

## 資料室だより

### BISI Translation 紹介

— No 31 —

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英國鉄鋼業界、BISRA および英國鉄鋼協会は共同で BISI を運営しています。この BISI は BISI Translations を発行しています。BISI Translations は世界各国（英米語を使用する以外の国）の主要鉄鋼誌および学術誌のうち主要論文を全文英訳したもので、これらの論文は、世界各国が発刊する多数の Journals から選択されており、鉄鋼関係の研究者向きの論文を網羅しています。

またこの翻訳論文の刊行準備のできたものの Title, Abstract および出典について Translations Available(Weekly) が刊行されたり、また Journal of The Iron and Steel Institute に掲載され、事前にどんな論文が出るかわかるようになります。

BISI Translations を利用すれば英國米国、以外の主要製鉄国の主要論文をきわめて容易に知ることが可能で、これによる時間的利得は非常に大きいと考えられます。

資料委員会では 1965 年より業界の協力のもとに共同購入してまいりました。

次に列記いたしました Title は最近入手したもので、複写は禁止されておりますので閲覧のみに限ります。

なお、今回から Group の仕方が少し変わりましたのでご了承下さい。“資料室だより”の別刷ご希望の方は本会調査課までご連絡下さい。無料でさし上げます。Tel. (279) 6021

BISI Translations List No. 621~625

#### Management Planning and Control

BISI 10495 (A. H. Leckie.)

Some factors governing the planning of an iron and steel industry.

[Metalurgia ABM, 1972, 28, Apr. (173), 243-56] (P)

BISI 10517 (East German Patent)

Process for cleaning cyanide-containing effluents and circulating water.

[East German Patent 86 153. Publ. 20, 11, 71]

#### Physical Structure of Materials and Crystallography

BISI 9928 (M. Holzmann)

The effect of pre-strain upon Brittle fracture of low carbon steel.

[Kovové Mat., 1971, (5), 397-418] (C)

#### Physical Metallurgy and Metallography

BISI 9927 (P. Pahuta et al.)

Contribution to the study of the influence of plastic deformation on structure stability of austenitic steels.

[Kovové Mat., 1971, (5), 389-396] (C)

#### Physical Properties and Chemical Analysis

BISI 9330 (K. Stránský and M. Kebrle)

Measuring the tapping temperature of steel and alloy cast irons with dip pyrometers.

[Slévárenství, 1971, (2), 41-44] (C)

BISI 9415 (L. Brahaček, et al.)

Direct determination of oxygen in liquid steel

[Hutn. Listy, 1971, (2), 87~96] (C)

BISI 9626 (H. Bauer)

Measurement of high temperatures utilising thermal noise.

[die Technik, 1970, 25, 258-261] (G)

BISI 9859 (K. Poljakova, et al.)

Contribution to the problem of determination of sulphur content in free-cutting steel.

[Hutn. Listy, 1971, (4), 303-305] (C)

BISI 10372 (F. Richter and U. Lotter.)

The problem of demagnetization of seamless and welded tubing, as well as of plate and strip in ferromagnetic steel.

[Schweissen Schneiden, 1971, 23, 407-409] (G)

BISI 10412 (V. M. Guba, et al.)

Approximate calculation of the temerature and stresses in simple shaped bodies during heating by convection.

[Izv. VUZ. Chern. Met., 1972, (3), 159] (R)

BISI 10513 (A. Wittmann)

The pelletisable crucible technique.

Preparation of non metallic specimens for analysis by X-ray fluoresceence and by optical emission spectrometry.

[C.D.S. Circ., 1972, Apr., 1063-82] (F)

BISI 10571 (S. Černoch)

Thermodynamics of the Furnace thermal work and its graphical representation.

[Hutn. Listy, 1965, (8), 562-570] (C)

#### Mechanical Properties and Material Defects

BISI 9530 (V. Foldyna et al.)

Heat-resisting properties of 0.5%Cr-0.5%Mo-0.25%V low alloyed steel.

[Hutn. Listy, 1971, (2), 119-126] (C)

BISI 9653 (T. Dumitrescu)

A radiometric method for determining the origin of macroinclusions occurring on the surface of steel semi-products.

[Metalurqia, 1971, 23, (2), 84-86] (Ru)

BISI 9819 (J. Elfmark)

The effect of self-diffusion rate of iron on hot-forming properties of carbon steels.

