'kov. Figure 1 shows cross-section and plan of the underground part of the Stalin Metallurgical Factory. It has a cylindrical structure, 28 m deep and 25 m in diamter. The segmental

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slabs have thin reinforced concrete walls with flanges on all sides and one rib in the centre. The circular floor slabs serve as additional strutting for the well. They are supported on columns so that no weight from the floors is transmitted onto the outer wall. The precast reinforced concrete segments (Fig.3) have the following dimensions: 3.13 x 0.99 x 0.65 m; weigh up to 3 t, and are made of concrete mark 300 with welded mesh reinforcement. The segments are calculated to withstand a maximum loading of 40 tons/$m^2$. The wall of the segmental slab has a thickness of 15 cm. The ribs are 15 x 65 mm in cross section. The slab of the segment is provided with 2 openings of 63.5 mm in diameter which are used for placing the grout between the wall and the excavation. The segments are bolted together with bolts for which 41 mm diameter openings are provided in the ribs. Waterproofing is obtained by addition of 2% to 3% sodium aluminate to this concrete back-filling. The latter has a thickness of 15 to 20 cm. Fig.4 illustrates the process of construction.

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Precast Reinforced Concrete Constructions Used for Underground Sections of Industrial Buildings.

The ground is first excavated and an in-situ reinforced concrete wall is constructed. The segments are then fixed to the underside of this retaining wall forming a ring. Further segments are added as soon as the excavation makes this possible. The construction of a skiphole for the Almeznyanskiy Ferro-Alloy factory is shown in Fig.5. Details of this underground structure are also given. Advantages of this construction consist in the possibility of being able to use precast units, to mechanise all labour, saving time, reduction in the volume of excavation, and a considerable saving in reinforcement. There are 5 figures.

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Water tower with precast reinforced concrete bearing elements. Biul. stroi. tekh. 15 no.4:18-21 Ap '58. (MIRA 11:5)

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(Foundations) (Steel industry--Equipment and supplies)

BAYTUGANOV, M.

PERINSKIY, N., polkovnik; FILIPPOV, R., polkovnik; MIKHAYLOVSKIY, G., FOMINYKH, A., general-leytenant; DYUBKOV, G., podpolkovnik; BAYTUGANOV, M., podpolkovnik; YEGIYAN, R., podpolkovnik; KONDRASHIN, V., podpolkovnik zapasa

From practice training in military science. Voen. vest. 38 no. 6:53-57 Je '58. (MIRA 11:7)

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REEL #40

BATUYEV, N.M.

TO

BAYTUGANTI, Ye.G