

AUTHOR: Smolyarenko, D.A., Candidate of Technical Sciences ^{SOV/130-58-6-20/20}
TITLE: Technical Progress in Open-hearth Production in the USA
(Tekhnicheskiy progress v martenovskom proizvodstve SSHA)
PERIODICAL: Metallurg, 1958, Nr 6, pp 38 - 40 (USSR)

ABSTRACT: This article deals with the proceedings recently received in the USSR, of the 39th Open-hearth Conference held in Cincinnati, Ohio, USA, on April 9-11, 1956. The author makes some comparison with Soviet practice and mentions Soviet model work on heat transfer in open-hearth furnaces by Doctors of Technical Sciences, Prof. M.A. Glinkov and P.M. Maslovskiy, and Candidate of Technical Sciences G.P. Ivantsov. There are 1 figure and 1 table.

ASSOCIATION: NTO ChM

Card 1/1 1. Open hearth furnaces - USA 2. Steel - Production

SOV/130-58-8-9/18

AUTHORS: Pertsev, M.A. and Smolyarenko, D.A.

TITLE: Third Meeting of the Steel-making Section of the Permanent Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid (Tret'ye zasedaniye sektiis stale-plavil'nogo proizvodstva Postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy Vzaimopomoshchi)

PERIODICAL: Metallurg, 1958, nr 8, pp 22 - 24 (USSR)

ABSTRACT: The third meeting of the steel-making section was held jointly with the refractories section of the Permanent Commission on Ferrous Metallurgy in Dnepropetrovsk in April, 1958. The following countries were represented: Bulgaria, Hungary, East Germany, Poland, Rumania, USSR and Czechoslovakia. The conference heard and discussed reports on the progress of the measures recommended for 1958-1960 steel production increases, development of new steel-making techniques for 1960-1975, improvement of refractories, development of proposals on bearing-steel production increases and standardisation of conditions. Reports on progress in 1956-1957 and development plans for the next few years. Measures planned for 1960-1975 include the construction of larger units, wide use of oxygen, use of cold, high-calorific value fuel, use of

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on Ferrous Metallurgy of the Council for Economic Mutual Aid

natural gas where available, increase in casting facilities, introduction of continuous casting, oxygen-blown converter processes. The open-hearth is to remain the main steel-making process and new and better refractories (Table 1) are to be adopted: for the upper rows of checkers, bricks with over 42% Al_2O_3 and porosity not exceeding 18% will be used. Induction and arc-furnace melting under high vacuum was recommended for high-quality alloy steels. Scrap preparation is to be improved and maximal mechanisation, the adoption of spectroscopic analysis, evaporative cooling and waste-heat boiler were recommended. Before 1965, the Socialist-camp countries are gradually to go over to the melting of ball-bearing steels with vacuum treatment in the ladle or during pouring; for internal use, the existing national marks are to continue but for export two standards are recommended (Table 2). For machine tool construction an agreed compromise between existing state standards (GOST) for non-metallic inclusions and customer requirements are

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recommended. GCST 801-58 for the composition of ball- and roller bearing steels (Table 3) was confirmed in the USSR in May, 1958 and will come into force on April 1, 1959. Improved standards are to be adopted by the member countries in 1960-1962. The members visited the imeni Petrovskogo (imeni Petrovskiy) Works, the Krivoy Rog and the Zaporozhstal' Works and expressed their thanks to N.A. Tikhonov, president of the Dnepropetrovsk Economic Council and the head of its production-technical department, D.G. Ignatenko, for the successful organization of the meeting.

There are 3 tables.

ASSOCIATIONS: Sovetskaya chast' staleplavil'noy septsii Postoyannoy komissii po chernoy metalurgii SEV (Soviet branch of the Steel-making Section of the Permanent Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid)

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Third Meeting of the Steel-making Section of the Constant Commission
on Ferrous Metallurgy of the Council for Economic Mutual Aid

and Staloplavil'naya sektsiya Postoyannoy komissii
po chernoy metallurgii SEV (Steel-making Section of
the Permanent Commission on Ferrous Metallurgy of
the Council for Economic Mutual Aid)

1. Steel--Production
2. Steel--Applications

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Sov/133/58-9-6/29

AUTHORS: Pertsev, M. A. (Engineer) and Smolyarenko, D. A. (Cand. Tech. Sciences)

TITLE: The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance (Raboty sektsii staleplavil'nogo proizvodstva postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy Vzaimopomoshchi)

PERIODICAL: Stal', 1958, Nr 9, pp 793-796 (USSR)

ABSTRACT: The third session of the above section (together with the section of the production of refractory materials) took place in April 1958 in Dnepropetrovsk. The representatives of the following countries participated: Bulgaria, Hungary, East Germany, Poland, Rumania, USSR and Czechoslovakia. The progress in the production of steel and refractories in the socialist countries during 1958-1960 and main directions of further developments in the technique of production of steel and refractories during 1960-1975 was reported and discussed. Every country reported in general terms increasing outputs by

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Sov/133/58-9-6/29

The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

intensification of smelting processes and construction of new production units. The only details quoted were: USSR - control of the length of flame by the angle at which the gas and air streams meet - Fig.1; Czechoslovakia - opening of tap hole by explosives - Fig.2; improvements in the lining of the tapping runner - Fig.3; a new method of heating hot tops by introducing through openings in special hot tops, a stream of oxygen ($2\text{m}^3/\text{min}$) and intermittent additions of a thermal mixture (14% Al, 35% ferrosilicon, 25.5% silicon manganese and 25.5% lime) in an amount of 1.15 kg/ton. On combustion of the mixture in a stream of oxygen, the slag and the upper layer of metal become well heated and a dense ingot with a small shrinkage cavity is obtained. This decreases head crop to 8-9% instead of the previous 17% (ingots of 2.5 t and 4.5 t). From Czechoslovakian research the following are mentioned - continuous casting with arc heating of metal in the crystallizer (mould) with subsequent rolling (without cooling) on a planetary mill; testing of steels for boilers and turbines on an experimental boiler operating at temperatures 700-850°C and pressure of 600 atm;

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The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

production of clad steels, casting of high alloy steels (e.g. rods and wire for welding, heat resistant alloy containing 28-30% of Al). Although the open hearth furnace will remain the main producing unit a wider application of oxygen blown converters is recommended. The following qualities for open hearth refractories were established:

Type of refractory material:	Magnesite chromite	Periclase spinel
Beginning of deformation under a load of 2 kg/cm ² °C	1550	1600
Apparent porosity, % not more than	17	14
Resistance to thermal shock (heating to 850°C) heating-cooling cycles, not less than	100	100

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The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

For upper rows of gas and air regenerators the use of bricks containing not less than 42% Al_2O_3 and porosity not exceeding 18% was recommended. There are 3 figures.

