

## 資料室だより

### BISITS Translation 紹介

— No 14 —

#### BISITS Translation の特長

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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っています。

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(BISI List No. 531~535)

#### **Mineral Sources, Ores, Mining & Treatment**

BISI 7671 (A. Nesrsta)

Methods of humidification in ore-blending dumps. [Hutnik, 1969, 19, (4), 123-126] (Cz)

BISI 8614 (W. Pietsch)

Briquetting compacting and compacting/pelletising of lime and calcareous materials.  
[Zement-Kalk-Gips Forschung Herstellung Verwendung, 1970, (5), 210-215] (G)

BISI 8230 (J. Martinek)

Central control of belt conveyance in sintering steel works. [Hutnik, 1969, 19 (10) 369-372] (Cz)

BISI 8564 (J. Lang and B. Bergmann)

Investigations on the particle size structure during transport and storage of sinter.  
[Stahl Eisen, 1970, 90(1), 3-8] (G)

#### **Fuel Preparation, Properties and Uses**

BISI 8388 (P. Morcinek)

Substitute fuels and their importance in the blast furnace. [Hutnik, Listy, 1970, 25, (2), 73-77] (Cz)

#### **Air Pollution & Materials**

BISI 8582 (F. Oehme)

A comparison of conventional cyanide decontamination processes. [La Technique de l'Assainissement, 1966, (237), Sept. 39-41] (F)

#### **Refractory Materials**

BISI 8197 (G. Horn and G. Konig)

Experience gained with the use of ramming masses in steel ladles. Part I. Properties and behaviour in service of ramming masses and effects of lable slags. [Stahl Eisen, 1969, 89, Oct. 2, 1092-1096] (G)

BISI 7796 (W. Zednicek)

Mineralogical investigations on basic refractory bricks used for the stuby of wear process.

[Radex Rund., 1968, (4/5), 323-341] (G)

BISI 8073 (M. Kepka)

The effect of liquid steel and slag on the corrosion of teeming-ladle refractories.

[Sbornik, V. S. B. Ostrava, 1969, 14, (3), 291-305] (Cz)

BISI 8856 (A. Braniski)

Refractoriness and the periodic system of chemical elements. [Silicates Industrials, 1970, 35, Feb., 43-48] (F)

#### **Blast Furnace Practice & Production of Pig Iron & Ferro Alloy**

BISI 7960 (Z. Buzek et al.)

Effect of some elements on sulphur activity.  
[Hutn. Listy, 1969, 24, (7), 498-509] (Cz)

BISI 8283 (K. Guddas, et al)

The reaction between pig iron and slag in the blast furnace. [Arch. Eisenh. 1969, 40, (10), 751-757] (G)

BISI 8331 (L. Tajzr and K. Havlicek)

Effect of variation in chemical analysis of sinter on uniformity of composition of open hearth pig iron. [Hutn. Listy, 1969, 24, (12), 838-842] (Cz)

BISI 8358 (J. Astier, et al.)

Economic aspects of the use of a partially reduced charge in the production of pig iron in the electric furnace.

[Met. Constr. Mecan., 1969, 101, Aug/Sept. 415-423] (F)

BISI 8053 (N. S. Kreshchanovskii, et al.)

Effect of modifiers on the dislocation structure of silicon iron. [Izv. VUZ Chern. Met., 1969, (5), 123-126] (R)

BISI 8374 (W. Wenzel)

Special processes for production of iron in the solid state. [Freiberger Forschungsh., 1969, (B151), 7-20] (G)