- [Hutn. Listy, 1971, (8), 555-559] (C)
- BISI 9826 (B. Sommer)**  
Study on the closing of internal defects (discontinuities) in forging ingots under model conditions. [Hutn. listy, 1971, (7), 487-495] (C)
- BISI 10511 (U. Schieferstein)**  
Creep behaviour of Cr-Mo-V steels containing 12%Cr. [VDE Conf. 'Properties of High-temperature steels' Dusseldorf, 1972, 3-5 May, VIII, Rep. 8.4] (G)
- Rolling**
- BISI 9814 (M. Endrle and B. Kot)**  
Non-uniform deformation of plates and its effect on shape, cross-section and mechanical properties.  
[Sbornik VSB Ostrava, 1969, (3), 65-102] (C)
- BISI 9845 (I. Călutoiu)**  
The influence of final rolling temperature on the mechanical properties of plate, controlled temperature rolling.  
[Metalurgia, 1970, Sept. 564-5] (Ru)
- BISI 9850 (J. dirhan et al.)**  
Blasting conditions for the planishing rolls of a four-high rolling stand.  
[Hutn. listy, 1971, (6), 404-411] (C)
- BISI 9885 (J. Mádej)**  
An investigation into some of the technological parameters in the rolling of square rods in oval passes. [Met. i Odlew., 1970, 34, (249), 75-92] (R)
- BISI 9960 (M. Hajduk, et al.)**  
Establishing rolling pressures from measured housing deformation of a universal rolling stand.  
[Hutnik, 1971, (7/8), 270-272] (C)
- BISI 10008 (H. Wilkening)**  
Problems encountered in strip rolling, particularly in conjunction with the strip profile and the profile stability.  
[Bander Bleche, 1971, 12, (11), 501-508] (G)
- BISI 10044 (H. Wladika)**  
Development trends in the construction of hot wide strip mills and their effects with respect to the conversion of a mill of this type.  
[Stahl Eisen, 1971, 91, (24), 1382-1390] (G)
- BISI 10598 (S. P. Strukov, et al.)**  
Composite roll pass design for the rolling of crane rails. [Stal', 1973, (5), 427-428] (R)
- BISI 10599 (A. V. Mayakin, et al.)**  
System of pass design of angle sections.  
[Stal', 1972, (5), 430-431] (R)
- BISI 10613 (V. F. Dudko and A. V. Dabagyan)**  
Determining the functions of the disturbing loads in rolling mills.  
[Izv. VUZ. Chern. Met., 1972, (5), 83-85] (R)
- Metalworking, Excluding Rolling**
- Optimization of roll design in the rotary piercing operation.  
[Hutnik, 1971, 38, (3), 143-154] (Po)
- BISI 10291 (H. Droscha)**  
More accurate and faster sizing of tubes.  
[Bänder Bleche, 1971, (9), 418] (G)
- BISI 10612 (B. I. Sokolovskii, et al.)**  
Speed of the metal flow in the deformation zone during the cold rolling of tubes on a mill with rotary stands (CTRR)  
[Izv. VUZ. Chern. Met., 1972, (5), 74-8] (R)
- BISI 10615 (V. M. Klimenko, et al.)**  
Determining the optimum draw plate angle for vibro-drawing.  
[Izv. VUZ. Chern. Met., 1972, (5), 98] (R)
- Steels and Alloys (Technical Applications and Methods of Production), cermets**
- BISI 9647 (B. Rotenstein)**  
Steels with 9% Cr and other alloying elements for high temperature application.  
[Metalurgia, 1971, 23, (5), 314-321] (Ru)
- BISI 9827 (M. Šicha)**  
Properties of Heat-treated, low-alloy weldable Structural steel with high yield values at temperatures of up to 450°C.  
[Hutn. listy, 1971, (7), 509-513] (C)
- BISI 9913 (W. Heller)**  
Results of american investigations of rails.  
[Stahl Eisen, 1961 81, (3), 200-202] (G)
- BISI 10117 (Peugeot Spec.)**  
High-grade medium-hard steels with guaranteed hardenability 38 C2-38C2Pb-38C2E.  
[Peugeot Spec., 11-01-205] (F)
- BISI 10164 (L. Meyer, et al.)**  
Metallurgical and technological basis for the development and production of pearlite-poor structural steels.  
[Thyssenforschung, 1971, 3, (1/2), 8-43] (G)
- BISI 10251 (L. I. Gladyshtein et al.)**  
Influence of alloying elements on the structure and properties of low alloy steels with nitrogen and vanadium.  
[Stal', 1972, (1), 74-79] (R)
- BISI 10340 (French National Standard)**  
Iron and steel products high-yield weldable steel plates-grades and qualities.  
[French National Standard A36 201, Jan. 1972]
- BISI 10374 (C. Otter, et al.)**  
Stress cracking of A 20%Cr-25%Ni austenitic stainless with additions of molybdenum and copper in a boiling sulphuric medium.  
[Comptes Rendu. hebdo. Seanc. Acad. Sci. Paris. C. 1971, 273, 939-42] (F)
- Casting and Cast Metals**
- BISI 9856 (J. Tichy and L. Fibich)**  
Mechanical and physical properties of various types of cast iron for ingot moulds.  
[Hutn. Listy, 1971, (4), 274-282] (C)
- BISI 9959 (J. Hrúby)**  
Contribution on stress problem originating in ingot moulds.  
[Hutnik, 1971, (7/8), 266-269] (C)
- BISI 9972 (G. Rossignol)**  
Operating results from the continuous casting plant at S.A.F.E.  
[C.D.S. Circ., 1971, (4), 1059-70] (F)
- BISI 10332 (G. Matalone)**  
New developments in the dimensioning of

foundry hot tops.