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SOV/130-58-11-16/16

AUTHOR: Smolyarenko, D.A., Candidate of Technical Sciences

TITLE: ~~Conference on the Organization of Metallurgical-Furnace~~
Repair and Workers' Safety (Soveshchaniye po organizatsii
remontov metallurgicheskikh pechey i okhrane truda
rabotayushchikh)

PERIODICAL: Metallurg, 1958, Nr 11, pp 45 - 46 (USSR)

ABSTRACT: In August 1958 a scientific-technical conference was held
in the town of Stalino on the organisation of metallurg-
ical furnace repairs and the safety of the workers
carrying them out. The conference was organized jointly
by the Tsentral'nyy komitet profsoyuza rabochikh metal-
lurgicheskoy promyshlennosti (Central ~~Committee of the Union of~~
Metallurgical Industrial Workers) and the Nauchno-tekhn-
icheskoye obshchestvo chernoy metallurgii (Scientific-
technical society for ferrous metallurgy). On open-
hearth furnaces much progress has been made, total idle
time being 5-7%, but no standard equipment has yet been
designed or produced: the type S-153 coal loader used at
the KMK for removing brick and slag from the regenerators
is deserving of attention; there is a particular need for

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Conference on the Organization of Metallurgical-Furnace Repair and
Workers' Safety

mechanization in the removal of checkers and of debris from below them. Silica refractories now have little importance in Soviet open-hearth practice, having been replaced by basic (or unburnt magnesite-chromite, for furnaces up to 100 ton in capacity when basic are unavailable). Periclase-spinel magnesite-chromite bricks are to be used in greater quantities. They are made by co-grinding a mixture of chromite and magnesite powder to 0.06-0 mm, followed by pressing in hydraulic presses; on large furnaces operated with oxygen enrichment at the NTMK they have given 16% longer roof life than ordinary magnesite-chromite bricks. The "Magnezit" works annual production of periclase-spinel bricks is 5000-6000 tonnes, much below requirements. Little progress has been made in the development, called for in the resolutions of the All-Union Steelmakers' Conference, of shaped bricks, although the Stal'proyekt, Giprostal' and VNIIO should have done this in 1957; refractory institutes have failed to develop materials or methods for building-up eroded refractory surfaces, or a wide range of solutions or

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powders for different refractory products. The large discrepancies in the total running-repair and refractory costs per tonne of steel (eg 17.15 and 8.75 roubles respectively at the MMK and 55.07 and 37.27 roubles respectively in the converter shop at the Krivoy Rog works). The conference made recommendations for further improvements in repair work. A permanent committee under the chairmanship of academician I.P. Bardin has been formed by the Akademiya Nauk SSSR (Academy of Sciences of the USSR) for the normalization of working conditions in hot repairs.

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USCOMM-DC_60378

PEYCHEV, G.P.; KORMILITSYN, N.S.; SMOLYARENKO, D.A.; YEFANOV, N.I.; SOKOLOV, O.N.

Open-hearth furnace temperature at the time of charging [with summary
in English]. Stal' 18 no.11:993 N '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii
proizvodstva i truda chernoy metallurgii (for Peychev, Kormilitayn).
2. Staleplavil'naya sektsiya Nauchno-tekhnicheskogo obshchestva chernoy
metallurgii (for Smolyarenko, Yefanov, Sokolov).
(Open-hearth furnaces)

SMOLYARENKO, D.A., . kand. tekhn. nauk

Improving the standardization of ferrous metals. Standartizatsia
22 no.5:6-11 S-0 '58. (MIRA 11:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Steel--Standards)

SMOLYARENKO, D.A., kand.tekhn.nauk; KAPLAN, A.S., inzh.; MATYUSHINA, N.V., inzh.

Technical specifications for new kinds of production in ferrous metallurgy. Standartizatsiia 22 no.5:37-39 S-0 '58.
(MIRA 11:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Iron--Metallurgy) (Steel--Metallurgy)

SMOLYARENKO, D.A.; MATYUSHINA, N.V.; KAPLAN, A.S.; GORZHEVSKAYA, A.V.:
Prinimali uchastiye: ULINSKAYA, Ye.I.; BARYSHEVA, I.V.; ROMAS,
F.D.. AVRUTSKAYA, R.F., red.izd-va; ISLENT'YEVA, P.G., tekhn.
red.

[List of specifications in effect for products of ferrous metallurgy] Perechen' deistvuushchikh tekhnicheskikh uslovii na produktsiiu chernoi metallurgii; po sostoiانيu na 1 ianvaria 1959 g. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tavetnoi metallurgii, 1959. 115 p. (MIRA 13:2)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. 2. Laboratoriya standartizatsii TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii (for Smolyarenko, Matyushina, Kaplan, Gorzhevskaya). 3. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (for Ulinskaya). 4. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti (for Barysheva). 5. Ukrainskiy institut metallov (for Romas).
(Iron--Specifications) (Steel--Specifications)

25(5)

NOV/94-59-3-3/25

AUTHORS: Smolyarenko, D.A., Candidate of Technical Sciences, and Kaplan, A.S., Engineer

TITLE: The Standardization and Classification of Precision Alloys (Standartizatsiya i klassifikatsiya pretsizionnykh splavov)

PERIODICAL: Standartizatsiya, 1959, Nr 5. pp 13 - 18 (USSR)

ABSTRACT: By the standardization plan, TsNIICHERMET will work out state standard drafts for precision alloys in 1959. There are no such state standards yet, and the precision alloys (soft and hard magnetic, magnetostrictional, with particular mechanical properties, etc.) for use in instruments and electric devices are being produced by technical specifications. The article gives general information on the grade names, properties, applications, and the dimensions of the wire, rods, sheets or tapes in the form of which the alloys are available. One new special alloy for hair springs of wrist watches and chronometers, "N35KhMV",

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DOV/28-59-3-3/25

The Standardization and Classification of Precision Alloys

developed by TsNIICHERMET, is mentioned as giving a temperature error of maximum 0.5 second per 1° C in 24 hours (comparing with 1.5 and 2 seconds or more per 1° C with the springs of alloys "EI574" and "EI278", so-called "elinvar"). This new alloy has a low temperature coefficient of the elasticity module and obtains high strength after deformation and annealing due to the separation of dispersed carbides out of a solid solution. The effect of heat treatment temperature on the tensile strength and elongation of the wire made of it is illustrated by a graph. The authors emphasize that only a circulation of accumulated experience can lead to valuable suggestions on standardization of the alloys. There are 6 tables, 4 graphs, and 4 Soviet references.

ASSOCIATION: TsNIICHERMET

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PERTSEV, M., inzhener; SMOLYARENKO, D.

Metallurgy in socialist countries. NTO no.7:63 Jy '59.
(MIRA 12:11)

1. Predsedatel' Tsentral'nogo pravleniya nauchno-tekhnicheskogo
obshchestva chernoy metallurgii (for Pertsav). 2. Predsedatel'
staleplavil'noy seksii pravleniya nauchno-tekhnicheskogo
obshchestva chernoy metallurgii.
(Metallurgy)

SMOLYARENKO, D.