- BISI 7985 (L. Tomis and J. Stefan)  
Teaching activity model and automation hot blast stoves. [Sbornik VSB Ostrava, 1968, 14, (2), 193-206] (Cz)
- BISI 8290 (I. Pentek)  
Supplying a high-temperature blast. [Bany. Koh. Lapok. Kohaszat, 1969, 102, (10), 421-427] (Hung)
- BISI 8492 (M. Ohji, et al.)  
Exchange of matter between ascending calotte-shaped bubbles and the elements dissolved in iron melts. [Arch Eisenh., 1970, 41, (4), 321-331] (G)
- BISI 8679 (J. Trzil and T. Chlebovsky)  
A contribution to the theory of sulphur solution in iron. [Hutn. Listy, 1970, 25, (1), 16-18] (Cz)
- BISI 8884 (C. Avram, et al.)  
On the possibility of lowering the coke-rate in blast-furnaces by means of pre-heated methane gas. [Cerc. Met., 1970, (11), 103-115] (Rum)
- Production of Steel**
- BISI 8498 (I. G. Kharchenko and I. D. Senikin)  
Principles of calculating rational parameters for baths of electric steelmaking furnaces. [Izv. VUZ. Chern. Met., 1969, 12, (8), 61-64] (Russ)
- BISI 8326 (J. Chvojka and J. Petrmanova)  
Experience in commencing production of very low carbon austenitic corrosion resistant steels. [Hutnik, 1969, 19, (11), 415-419] (Cz)
- BISI 8369 (W. Burgmann and R. C. Fornerod)  
Solidification rate and shape of the liquid core in continuous casting. [Rev. Met., 1969, 66, Oct., 663-672] (F)
- BiSi 8064 (P. Kozelsky, et al.)  
The use of hollow electrodes on a 30-ton electric-arc steelmaking furnace. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 211-216] (Cz)
- BISI 8069 (M. Benda, et al.)  
The heterogeneity of the chemical compositions of the bath during the production of stainless steel in 30 ton arc furnaces. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 263-268] (Cz)
- BISI 8329 (R. Fierla, et al.)  
Applying spectrometers to steelmaking process control. [Hutnik, 1969, 19, (11), 430-432] (Cz)
- BISI 8613 (P. E. Kihlstedt)  
Bubbles in steel. [Jernkont. Ann., 1968, 152, Jan., 19-28] (Sw)
- BISI 7724 (K. Gottfried and Z. Hamza)  
Manufacturing semi-killed ladle deoxidized steel of 42-52 kg/mm<sup>2</sup> strength for spirally welded tubes. [Hutn. Listy, 1969, 24, (6), 408-412] (Cz)
- BiSI 9058 (M. Koleda and V. Maly)  
Modifications of electroslag remelting and the results obtained. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 153-159] (Cz)
- BISI 8060 (I. Chmelar, et al.)  
The behaviour of oxygen and the losses of alloying elements during electroslag remelting. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 167-176] (Cz)
- BISI 8061 (I. Chmelar, et al.)  
Determination of the activity of sulphur in Fe-X-S systems in a laboratory electroslag furnace. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 175-181] (Cz)
- BISI 8062 (J. Hlineny, et al.)  
The effect of the method of deoxidation on the cleanliness of vacuum-arc and electroslag remelted ball-bearing steel. [Sbornik V. S. B. Ostrava, 1968, 14, (3), 183-194] (Cz)
- BISI 8332 (M. Gottwald and K. Obroucka)  
Model research on flame and waste/gas aerodynamics in open-hearth furnaces. [Hutn. Listy, 1969, 24, (12), 843-849] (Cz)
- BISI 8506 (J. Kurila)  
Trials on blowing converter dust into the steel-making converter at the VSZ (East Slovakian Ironworks) plant at Kosice. [Hutnik, 1969, 19, (12), 461-463] (Cz)
- BISI 8546 (E. Eibl)  
Method of operation and results of a statistical process model. [Intervention International Conf. on Automation in Iron and Steelmaking, Luxembourg/Dusseldorf, 1970, Apr.] (G)
- BISI 8392 (H. G. Baumann)  
Temperature profiles of continuously cast steel strands. [Stahl Eisen, 1969, 89, (26), 1467-1473] (G)
- BISI 8771 (E. Meier)  
The slide gate nozzle. [C.D.S. Circ. 1970, 6, 1507-1507-1526] (F)
- BISI 8774 (A. I. Kholodov and V. A. Alyavdin)  
Oxidation of metal during melting of steel in large electric arc furnaces. [Izv. VUZ. Chern. Met., 1969, (6), 80-82] (Rus)
- BISI 9994 (T. Dumitrescu)  
Radiometric method for studies regarding origin and distribution of non-metallic inclusions in ingot moulds. [Metalurgia, 1970, 22, (1), 14-17] (Rum)
- BISI 8930 (H. G. Baumann and J. Pirdzum)  
Continuously cast round steels strands-their production and processing. [Bander Bleche 1970, 11, (10), 495-500] (G)
- Foundry Practice**
- BISI 7674 (J. Plachy and P. Sykora)  
A basic study of nodular cast iron with ferritic or ferritic and pearlitic structure in thick-walled castings. [Slevanensti, 1969, 10, (405), 161-166] (Cz)
- BISI 8224 (A. Vetiska)  
Wedge test for cast iron. [Strojirenstvi, 1969, 19, (11), 715-719] (Cz)
- BISI 7675 (J. Exner)  
A contribution to the study of some physical and-chemical reactions at the steel casting-mould interface.