[Fond. Ital., 1971, (8), 284-286] (I)

BISI 10516 (R. Ferree, et al.)

Process for cleaning, reduction of surface blemishes and lubrication of the external surface of an ingot.

[German Patnt 2 031 393 Publ. 30.12.71] (G)

BISI 10609 (E. A. Lodko, et al.)

The Distribution of a soluble addition in a solidifying ingot.

[Izv. VUZ. Chern. Met., 1972, (5), 38-41] (R)

BISI 10618 (A. M. Petrichenko, et al.)

Research into the hydraulic resistance of the runners in chill moulds.

[Izv. VUZ. Chern. Met., 1972, (5), 151] (R)

### Heat Treatment

BISI 9751 (H. Kunst and O. Schaaber)

Boriding of iron-base alloys and titanium

[Hart. Techn-Mitt., 1971, 26, 18-20] (G)

BISI 9835 (N. Gâmbutan)

Considerations regarding the reduction of decarburized layers (During heat treatment)

[Metalurgia, 1971, 23, (7), 414-417] (Ru)

BISI 10604 (Ya. A. Peker, et al.)

Experience of using new catalysts for dissociating ammonia in the production of shielding gas. [Stal', 1972, (5), 472] (R)

### Fuel, Combustion and Refractories

BISI 10098 (P. Bartha, et al.)

Investigations on bonding ceramic materials with H<sub>2</sub>PP<sub>4</sub>.

[Ber. Deutsch. Karam. Gesell., 1971, 48, (3), 111-115] (G)

BISI 10268 (M. Luchesi)

Comparative study of the respective economic balances of dry and wet quenching of coke.

[CDS Circ., 1971, 28, (11), 2441-2454] (F)

BISI 10270 (W. Zolkowski and Z. Teper)

Granulation of coke—the main parameter in the blast furnace operation.

[Hutnik, 1971, 38, (3), 164-168] (Po)

BISI 10349 (A. Braniski)

A new refractory high-alumina cement.

[Zement-Kalk-Gips, 1971, (10), 477-479] (G)

BISI 10595 (M. S. Tarnavskii, et al.)

Plasma gunning of a converter lining.

[Stal', 1972, (5), 411] (R)

### Welding and Joining

BISI 10354 (H. Kupper)

Flame cutting in a forge.

[Schweissen Schneiden, 1970, 22, (7), 286-8] (G)

### Ores and Minerals Handling and Beneficiation

BISI 9280 (ANON)

Investigations of the technology of producing metallized sinter.

[Izv. VUZ Chern. Met., 1970, (9), 25] (R)

BISI 9645 (S. Forizs et al.)

Influence of metallic charge and coke quality upon coke consumption in the sinter process.

[Metalurgia, 1971, 23, (5), 275-280] (Ru)

BISI 9774 (A. G. Rusakova and I. A. Kopyrin)

Influence of firing temperature and [schedules of structure-forming and strengthening processes in fluxed iron-ore pellets. communication 1.

[Izv. VUZ. Chern. Met., 1971, (8), 40-43] (R)

BISI 9956 (O. Bohus and J. Mach)

Applicability of the combustion method "kontakin" to ferrous metallurgy.

Hutnik, 1971, (7/8), 250-2] (C)

BISI 10269 (K. Swigon, et al.)

Investigation of mixing processes in agglomerated charges by the method of labelled atoms.

[Hutnik, 1971, 38, (11), 543-547] (Po)

BISI 10337 (J. Horvath, et al.)

Effect of mineral structure on the mechanical strength of sinter.

[Koh. Lapok, 1971, (9), 391-393] (H)

BISI 10592 (S. V. Bazilevich, et al.)

Properties of highly basic magnesia-containing sinters. [Stal'. 1972, (5), 397-401] (R)

### Ironmaking and Ferro-Alloys

BISI 9617 (I. Vircolacu)

The thickness determination, control and choice of steel for 700~2000m<sup>3</sup> useful capacity blast furnace shells.