Increase the production of semikilled steel. NTO no.8:35 Ag '59.
(MIRA 12:11)

1. Predsedatel' staleplavil'noy seksii Tsentral'nogo pravleniya
Nauchno-tekhnicheskogo obshchestva chernoy metallurgii.
(Steel--Metallurgy)

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SOV/190-9-10-10/20

AUTHOR: Smolyarenko, D. A. (Candidate of Technical Sciences)

TITLE: Increasing Production of Semi-Killed Steel

PERIODICAL: Metallurg, 1959, Nr 10, pp 18-20 (USSR)

ABSTRACT: In March 1959, a scientific and technical conference attended by representatives of Councils of National Economy (sovnarkhoz), metallurgical plants and scientific research institutes took place in Moscow. Subject: increasing the production of semi-killed steel. The Chairman of the Scientific and Technical Society of Ferrous Metallurgy of the Central Scientific Research Institute of Ferrous Metallurgy (NTO ChM TsNIICHM) and Chief of the Laboratory of Ingots (laboratoriya slitka) Yefimov, L. M., reported on semi-killed steel production abroad. Pudikov, A. K., Assistant Deputy Chairman of the Council of Ministers USSR (Sovet Ministrov SSSR) spoke of the visit of Soviet metallurgists to the U.S.A. Other speakers indicated

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Increasing Production of Semi-Killed Steel

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that the production of killed-steel in the Soviet Union increased from 49.2% in 1951 to 58% in 1958. The production of semi-killed steel is insignificant. It was decided to boost production at the following plants: "Zaporozhstal'" (zavod "Zaporozhstal'"), "Azovstal'", Makeyevka (Makeyevskiy zavod), Stalino (Stalinskiy zavod), Yenakiyevo (Yenakievskiy zavod), Transcaucasia (Zakavkazskiy zavod), Magnitogorsk Metallurgical Combine (MMK), and Kuznetsk Metallurgical Combine (KMK). There are 3 tables.

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SMOLYARENKO, Daniil Abramovich; YEFANOV, Nikolay Ivanovich; MASLOVSKIY,
P.M., retsenzent; BORODULIN, A.I., retsenzent; GONCHAROV, G.I.,
retsenzent; SPIRIN, N.I., retsenzent; KOROLEV, M.N., nauchnyy red.;
ZINGER, S.L., red.izd-va; KARASEV, A.I., tekhn.red.

[Large-capacity open-hearth furnace plants] Martenovskie tsekh
s pechami bol'shoi emkosti. Izd.2., perer. i dop. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po chernoj i tsvetnoj metallurgii,
1960. 356 p. (MIRA 13:9)
(Open-hearth furnaces--Design and construction)

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SOV/130-60-1-21/22

AUTHOR: Smolyarenko, D. A. (Candidate of Technical Sciences, Member of the Presidium of the Central Board of Scientific and Technical Society of Ferrous Metallurgy)

TITLE: The First Conference of the Scientific and Technical Society of Ferrous Metallurgy. Current Events

PERIODICAL: Metallurg, 1960, Nr 1, pp 43-44 (USSR)

ABSTRACT: During September 29-30, 1959, first All-Union Conference of the Scientific and Technical Society of Ferrous Metallurgy (NTO ChM) took place at Dnepropetrovsk. Nearly 400 members participated. M. A. Pertsev, Chairman of Scientific and Technical Society of Ferrous Metallurgy reported on problems in connection with decisions reached at the XXI Congress and the June plenary session of the Central Committee of the Communist Party of Soviet Union. Since 1955, NTO

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Technical Society of Ferrous Metallurgy.
Current Events:

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ChM has completed the major task of organizing professional technical groups by introducing the latest production methods and inventions of science and technology into industry of ferrous metallurgy, and by organizing an exchange of professional and technical experience among the plants and combines of the metallurgical industry. The Society has over 42,000 members among the 350 primary organizations. A report was made on the subject plans of the primary organizations of the following 3 plants; (1) plant imeni Petrovskiy (zavod imeni Petrovskogo) Chairman of the Council - Malyy, (2) plant imeni Dzerzhinskiy (zavod imeni Dzerzhinskogo) Chairman of the Council - Sorokin, (3) Kuznetsk combine (Kuznetskiy kombinat) Chairman of the Council - Borodulin. These 3 seem to have fully comprehended all the aspects of NTO ChM activity. In many ferrous metallurgical plants members of NTO ChM are assisting production as technical advisors. One of the best examples is a trip undertaken by Foreman M. M. Privalov (member of the steel

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Technical Society of Ferrous Metallurgy.
Current Events

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casting section of NTO ChM, Hero of Socialist Labor and member of the Supreme Soviet of the USSR) to the Cherepovets metallurgical plant, where he initiated several economy and production measures related to performance of large-capacity open-hearth furnaces and in charge preparation. A great job is being done at the Makeyevka metallurgical plant (Makeyevskiy metallurgicheskiy zavod) by the NTO ChM unit headed by V. O. Kulikov and B. R. Ratner on production of the new economical reinforcing steel 35GS scheduled to replace steel 25G2S at present used for reinforced concrete construction. The Kuznetsk combine is working out a method of limiting the amount of nickel in the production of steel. At the conference, a Central Committee consisting of 55 members was elected, among them; M. A. Pertsev, a specialist in the high-grade metallurgy and Director of the "Serp i Molot" plant, elected as chairman of the Central Board of NTO ChM; P. I. Korobov, Hero of Socialist Labor and

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Technical Society of Ferrous Metallurgy.
Current Events.

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the vice-chairman of the State Scientific and Technical
Committee of the USSR (GNTK SSSR); A. M. Samarin,
corresponding member of the Academy of Sciences of
USSR (AN SSSR); A. P. Chekmarev, Academician; I. N.
Golikov, Doctor of Technical Sciences; V. A. Podzerko,
(Chairman of Central Committee of the Trade Union
of Workers of Metallurgical Industry and others.

Card 4/4

SMOLYARENKO, D.A., kand.tekhn.nauk

Steelmaking in the United States [from "Open-Hearth
Proceedings," 1958]. Metallurg 5 no.9:37-39 S '60.
(MIRA 13:8)

1. Predsedatel' Vsesoyuznoy staleplavil'noy sekti Nauchno-
issledovatel'skogo obshchestva chernoy metallurgii.
(United States--Steel--Metallurgy)

S/028/60/000/010/002/020
B013/B063

AUTHOR: Smolyarenko, D. A.
TITLE: Standards and Saving of Iron Metals
PERIODICAL: Standartizatsiya, 1960, No. 10, pp. 9 - 15

TEXT: The author reports on standards and saving measures in the processing of iron metals. ГОСТ 9458-60 (GOST-9458-60)¹⁸ for carbon steel subjected to heat treatment and used for the production of plate and wide strips was enforced on October 1, 1960. The standard was elaborated at Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy) under the supervision of M. V. Pridantsev, Doctor of Technical Sciences. Heat treatment increases the strength of the metal, thus helping to save hundreds of tons of metal per year. GOST 9458-60 will help save also ferroalloys and low-alloy semi-quiet and quiet steels ГОСТ 380-60 (GOST 380-60) for mass-produced carbon steel and ГОСТ 1050-60 (GOST 1050-60) for high-grade structural carbon steel will be enforced on January 1, 1961. Due to the

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Standards and Saving of Iron Metals