- [Slevarenstvi, 1969, 10, (4-5), 213-216] (Cz)  
**BISI 7788** (J. Piszak)  
Effect of cast iron properties on the life ingot moulds.  
[Prace Inst. Odlew, 1967, 17, (3), 222-43] (Pol.)  
**BISI 7851** (P. Poyet and J. Ponchon) Contribution to the study of nuclei of spheroidal graphite in casting for ingot moulds.  
[Fonderie, 1969, 277, Apr., 183-190] (F)  
**BISI 8285** (J. P. Aymard and P. Detrez)  
The reaction of liquid steel with an aluminous lining material.  
[Fonderie, 1969, 281, 348-354] (F)  
**BISI 8858** (J. Lagarde and R. Chevriot)  
Sodium-silicate blast-furnace slag selg-hardening sand. First applications to the manufacture of casting using polystyrene patterns.  
[Fonderie, 1970, 288, Mar. 105-110] (F)
- Heat-Treatment, Heat-Treatment Furnace, Re-heating Furnace & Soaking Pits**
- BISI 7830** (R. Kremer)  
Graphical and numerical method of formulating process. [Sbornik V. S. B. Ostrave, 1968, 14, (2), 71-92] (Cz)  
**BISI 7992** (F. Pollmeier and B. Hoffman)  
Heat treatment of steel rod from rolling heat to obtain a good drawing structure: principles and processes.  
[Draht Welt, 1966, 52, Oct., 701-709] (G)  
**BISI 8620** (V. V. Druzhinin, et al.)  
The choice of optimum alloy for rail steels subjected to thermomechanical work-hardening.  
[Izv. VUZ Chern. Met., 1969, 12, (8), 132-134] (Russ)  
**BISI 7973** (F. Benes)  
Notes on decarburization of carbon steel wires.  
[Hutn. Listy, 1969, 24, (10), 707-711] (Cz)  
**BISI 8076** (M. Redr et al.)  
Possibilities of rapid reheating highcarbon alloy steel billets.  
[Hutn. Listy, 1969, 24, (8), 571-580] (Cz)
- Forging, Pressing, Drawing Extrusion Swaging & Stamping**
- BISI 7308** (K. Sieber)  
Recent developments in the field field of cold forming.  
[Draht, 1968, 19, (8), 568-575] (G)  
**BISI 8574** (K. H. Weber and E. Pflaume)  
Assessment of workability during forging.  
(Neue Hutte, 1970, 15, Mar., 154-158] (G)
- Rolling & Rolling Practices**
- BISI 6607** (J. Bellot and M. Hugo)  
Application of forgeability tests to rolling.  
[C. D. S. Circ., 1967, (9), 2063-2091] (F)  
**BISI 8420** (H. G. Husken, et al.)  
Use of electronic computers for management and process control in a wide-strip, hot rolling mill.  
[Stahl Eisen, 1969, 89, (23), 1281-1285] (G)  
**BISI 8507** (J. F. Pigne)  
Visualization on surface defects at high temperature.
- [C. D. S. Circ., 1969, (11), 2483-2492] (F)  
**BISI 7673** (R. Stepanek)  
Principles of limit cooling in rolling mill rolls.  
[Hutnik, 1969, 19, (4), 132-137] (Cz)  
**BISI 8383** (H. Weinberg)  
The use of weighing devices, data comprehension and data processing plant in automated hot strip and cold rolling mills-I.  
[Bander Bleche, 1970, 11, (1), 2-9] (G)  
**BISI 8552** (B. Fazan, et al.)  
Optimisation the automatic rolling of heavy and medium plate. [International Conference on Iron and Steel, 1970, 'Automation in iron and steel works'] (F)  
**BISI 8330** (V. Chadzis)  
Effect of technological conditions on mechanical properties and structure of hot rolled low-carbon steel strip.  
[Hutnik, 1969, 19, (11), 438-672] (Cz)  
**BISI 8607** (R. V. Lambah, et al.)  
Comparisons of the weather resistance of modified chromated and phosphate primers on iron.  
[10 th FATIPEC Congress, 1970, 7th-13th June, Montreux, 471-478] (G)  
**BISI 8232** (J. Ullmann and L. Vavros)  
Application of the eddy current method to defect detection in hot rolled seamless tubes.  
[Hutnik, 1969, 19, (10), 394-398] (Cz)  
**BISI 8608** (F. Lindemann)  
Simple proven model with rapid adaptation for computerized control of coiling temperature in a wide hot strip mill.  
[International Symposium "Automation in Steelworks" 1970] (F)  
**BISI 8696** (J. Midell)  
Examination of self-adapting mathematical process model for controlling the reversing roughing stand of a wide strip hot rolling mill by means of a process computer.  
[Stahl Eisen, 1970, 90, July 9, 749-760] (G)  
**BISI 8278** (A. Barbeyrac and A. Spasski)  
Forged-steel rolls for roughing mills.  
[C. DSS. Circ., 1969, (9), 2037-2046] (F)  
**BISI 8338** (J. Pocta)  
Studying pressures in hot rolling of medium-alloy steels.  
[Hutn. Listy, 1969, 24, (10), 712-17] (Cz)  
**BISI 8418** (K. Overthun and E. Wilhelm)  
The fabrication of semi finished special steel products on blooming mills and their finishing.  
[Stahl Eisen, 1970, 90, Apr. 30, 452-457] (G)  
**BISI 8732** (J. Konvicky, et al.)  
Complex measurements on main parameters in operation of 1150 blooming mill.  
[Hutn Listy, 1970, 25, (1), 19-25] (Cz)
- Machinery, Machining, Machinability & Services for Iron and Steel Plant**
- BISI 8223** (R. Strobl and J. Skoda)  
Machinability and mechanical properties of leaden steel.  
[Strojirenstvi, 1969, 19, 11, 702-707] (Cz)  
**BISI 8447** (J. Fojtik)