[Metalurgia, 1971, (1), 13-19] (Ru)

BISI 9654 (S. Banu and N. Iancu)

Aspects of development in blast furnace coke consumption in the iron and steel works, galati.

[Metaluraia, 1971, 23, (2), 95-99] (Ru)

BISI 9853 (H. Beer)

Increase in hot metal production rate by enlargement of blast furnace capacity.

[Hutn. Iisty, 1971, (4), 232-237] (C)

BISI 9878 (J. Maes, et al.)

Measuring and calculating the temperature distribution in a blast furnace bosh lined with graphite and semi-graphite bricks.

[Stahl Eisen, 1971, 91, (19), 1098-1101] (G)

BISI 10003 (G. Sironi et al.)

Automating the blast furnace.

[Boll. Tecn. Finsider, 1971, May, (291), 327-348] (I)

BISI 10455 (V. A. Ulakhovich and P. G. Rusakov)

Assessing the effectiveness of the automatic control of the thermal conditions in blast-furnace operation. [Stal', 1972, (4), 295-297] (R)

BISI 10523 (R. Benesch, et al.)

Evaluation of factors characterizing the thermal conditions in the bosh and hearth regions of blast furnace.

[Hutnik, 1969, 36, (12), 593-7] (Po)

### Steelmaking

BISI 10001 (O. Darmann, et al.)

Rheinstahl huttenwerke ag's new oxygen steel-works at hattingen.

[Stahl Eisen, 1971, 28th Oct., 1232-1238] (G)

BISI 10040 (A. Hamilius, et al.)

Castign with large-diameter Nozzles at sidmar's LD steelmaking plant.

[CDS Circ., 1971, 28, (5), 1279-1286] (F)

BISI 10338 (Anon.)

- Compensation of arc furnace reactive power fluctuations by electronically controlled phase shifting.  
[Elektrowärme Int., 1972, Feb. B1, B40-B44] (G)
- BISI 10457 (F. I. Bashlii and G. S. Kolganov)  
Relationship between the extent to which oxygen is utilized and the height to which the lance is raised above the bathe when injecting an open hearth bath.  
[Stal', 1972, (4), 308-310] (R)
- BISI 10458 (I. S. Timoshpolskii)  
Air-water mixture, mid-campaign cleaning of open hearth furnace checkerwork.  
[Stal', 1972, (4), 316-317] (R)
- BISI 10593 (K. A. Blinov, et al.)  
The decarburization of metal with intensive blowing of the converter bath with oxygen through lances of various types.  
[Stal', 1972, (5), 407-408] (R)
- Extraction and Refining**
- BISI 10266 (Ya. P. Nikitin, et al.)  
Decarburisation from steel drops and the influence of this factor on the foaming of slags.  
[Izv. VUZ. Chern. Met. 1966, (6), 67-71] (R)
- BISI 10456 (A. G. Romanenko)  
Economics of the complete combined processing of blast-furnace slags.  
[Stal', 1972, (4), 299-301] (R)
- BISI 10597 (V. S. Kudryavtsev, et al.)  
Perfecting the technology of smelting low-phosphorus manganese slag.  
[Stal', 1972, (5), 419-421] (R)
- BISI 10605 (A. V. Bakakin, et al.)
- Investigation of the kinetic laws of decarburization of a metal melt on an analog computer.  
[Izv. VUZ Chern. Met., 1972, (5), 5-7] (R)
- BISI 10606 (B. A. Iksanov, et al.)  
The surface solution properties and density of Ni-Co and Ni-C system alloys.  
[Izv. VUZ Chern. Met., 1972, (5), 12-14] (R)
- BISI 10607 (G. D. Surguchev, et al.)  
A mathematical model of the decarburization process during blowing.  
[Izv. VUZ Chern. Met., 1972, (5), 18-22] (R)
- BISI 10608 (V. I. Yavoiskii, et al.)  
Inter-phase tension between the slags used for teeming grade 40kh steel and the metal.  
[Izv. VUZ. Chern. Met., 1972, (5), 33] (R)
- Engineering**
- BISI 9825 (J. Veselý)  
Water economy in wet cleaning of steel furnace combustion gases.  
[Hutn. Listy, 1971, (7), 482-486] (C)
- BISI 10277 (A. Tross)  
Mechanisms of various types of damage affecting gear wheels.  
[Schmier Technik und Tribologie, 1969, May-June, 111-118] (G)
- BISI 10373 (Discussion)  
Glass, copper and stainless steel: materials for the production of distillation columns and plant.  
[Destillateurmeister, recd. 1972, 6pp]
- BISI 10387 (J. Eisenmann)  
Straining of the railway permanent way by high axle loads.  
[Stahl Eisen, 1969, 89, (7), 373-375] (G)