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new standards, manufacturers may select the production methods for rimming, quiet, and semi-quiet steel. According to the new standard the silicon content in semi-quiet steels must not exceed 0.17%. The production of semi-quiet steels which have several advantages over rimmed steels is to be increased. The production methods are to be improved by close cooperation between scientists and manufacturers. The Seven-year plan provides for an increase in the production of ferroconcrete structures by almost 2.5 times. Up till now mainly steels of the types М15 and 25Г2С (МСт. 5 and 25Г2С) have been used. To save manganese, a new type 35ГС (35GS) was developed which is produced by open-hearth and purifying processes. It was found that 35GS complies with the specifications of ГОСТ 7314-55 (GOST 7314-55) and ГОСТ 5058-58 (GOST 5058-58) for 25Г2С. At present, a high amount of metal is wasted due to careless preparation of the charge. This could be avoided by special-purpose balances. At such modern factories as Kuznetskiy kombinat (Kuznetsk Kombinat), zavody Azovstal' (Azovstal' Works), Dneprospetsstal', Elektrostal', a large number of specimens are tested on smelting and rolling. Such tests are not necessary and retard the delivery of the products. For this reason, some factories should be allowed to



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deliver their products without special tests provided that such production processes are applied as guarantee excellent qualities. In such cases the manufacturers should state in the certificate that the factory is not to be held responsible for the quality of the metalware concerned. The author mentions the following metallurgical Kombinats: Orsko-Khalilovskiy (Orsk-Khalilovo) ^{III}, Magnitogorskiy (Magnitogorsk) ^{III}, Nizhne-Tagil'skiy (Nizhne-Tagil'skiy) ^{III}, Makeyevskiy (Makeyevka) ^{III}, Yenakiyevskiy (Yenakiyevo) ^{III} and metallurgical plants: Cherepovetskiy (Cherepovets) ^{III}, Ashinskiy (Ashinskiy) ^{III}, Izhevskiy (Izhevsk) ^{III}, the works: "Krasnyy Oktyabr" ^{III}, Zaporozhstal' ^{III}. The figures and the table contain data from several works. There are 5 figures and 1 table. ✓

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S/130/60/000/011/001/011
A006/A001

AUTHOR: Smolyarenko, D. A., Candidate of Technical Sciences
TITLE: The 50th Anniversary of the Scientific-Technical Society of Ferrous Metallurgy

PERIODICAL: Metallurg, 1960, No. 11, pp. 1-2

TEXT: This is a review on the historical development and the activities of the Scientific-Technical Society of Ferrous Metallurgy (NTO ChM) founded in Leningrad in 1910. The Society has now over 53,000 members and its objects laid down in Article 1 of the Statutes, confirmed in 1957 by the Home Office (Narodnyy kommissariat vnutrennykh del) are: the unification of persons working in the scientific or practical fields of metallurgy, propagation of scientific information; performance of scientific-research work; consultation of authorities and enterprises. After the reorganization of the industrial administration in 1957, the NTO ChM has concentrated its activities particularly on the exchange of experiences by organizing conferences and by publishing technical recommendations. Organizations belonging to the Society participated in the Socialist Competition to fulfill the primary task of catching up and surpassing the production of

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SMOLYARENKO, D.A.; MATYUSHINA, N.V.; KAPLAN, A.S.

Technical specifications for new kinds of ferrous metallurgy
products. Standartizatsiia 24 no.3:31-35 Mr '60.
(MIRA 13:6)

(Steel--Classification)

SMOLYARENKO, Daniil Abramovich; YEFANOV, N.I., retsenzent; SOKOLOV, N.A.,
retsenzent; GURSKIY, G.V., retsenzent; BURNASHEV, S.M., retsenzent;
GROMOV, N.D., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Quality of carbon steel] Kachestvo uglerodistoi stali. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961.
244 p. (MIRA 14:12)
(Steel--Metallurgy) (Metallurgical plants--Quality control)

SMOLYARENKO, Daniil Abramovich; GROMOV, N.D., red. izd-ye; ISLANI'YEVA,
P.G., tekhn. red.

[Steel pourer] Razlivshchik stali. Moskva, Gos. nauchno-tekhn.
izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 254 p.
(MIRA 14:11)

(Open-hearth process)

SMOLYERENKO, D A., kand. tekhn. nauk

All-Union Steelmakers' Conference. Biul. TSIICM no.3:1-5
'61. (MIRA 14:12)

(Steel industry--Congresses)

S/028/61/000/003/004/005
B129/B201

AUTHORS: Smolyarenko, D. A., Kaplan A. S.

TITLE: New materials of iron metallurgy

PERIODICAL: Standartizatsiya, no. 3, 1961, 53

TEXT: In connection with the rapid development of modern engineering, an ever increasing importance is attached to the technical conditions for new types of steel, alloys, and other types of metal products. The technical conditions contribute to the introduction of new materials in the industry, they simplify the coordination of scientific research work in this field and permit the study of new types of domestic metal products. The Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute for Iron Metallurgy) conducted a number of studies in the second half of 1960 regarding the creation of technical conditions for the new types of metal products, and also for the better definition of current technical conditions on the basis of the standardization of their indices. New types of steels and alloys for ferroboron with slight aluminum content (4 % at most), and for new rolled

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S/028/61/000/003/004/005
B129/B201

New materials of iron metallurgy

products are listed (with the specification of chemical composition, strength, etc.) along with the technical conditions for the elaboration of state norms and improvement of current technical conditions. There are 5 tables.

Steel type	Mechanical properties (not less than...)					Hardenability	
	1	2	3	4	5	5 mm	30 mm
18XН2МА(18KhN2MA)	95	80	10	50	9	35	25
20X2H2MΦA(20Kh2N2MFA)	100	85	10	50	9	45	40
19XН3МА(19KhN3MA)	95	80	10	50	10	40	30
15XНГ2ВА(15KhNG2VA)	120	100	12	55	10	-	-
15XГHP(15KhGHR)	110	90	10	55	10	-	-
14XП2H/Г/Р/Р(14KhG2N/S/R/R)	110	90	10	50	9	-	-

1) Strength, kg/mm²
2) Yield point, kg/mm²
3) Specific elongation, %
4) Contraction, %
5) Resilience, kgm/cm²

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S/028/61/000/010/002/002
D211/D301

AUTHORS: Smolyarenko, D.A. and Kaplan, A.S.

TITLE: New Types of ferrous metal products

PERIODICAL: Standartizatsiya, 1961, no. 10, 46-51

TEXT: The authors describe new standards worked out by TsNIChM (quoted as ChMTU/TsNIChM with corresponding number) for: A) High-strength metals B) New grades of steels and alloys. A) 1) 395-61 specifies the properties of high strength wire of yield stress-350 kg/mm². 2) 460-61: profile sections of No.10-32 used for strengthening prestressed reinforced concrete structures. 3) 426-61: seven wire strands made of stainless steel, whose characteristics are given by ГОСТ (GOST 7372-55) and GOST 7348-55. 4) 460-61: Steel cables used in the mining and metallurgical industry. B) 1) 409-61: hot rolled steel angles of X25H10W2 (Kh25N10YU2) steel with yield stress -85 kg/mm².