Modernization of weighing system in nhkg scrap yard. [Hutnik, 1970, 20, (3), 92-94] (Cz)

#### **Welding**

BISI 8755 (F. Erdmann-Jesnetzer and P. Kraljic)  
Studies of the causes of weldment inhomogeneities of plain-carbon and low-alloy steels with the electron microprobe.  
[Arch. Eisenh., 1968, 39, Jan., 77-87] (G)

#### **Plating, Protective Coatings, Cleaning Pickling**

BISI 8610 (G. Meyer)  
Comparisons of the weather resistance of modified chromate and phosphate primers on iron.  
[10th FATIPEC Congress, 1970, 7th-13th June Montreux, 471-478] (G)

#### **Properties and Tests**

BISI 7317 (A. Salak)  
Fatigue properties of low carbon strip steel.  
[Strojirenstvi, 1968, 18, (2), 122-127] (Cz)

BISI 8271 (M. Strasser)  
Non-destructive crack testing on structural parts made of steel with the aid of direct-current potential-probe method.  
[Thyssen Forschung, 1969, 1, (3), 116-121] (G)

BISI 8071 (F. Kufa)  
The influence of technological factors on the properties of highmanganese steel.  
[Sbornik V.S.B. Ostrava, 1968, 14, (3), 275-283] (Cz)