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S/028/61/000/010/002/002
D211/D301

New types of ferrous ...

Surface conditions of the steel are given by GOST 5949-51 and its phosphor content must be less than 0.035 %. 2) 414-61: cold rolled thin metal sheets of thickness 1.5 to 3 mm made of 25X2H4MCPA (25Kh2N4MSTsA), 38X5MCPA (38Kh5MSTsA) and 38X5MCPA (38Kh5MSTsA) steels. 3) 420-61: cold rolled sheets made of magnetic alloys 12 KV. Magnetic properties: Coercitive force in the field of maximum permeability = 22-28e, residual induction in the saturation field (100e) not less than 9000 gauss. 4) 424-61: Hot rolled and forged circular and square bars made of alloy steel 15X2H2TPA (15Kh2GN2TRA). The phosphor content must be less than 0.03%, and the Y.S. is 150 kg/mm². 5) 425-51: Same products as in 4) but the steels used here are X28H8 (Kh28N8), X32H8 (Kh32N8). 6) 444-61: Hot and cold rolled sheets of X14G14N (Kh14G14N), X17AG14 (Kh17AG14), EM213 (EP213) steel, which replace X18H9T (1Kh18N9T) steel. 7) 491-61, 492-61 and 496-61: Sheets, bars and wire made of X21HPT (Kh21NRT) steel.

Card 2/3

SMOLYARENKO, D.

Principles of our life. NTO 3 no.12:31-32 D '61. (MIRA 15:1)

1. Chlen prezidiuma Tsentral'nogo pravleniya nauchno-tehnicheskogo obshchestva chernoy metallurgii.
(Steelworks--Technological innovations)

BALAKINA, I.A.; BOCHKAREVA, A.I.; GORZHEVSKAYA, A.V.; KAPLAN, A.S.;
SMOLYARENKO, D.A., kand. tekhn.nauk; TEREENT'YEV, Ye.A.; SOTS,
G.A.; TREMBITSKIY, Ya.V.; ULINSKAYA, Ye.I.; KHUTORSKAYA, Ye.S.,
red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Technical specifications in effect on products of ferrous metal-
lurgy; list as of October 1, 1961] Deistvuiushchie tekhnicheskie
usloviia na produktsiiu chernoii metallurgii; perechen' po
sostoianiiu na 1 oktiabria 1961 g. Moskva, Metallurgizdat,
1962. 141 p. (MIRA 15:5)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Iron industry--Tables and ready-reckoners)
(Steel industry--Tables and ready-reckoners)

SMOLYARENKO, D.A., kand.tekhn.nauk

All-Union Congress of the Scientific Technological Society for
ferrous metallurgy. Met. i gornorud. prom. no.3:86 My-Je
'62. (MIRA 15:9)

1. Chlen Prezidiuma Tsentral'nogo pravleniya Nauchno-tehnicheskogo
obshchestva chernoy metallurgii.
(Iron industry--Congresses) (Steel industry--Congresses)

SMOLYARENKO, D.A.

Second All-Union Conference of the Scientific Technological Society
for Ferrous Metallurgy. Metallurg 7 no.3:39 Mr '62.
(MIRA 15:2)

1. Chlen prezidiuma Tsentral'nogo pravleniya Nauchno-tekhnicheskogo
obshchestva chernoy metallurgii.
(Metallurgy--Congresses)

SMOLYARENKO, D.A., kand.tekhn.nauk; BOCHKAREVA, A.I., inzh.

New materials in ferrous metallurgy. Metalloved. i term. obr.
met. no.12:50-53 D '62. (MIRA 16:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Steel--Metallurgy)

SMOLYARENKO, D. A.; KAPLAN, A. S.

Alloyed steel. Standartizatsiia 26 no.10:50-52 0 '62.
(MIRA 15:10)

(Steel alloys--Standards)

SMOLYARENKO, D. A., kand. tekhn. nauk

Trends in the expansion of steel smelting processes in Great
Britain. Met. i gornorud. prom. no.1:84-86 Ja-F '63.
(MIRA 16:4)

(Great Britain—Iron and steel plants)

SMOLYARENKO, D.A., kand. tekhn. nauk; SMOLYARENKO, V.D., inzh.

Conference of United States steelmakers. Met. i gornorud.
prom. no.5:84-86 S-0 '63. (MIRA 16:11)

SMOLYARENKO, D.A.; TERE~~N~~T'YEV, Ye.A.

Capped steel. Metalloved. i term. obr. met. no.7:20-23 JI '63.
(MIRA 16:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Steel--Metallurgy)

SPOLYARENKO, D., laureat Gosudarstvennoy premii

Potentialities of the steel industry. (1966) (MIRA 1966)

1. Predsedatel' stateplavil'noy sektora i entral'nogo pravleniya Nauchno-tekhnicheskikh obshchestva chernoy metallurgii.

SMOLYARENKO, D.A.

Steelmaking in the U.S.A. Metallurg 8 no.1:19-21 Ja '63.
(MIRA 16:1)
(United States--Steel--Metallurgy)

СМОЛЯНЕНКО, Д.А., канд. техн. наук

Improving the quality of low carbon martensite steel. Web. 1
gornerud. prom. no.4:13-16 31-Ag 161. (MIRA 18:7)

L 00557-66 EWP(m)/EWA(a)/EWP(t)/EWP(v)/EWP(z)/EWP(b)/EWA(c) IJP(c)
JE/HW

ACCESSION NR: AP5019944

UR/0133/65/000/008/0706/0707
669.18-412 : 621.746.753 29

AUTHORS: Borodulin, A. I.; Smolyarenko, D. A.; Sivtsov, G. V.; Chizhova, V. Ya. 30
P

TITLE: Improving the quality of metal for cold-rolled sheet metal

SOURCE: Stal', no. 8, 1965, 706-707

TOPIC TAGS: sheet steel, steel pouring, steel foundry, deep drawing steel

ABSTRACT: Some of the reasons why Cherepovets steel is superior to others for deep-drawing are discussed. The factory uses ore containing 62% Fe (to be raised to 63% in 1965) and coke containing 0.55% S (compared with normal 1.6-1.8%) to obtain only 0.018% S in the cast iron (to be lowered to 0.015-0.017%). Fuel consumption (natural gas) in 1964 was 136 kg/ton. C content in medium and large capacity furnaces is taken as 0.35-0.80 and 0.25-0.70% respectively, while cast iron consumption (containing 0.40% Si, 0.25% Mn) is 55-58%. The steel produced for deep-drawing corresponds to stricter limitations on chemical composition (imposed within the factory) than those established by GOST specifications (primarily, smaller % of Si, P, and S). Since the heating of the ingredients was found to be a major factor in steel quality, the following order is used: agglomerate is uniformly loaded on the fettlings and covered with lime. The charge is heated 7-10 minutes and scrap is
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L 00557-66

ACCESSION NR: AP5019944

9
loaded at 3 tons/min to speed the melting. Since the S content remains essentially constant through the melting operation (small amounts only are removed in slag), the charge must consist of materials containing little S. The Mn/S ratio has to be substantially above 12 (around 20-30). The metal temperature is kept at 1530-1600C while the slag temperature should not drop below 1580C. Speed pouring through 60-70 mm spouts (12 tons/min) results in 1.45% increased yield of class I metal compared with normal pouring through 30 mm spout (2.5 t/min). I. M. Konovalov, E. V. Tkachenko, K. I. Zhurkin (Cherepovets); V. N. Gasilina, K. A. Kapustin (TsNIICHM) participated in the work. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Factory); TsNIICHM

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card

2/2

SCURCE CODE: UR/0130/66/000/003/0027/0028

ACC NR: AP6021713

AUTHOR: Monid, A. G.; Benyakovskiy, M. A.; Smolyarenko, D. A.; Sivtsov, G. V.;
Tkachenko, E. V.; D'yakonova, V. S.; Popov, P. I.; Pakudin, V. P.; Shirinskaya, S. A.;
Sosipatrov, V. T.

ORG: none

TITLE: Production testing of 08Yu cold rolled low carbon steel

SOURCE: Metallurg, no. 3, 1966, 27-28

TOPIC TAGS: low carbon steel, deoxidation, cold rolling, quality control / 08Yu steel

ABSTRACT: Production testing was carried out on nonaging 08Yu steel sheets at the Cherepovetsky Metallurgical Plant and the results were compared to the norms set by GOST 9045-59. Melting was carried out in single-grooved Martens furnaces of average capacity; deoxidation by ferromanganese was done in steps--50% in the furnace and 50% in the ladle; Al was also introduced in the ladle in quantities of 100-150 g/T of steel while full deoxidation was accomplished by the addition of Al pellets in quantities of 900-1000 g/T. The chemical composition of 08Yu steel compared favorably with the standards set by GOST 9045-59 (experimentally--C=0.04-0.08%, Si=0.01%, Mn=0.32-0.38%, S=0.009-0.016%, P=0.01-0.015%, Cr=0.01-0.03%, Ni=0.03-0.07%, Cu=0.02-0.07% and Al=0.02-0.05%). Ingots weighing 14T were hot rolled in 15-18 passes into slabs of

UDC: 621.771.24

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ACC NR: AP6021713

135-140 mm thickness and 1070-1430 mm width on a 1150 bloom. These slabs were next cold rolled to a maximum of 68% reduction into sheets of 2.5-3.5 mm thickness and 1040-1430 mm width. Annealing was done at 550°C for 10 hrs at a heating rate of 15°/hr and cooling was at 6°/hr. The final operation was a finishing pass at 1.0-1.3% reduction. Tests made on the sheets after aging at 200°C for 30 min substantiated that the steel was nonaging. The sheets performed well in stamping tests which were run under the stamping conditions used at the Gor'ky Automotive Plant. Orig. art. has: 1 table.

SUB CODE: 11,14/ SUBM DATE: none

Card 2/2 *5*

SOV/126-7-6-12/24

AUTHORS: Sirota, N.N., Lekhtblau, Ye.A. and Smolyarenko, E.M.

TITLE: Influence of Ultrasonic Action in the Crystallization Process on the Structure and Properties of Aluminium Silicon Alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 6, pp 879-884 (USSR)

ABSTRACT: Experiments were carried out on the ultrasonic apparatus of the Scientific Research Technological Institute (Fig 1). It consisted of a generator, a 3 kW amplifier and a magnetostriction transformer and rectifier. Twelve Al-Si alloys were made for the experiments with the following silicon contents: 2.5; 5; 7.5; 10; 11; 11.6; 12; 12.5; 15; 17.5; 20 wt.%. The alloys were heated to 250°C above the melting point and were cast into a mould which had been pre-heated to 400°C and dressed with chalk. Control runs have shown that dressing with chalk has no influence on the crystallization process and the structure of the ingot but it does prevent sticking to the mould walls. Ultrasonic waves were applied up to the point of casting. The frequency of oscillation was 18 to 18.5 khertz, changing during the crystallization process due to an

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SOV/126-7-6-12/24

Influence of Ultrasonic Action in the Crystallization Process on the Structure and Properties of Aluminium Silicon Alloys

increase in the quantity of the solid phase and to the change in the acoustic parameters of the system. The power supply to the emitter was 1.0 to 1.5 kW. As the alloys changed to the heterogeneous pasty state at the end of the crystallization process, the ultrasonic waves were as a rule discontinued. After perfecting the method a series of experiments with alloys of the Al-Si system was carried out. Six ingots were cast from each alloy, three being exposed to ultrasonic waves and three for reference purposes. From these ingots, specimens were made for tensile, impact and hardness testing and also for macro and micro-sections. It was noticed that alloys with low Si content (up to 7.5%) did not swell up under the action of ultrasonic waves until the ingot had completely solidified. The surface of the exposed ingots was smooth and even, whereas the surface of the reference specimens was rough. In Fig 2 the macrostructure of an Al-Si alloy containing 2.5% Si is shown (a - non-exposed and b - exposed specimens). In Fig 3 the macrostructure of an Al-Si alloy containing 11.6% Si is shown (a - non-

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SOV/126-7-6-12/24

Influence of Ultrasonic Action in the Crystallization Process on the Structure and Properties of Aluminium Silicon Alloys

exposed and b - exposed specimens). In Fig 4 the macrostructure of an Al-Si alloy containing 15% Si is shown (a - non-exposed and b - exposed specimens). In Fig 5 the influence of exposure on the change in ultimate tensile stress of Al-Si alloys with change in composition is shown (exposed specimen - upper curve). In Fig 6 the change in impact strength of Al-Si alloys with change in composition is shown (exposed specimen - upper curve, non-exposed specimen - lower curve). The authors arrive at the following conclusions:

- 1) As a result of the action of ultrasonic waves on the crystallization of Al-Si alloys, within the range 2.5 and 20% Si, a sharp refinement of the primary grain and microstructure takes place.
- 2) The ultimate tensile stress of exposed ingots increases on the average by 11% and the percentage elongation by 75%.
- 3) A general increase in hardness and impact strength

Card 3/4 of the alloys is achieved.

SOV/126-7-6-12/24

Influence of Ultrasonic Action in the Crystallization Process on
the Structure and Properties of Aluminium Silicon Alloys

There are 6 figures, 1 table and 3 references, 1 of
which is Soviet and 2 German.

ASSOCIATION: Moskovskiy institut tsvetnykh metallov i zolota imeni
M. I. Kalinina (Moscow Institute of Non-ferrous Metals
and Gold imeni M. I. Kalinin)

SUBMITTED: December 7, 1957 (Initially)
July 29, 1958 (After revision)

Card 4/4

SIROVA, N.N., akademik, otv.red.; BELOV, K.P., prof., red.; KONDORSKIY, Ye.I., prof., red.; POLIVANOV, K.M., prof., red.; TELESNIN, R.V., prof., red.; SMOLENSKIY, G.A., prof., red.; SHOL'TS, N.N., kand. fiz.-mat.nauk, red.; SMOLYARENKO, E.M., red.; BASHKIROV, L.A., red.; KHOLYAVSKIY, S., red.izd-va; VOLOKHANOVICH, I., tekhn.red.