BISI 8080 (M. Zidek et al.)  
Effect of temperature, chemical analysis and structure conditions on hot yield stress of steels.  
II High-alloy mono-and two-phase steel grades. [Hutn. Listy, 1969, 24, (9) 650-657] (Cz)

BISI 8081 (M. Sicha et al.)  
Heat-treated steel plate with high yieldpoint values for welded construction.  
[Hutn. Listy, 1969, 24, (9), 657-670] (Cz)

BISI 7968 (K. Siha, et al.)  
Effect of metallurgical factors on the ductility and drawability of low-carbon wire steel.  
[Hutnik, 1969, 19, (9), 342-347] (Cz)

BISI 8055 (A. Smrhov and T. Myslivec)  
The problem of the effect of aluminium in steel. [Sbornik V.S.B. Ostrava, 1968, 14, (3), 45-56] (Cz)

BISI 8437 (D. Dumitrescu)  
Some aspects of the prescriptions regarding surface roughness.

[Standardizarea, 1968, 20, (3), 116-120] (Rum)  
BISI 8652 (F. Michalski)

Ultrasonic determination of the size of defects in forgings.  
[C.D.S. Circ, 1969, 2695-2718] (F)

BISI 8906 (M. Grumbach, et al.)  
Influence of speed and on the tensile strength and fatigue properties of stainless steel.  
[Rev. Met. 1969, Oct., 653-662] (F)

#### **Corrosion**

BISI 8349 (K. Barton and Z. Barsonova)  
The meaning of "CRITICAL HUMIDITY" in atmospheric rusting of steel.  
[Werkstoffe Korr., 1970, 21, (2), 85-88] (G)

BISI 8421 (J. Ledion et al.)  
Protection of iron by electrolytically deposited calcium carbonate. [Corros. Trait. Pro. Fin., 1969, 17, Dec., 397-402] (F)

BISI 8474 (M. Machacek et al.)  
Measuring instantaneous corrosion rate by electrode polarization resistance.  
[Strojirenstvi, 1970, 20, (4), 234-237] (Cz)

BISI 8746 (V. Cihal et al.)  
Anodic behaviour of titanium-stabilized stainless. [Corros. Trait. Prot. Fin., 1970, 18, Jan/Feb, 17-21] (F)

#### **Metallography**

BISI 8405 (J. Vana and E. Janda)  
Applying the kerr effect to the study of domain structure in electrical sheets.  
[Hutn. Listy, 1969, 24, (10), 721-726] (Cz)

BISI 8148 (P. Funke, et al.)  
The influence of austenite stability on the behaviour of stainless chromium-nickel steel during cold-working.  
[DEW Techn. Ber., 1969, 9, 370-397] (G)

#### **Analysis**

BISI 8617 (G. Kainz)  
Modern methods of gas analysis.  
[Osterr. Chem. Zeitung, 1958, 59, Feb., 45-51] (G)

BISI 8616 (H. Guerin)  
Application of physical methods to gas analysis. [Chimie Anal., 1965, 47, Oct. 495-501] (F)

BISI 8618 (H. Keinitz)  
Development of methods of gas analysis.  
[Z. Anal. Chem., 1963, 192, 160-189] (G)

## Henry Brutcher Metallurgical Translations 紹介

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### HB 7987 (G. V. Karpenko et al.)

Corrosion fatigue strength of 18-10 type steel at elevated temperatures and pressures in Aq. solutions of sodium chloride and magnesium chloride. [Fiz.-khim. Mekh. Materialov. vol. 5, 1969, #3, 287-290] (Russ)

### HB 7919 (V. G. Krechmer and I. V. Paisov)

Influence of thermomechanical treatment on the properties of high-strength nickel-free steel. [Izvest. vuz-chern. met., vol. 12, 1969, #5, 127-129] (Russ)

### HB 7981 (A. E. Vainerman and A. A. Osetnik)

On the mechanism of formation of cracks filled with copper alloy in steel in contact with a liquid non-ferrous metal (on alloy) [Fiz.-Khim. Mekh. Mat., vol. 5, 1969, #2, 151-154] (Russ)