[Ferrates; physical and physicochemical properties] Ferrity; fizicheskie i fiziko-khimicheskie svoistva. Doklady. Minsk, Izd-vo Akad.nauk BSSR, 1960. 655 p. (MIRA 13:11)

1. Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya.
2. AN BSSR (for Sirota).
(Ferrates)

18 3200

27374
S/194/61/000/003/040/046
D201/306

AUTHORS: Sirota, N.N., Lekhtblau, Ye.A. and Smolyarenko, E.M.

TITLE: Crystallization of alloys in an ultrasonic field

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 3, 1961, 20, abstract 3 E144 (V sb. Kristallizatsiya metallov, M., AN SSSR, 1960, 268-271)

TEXT: An investigation has been made into the effect of ultrasonic oscillations at a frequency of 19 Kc/s on the process of crystallization. The alloys Al-Si, Al-Cu, Al-Mg were heated to about 50-100°C above their melting point and then poured into a casting mould heated to 400°C. The mould was then screwed onto the concentrator. The analysis of the samples thus obtained has shown that the sedimentation shell concentrated in the upper portion of the ingot under the effect of ultrasound and was evenly distributed throughout its volume without ultrasound. By comparing the macrographs it was determined that sound makes the structure of the ingot

Card 1/2

Solid solutions in the system InP-GaP. N. N. Sirota, V. V. Rozov.

Investigation of solid solutions of InP-GaAs. N. N. Sirota, L. A. Makovetskaya.

Physical properties of the system ZnTe-CdTe. N. N. Sirota, V. D. Yanovich.

Physical properties of ternary alloys of the system Zn_3As_2 - Cd_3As_2 . N. N. Sirota, E. M. Smolyarenko.

Semiconducting properties of manganese-telluride and selenide. N. N. Sirota, G. I. Makovetskiy.

Production of films of semiconducting compounds of the type $A^V B^{VI}$ and $A^{III} B^V$ on antimony by reactive diffusion. N. N. Koren', N. N. Sirota. (25 minutes). (Presented by N. N. Sirota).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

SMOLYARENKO, V.D.

Introducing automatic control of steel pouring into ingot
molds. Metallurg 6 no.9:20-22 S '61. (MIRA 14:9)

1. Gosudarstvennyy soyuznyy institut po proyektirovaniyu
metallurgicheskikh zavodov.
(Steel ingots) (Remote control)

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Viscosity of lime-alumina slags with additions of SiO_2 , MgO ,
and Na_3AlF_6 . Izv. vys. ucheb. zav.; chern. met. 7 no.9:
63-67 '64. (MIRA 17:6)

1. Moskovskiy vecherniy metallurgicheskiy institut.

SMOLYANENKO, V.I.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Method for measuring the viscosity of molten slags with an
electric vibration viscosimeter. Zav. lab. 30 no.8:969-971 '64.
(MIRA 18:3)

1. Moskovskiy vecherniy metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEINERAL F.P.

Density and surface tension of lime-alumina slags with additions of SiO_2 , MgO and Na_2AlF_6 . Izv. vys. ucheb. zav. khim. met. 8 no.1955-60 165 (MIRA 1831)

1. Moskovskiy vchenyiy metallurgicheskiy institut.

SMELYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.F.

Viscosity and surface properties of synthetic white slag with
additions of Al_2O_3 , CaF_2 and Na_3AlF_6 . Izv.vys.ucheb.zav.;
chern.met. 8 no.6:72-77 '65. (MIRA 18:8)

1. Moskovskiy vecherniy metallurgicheskiy institut.

CHVERTKO, A.I.; PATON, V.Ye.; SMOLYARKO, V.B.; STESIN, V.V.

Standardized semiautomatic welding machines. Avtom. svar. 16
no.8:65-75 Ag '63. (MIRA 16:3)

1. Institut elektrosvariki imeni Ye.O. Patona AN UkrSSR.
(Electric welding—Equipment and supplies)

2.4220

77190

307/109-5-1-3/20

AUTHOR: Mikheilyan, A. L., Smolyanov, A. K., Vasil'ev, A. A.

TITLE: Investigation of the Spectrum of Natural Oscillations of a Resonator With a Magnetized Ferrite

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 1, pp 27-33 (USSR)

ABSTRACT: In the study an exact solution is given of the problem of natural frequencies for a cylindrical resonator containing a longitudinally magnetized ferrite cylinder of an arbitrary radius. A similar problem is discussed for the case when the resonator has no side walls. It is shown that for the cylinder of infinitely small radius the results obtained in this study coincide with the corresponding results obtained by Walker who used quasi-statical approximations. The system under discussion represents a cylindrical resonator of a circular cross section with a longitudinally magnetized ferrite rod (Fig. 1).

Card ~~1/21~~

8(3), 9(3), 24(1)
AUTHOR: Ismailov, Sh.Yu., Candidate of Technical Sciences ,
Smolyarov, A.M., and Tsvetkov, A.F., Engineers
(Ryazan')

TITLE: A Measuring Audio Frequency Generator

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroye-
niye, 1958, Nr 4, pp 34-35 (USSR)

ABSTRACT: A measuring audio frequency generator was developed at
the Ryazanskiy radiotekhnicheskiy institut (Ryazan'
Institute of Radio Engineering). A photograph of the
generator is shown in Figure 1. The audio frequency
generator provides a high stability and accuracy of
frequency readings. It covers continuously the fre-
quency range of 20 to 20,000 cycles. The frequency
stability of the generator is 10^{-3} in the entire fre-
quency range during 5 hours of continuous operation
after a preliminary one-hour warm-up. The frequency
stability is not influenced by environment temperatures
or by feed voltage changes. The accuracy of frequency
readings is not below 0.2% of any set frequency range.
The output power of the generator is not less than 4

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A Measuring Audio Frequency Generator

SOV/146-58-4-6/22

the stroboscopic method, and in all cases when high-accuracy frequency readings are required. There is 1 photograph.

SUBMITTED: May 5, 1958

Card 3/3

ACCESSION NR: AP4042113

S/0115/64/000/006/0036/0039

AUTHOR: Smolyarov, A. M.

TITLE: Automatic pulse-duration recorder

SOURCE: Izmeritel'naya tekhnika, v. 6, 1964, 36-39

TOPIC TAGS: pulse duration measurement, pulse duration recorder, electronic pulse duration recorder

ABSTRACT: A new pulse-duration recorder compares the measured duration with the duration of a reference pulse, modulates the difference pulse with h-f, stores it, and records the result on a chart tape. A block diagram is shown to explain the functioning of the recorder; a phantastron or sanatron is used as a reference-pulse generator, and a ShD-5 stepping motor (responsive to up to 1500 pulse/min) is used for operating the recorder-potentiometer slider. Formulas for the evaluation of possible error are supplied. It is claimed that a laboratory

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ACCESSION NR: AP4042113

model of the recorder measures pulse duration within 200—600 microsec and has a full-scale running time of 0.5 sec and an over-all error of 0.5%. Orig. art. has: 3 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3069

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 000

Card. 2/2

ACCESSION NR: AP4037468

S/0146/64/007/002/0090/0095

AUTHOR: Ismailov, Sh. Yu.; Smolyarov, A. M.; Dondik, Ye. M.

TITLE: Automatic devices and systems with stepping motor actuators

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 2, 1964, 90-95

TOPIC TAGS: electric motor, stepping motor, actuator, actuator stepping motor, automatic control

ABSTRACT: A few automatic systems which may use the stepping motor as an actuator are briefly described: an elementary open-loop automatic-control system may be used for control or measurement; a pulse-frequency-speed conversion system using a nonreversible stepping motor and a differential gear is recommended for automatic control; a pulse-supplied synchro (selsyn) system may be used for angle transmission; two stepping motors can serve as an adder; one stepping motor with a toothed disk can work as a variable-reluctance device

Card 1/2

ACCESSION NR: AP4037468

multiplying the frequency of the operating pulses; the stepping motor is also suitable for operating a bridge-type automatic recorder, servo system, or a time-interval-measuring recorder. As drift and hunting are practically absent in the operation of stepping motors, no corrective device is needed. [Abstracter's note: Nothing is said about the main drawback of the stepping motor — its large size] Orig. art. has: 4 figures and 12 formulas.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan' Radiotechnical Institute)

SUBMITTED: 04Jun63

DATE ACQ: 05Jun64

ENCL: 00

SUB CODE: IE

NO REF SOV: 005

OTHER: 000

Card 2/2

L 26312-65 EWT(d)/EEC(k)-2/EEC04 Po-4/Pq-4/Pg-4/Pk-4/Pl-4

ACCESSION NR: AP5002082

S/0146/64/007/006/0015/0019

AUTHOR: Ismailov, Sh. Yu.; Smolyarov, A. M.

36
33
B

TITLE: Automatic device for measuring pulse duration and oscillation frequency

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 6, 1964, 15-19

TOPIC TAGS: pulse measurement, frequency measurement *qm*

ABSTRACT: ^{qm} The instrument is based on the comparison of the duration of the measurand and a reference pulse, the difference pulse being a burst of high-frequency pulses subsequently counted by a stepping motor. A laboratory setup with a phantastron and semiconductor devices was able to measure pulse duration within 200—600 μ sec; it had a travel time over the full scale of 0.4 sec and an overall error of 0.5%. The instrument provided continuous visual indication and could measure the duration of single, periodic, or nonperiodic pulses; data logging on paper tape was also provided. Orig. art. has: 2 figures and 9 formulas. [03]

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan Radio Engineering Institute)

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Card 2/2

SMOLYAROV, I., (Maj Gen, Medical Service, ~~Member of the Academy of Medical Sciences~~)
Smolyarov, I., (Maj Gen, Medical Service, Member of the Academy of Medical Sciences) -
Coauthor with Professor A BAKULEV (Professor, Member of the Academy of Medical
Sciences) and Cols An. ROZHKOV and Ar. ROZHKOV of review of the book,
Entsiklopedicheskiy meditsinskiy spravochnik d.ya voyennykh fel'dsherov (Encyclopedic
Medical Handbook for Assistant Military Surgeons). / See section on Military
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SO: SUM 182, 13 August 1954

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Its Compounds by Ultraviolet Region Spectra K. P. Smolyarov
and F. B. Agrest. (Zhur. Anal. Khim., 1956, II, (3), 280-281)

4E4
4E2

M. J. R.
a.g.

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GRANOVSKIY, S.A.; ORGO, V.M.; SMOLYAROV, L.G.

[Construction of hydroturbines and calculation of their parts] Konstruktsii gidroturbin i raschet ikh detalei. Leningrad, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry [Leningradskoe otd-nie] 1953. 391 p. (MLRA 6:8)
(Water wheels)

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Granovskiy, S.A., Orgo, V.M., and Smolyarov, L.G., "General Information on Control Systems for Water Turbines," in their book *Konstruktsii gidroturbin i raschet ikh detaley* /Designs for Water Turbines and Breakdown for their Components/. Moscow and Leningrad, Mashgiz, 1953, Chapter 8, Pages 351-375, 25 figures.

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Repairing the jacket of the shaft of a hydraulic turbine without
disassembling the installation. *Energomashinostroenie* no.11:21-22
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Hydraulic turbines used at the Kuybyshev Hydroelectric Power Station.
Biul.tekh.-ekon.inform. no.9:33-36 '58. (MIRA 11:10)
(Kuybyshev Hydroelectric Power Station--Hydraulic turbines)

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(Kovalev, Nikolai Nikolaevich)

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SMOLYAROVA, Ye. L.

Electron-Optical Effect During Development of Plasma.
(In Russian.) G. V. Splyak and Ye. L. Smolyarova.
Zhurnal Tekhnicheskoi Fiziki (Journal of Technical Physics), v. 18, Mar. 1948, p. 279-288.

Firing potential, firing times, and disposition and movement of electrons between the cathode and anode in a long tube were investigated. 8 ref.

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RYSKIN, M.Ya.; TSVETKOV, I.T.; MITROFANOV, S.I., prof., rukovoditel' raboty;
Prinimali uchastiye: BAKHTEYEV, N.Ye.; KOLOSOV, A.A.; SMOLYUK, L.P.

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no.12:76 D '63. (MIRA 17:2)

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USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 30/59

Authors : Koton, M. M. and Smolyuk, T. G.

Title : Polymerization of methylated styrenes

Periodical : Dok. AN SSSR 102/2, 305-306, May 11, 1955

Abstract : Studies were conducted to determine the effect of the number and mutual disposition of methyl groups oriented in the benzene ring of styrene on the polymerizability and properties of polymers obtained. A check of the polymerization kinetics showed that some styrenes polymerize easier and more rapid than the other. The activation energy values for the process of polymerization of methylated styrenes were estimated. It was established that an increase in the number of methyl groups in the benzene ring of styrene reduces the polymerizability of the styrene substitutes as result of the steric hindrances originating thereat. Two reference: 1 USA and 1 USSR (1935-1954). Graphs.

Institution : Acad. of Sc., USSR, Inst. of Highmolecular Comp.

Presented by : Academician V. A. Kargin, December 14, 1954

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Izv.vys.ucheb.zav.; fiz. no.5:75-77 '61. (MIRA 14:10)

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1. Iz gospital'noy (zav. - dotsent G.K.Khodzhakuliyev) i fakul'tetskoy
(zav. - dotsent Ye.A.Pletnev) terapevticheskikh klinik Turkmenskogo
gosudarstvennogo meditsinskogo instituta imeni I.V.Stalina i
respublikanskogo protivotuberkuleznogo dispansera (glavvrach - D.M.
Ismailov).

(INFLUENZA)

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_____, (Name, ...)

... (Faint, illegible text)

... (Faint, illegible text)

BADAK, J.; SMORAGIEWICZ, W.

Upper Jurassic marly oil shale at Czarnoglow near Kamien Pomorski.
Bul geolog PAN 9 no.2:73-75 '61.

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