### HB 7966 (I. I. Vasilenko et al.)

Corrosion cracking of an Mn-Si-Cr-Ni- constructional steel with different structures and degrees of contamination. [Fiz.-khim. mekh. Mat., vol. 5, 1969, #2, 247-248] (Russ)

### HB 8108 (J. Kruse)

Investigation on crack depth measurement by means of potential measuring probes and an eddy-current method. [Feingerate-technik, vol. 18, 1969, no. 2, 75-78] (G)

### HB 8107 (P. Ravizza and A. Masi)

Influence of electro-slag remelting of steel on some important properties and the oxygen content. [La metallurgia italiana, vol. 61, 1969, #4, 162-166] (I)

### Metallography

#### HB 7754 (Yu. S. Veselyanskii and I. Kh. Tarkovskaya)

Electron microscope investigation of surface wear on high carbon, high chromium (tool) steel. [Fiziko-khim. mekh. mat., vol. 4, 1968, #5, 610-612] (Russ)

#### HB 8044 (A. S. Zavarov et al.)

The substructure of wires patented by different methods. [Izvest. vuz-chern. Met., vol. 12, 1969, #10, 79-81] (Russ)

### Analysis

#### HB 8043 (A. M. Dymov et al.)

Determination of small amounts of aluminum and titanium in steel.

[Izvest. vuz-chern. Met., vol. 12, 1969, #9, 184-186] (Russ.)

### HB 8037 (G. Mahn and B. C. Mahanty)

Rapid determination of oxygen in liquid steel by means of thermal analysis.

[Stahl und Eisen, vol. 89, no. 23, 1314-1315] (G)

### Vacuum Metallurgy

#### HB 8078 (W. Coupette)

Continuous production of vacuum steel from pig iron.

[Kleipzig Fachberichte, vol. 77, 1969, No. 10, 617-618]

### Forging, Pressing, Drawing, Extrusion, Swaging & Stamping

#### HB 8081 (M. Wolf)

Experiences in the manufacture of high-alloy (seamless) tubes by extrusion.

[Neue Hütte, vol. 14, 1969, #11, 674-679] (G)

### Rolling & Rolling Practices

#### HB 8070 (A. P. Grudev, et al.)

Highly effective industrial lubricants for cold rolling (Metals).

[Metallurg. i Gornorudn. Promshlennost', vol. 10, 1969, #4, 19-22] (Russ)

#### HB 8026 (P. Höller and H. Smit)

Ultrasonic inspection of cold-rolled strip with lamb waves using the echo method.

[Materialprüfung, vol. 11, 1969, #10, 329-335] (G)

### Welding

#### HB 7888 (F. Eichhorn and R. Schaefer)

Fundamental investigations of conventional friction welding. [Schweißen und schneiden, vol. 21, 1969, #5, 189-198] (G)

#### HB 7935 (J. Ruge and P. Gumm)

Cold pressure welding of composite components using deformation processes.

[Schweißen und schneiden, vol. 21, 1969, #5, 203-209] (G)

### Plating, Protective Coatings, Cleaning Pickling

#### HB 8029 (V. I. Pokhmurskii and G.V. Karpenko)

Criteria for the strengthening of (steel) components on surface impregnation.

[Fiziko-khim. Mekhanika materialov, vol. 5,

- 1969, #2, 131-135] (Russ)  
**HB 8025** (W. Machu)  
 New developments in the field of phosphate coating.  
 [Neue hutte, vol. 14, 1969, #5, pp. 290-295] (G)
- HB 8085** (V. G. Protsik et al.)  
 Fatigue and corrosion-fatigue strength of boron-impregnated 17% Cr steel and 17% Cr, 2% Ni steel. [Fiz.-khim. Mekh. Mat., vol. 4, 1968, #6, 608-10] (Russ)
- Properties and Tests**
- HB 7373** (M. Wahlster et al.)  
 The effect of calcium-containing alloys upon the deoxidation, desulfurization and the mechanical properties of fine-grained constructional steels.  
 [Radex randschau, 1969, #2, 478-494] (G)
- HB 7980** (I. Yu. Liskevich et al.)  
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