

## 資料室だより

## BISI Translation 紹介

— No 30 —

## BISI Translation の特長

英国鉄鋼業界、BISRA および英国鉄鋼協会は共同で 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す。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け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っていきます。

BISI Translations を利用すれば英国米国、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す。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. 616~620

**Physical Structure of Materials and Crystallography**

- BISI 10410 (B. G. Livshits, et al.)  
Structure of YuNDK35T5BA-alloy after hot working and heat treatment. [Izv. VUZ. Chern. Met. 1972, (3), 132-4] (R)

**Physical Metallurgy and Metallography**

- BISI 9341 (H. Schenck & F. Neumann)  
Activity of manganese in liquid iron-manganese carbon solutions [Arch. Eisenh., 1958, 29, (5), 263-267] (G)
- BISI 10086 (A. Mittasch)  
Iron carbonyl and carbonly iron [Z. zngew Chem., 1928, 41, 827-833] (G)

**Physical Properties and Chemical Analysis**

- BISI 8465 (G. Hellmiss)  
Bowling of domain walls due to eddy current damping [Z. Angew. Phys., 1969, 28, (1), 25-28] (G)
- BISI 9852 (A. Zidek)  
Improvement in magnetic properties of electrical steel by means of modification of domain structure. [Hutn. Listy, 1971, (6), 425-428] (C)
- BISI 9950 (P. Konig, et al.)  
Operational experience in the determination of oxygen and nitrogen contents of steel during melting [Arch. Eisenh., 1969, 40, (9), 681-684] (G)
- BISI 10401 (V. I. Kostikov, et al.)  
Measurements of the surface tension of high-temperature group iv metals [Izv. VUZ Chern. Met., 1972, (3), 25] (R)
- BISI 10333 (H. Feichtinger & L. Habel)  
Rapid determination of the hydrogen content in steel melts [Arch. Eisenh., 1972, 43, Mar.,

249-250] (G)

- BISI 10404 (V. G. Dyubanov, et al.)  
Enthalpy of solution of aluminium in melts of iron, cobalt and nickel [Izv. VUZ Chern. Met., 1972, (3), 69-71] (R)
- BISI 10409 (N. I. Yalovoi et al.)  
Analytical investigation of the temperature of deformed metal [Izv. VUZ. Chern. Met., 1972, (3), 106-9] (R)
- BISI 10464 (B. P. Burylev, et al.)  
Analysis of the concentration dependence of the heat of mixing of iron and magnese with silicon [Izv. VUZ Chern. Met., 1972, (4), 9-11] (R)

**Mechanical Properties and Material Defects**

- BISI 9914 (W. Janiche.)  
Investigation into the formation of black spots on the rail tread [Stahl Eisen., 1952, 72, (13), 758-766] (G)
- BISI 10122 (E. Broszeit et al.)  
Internal stresses in electrodeposited nickel-containing SiC and Al<sub>2</sub>O<sub>3</sub> particles and their influence on the fatigue strength of Ck 45 steel. [Metall., 1971, 25, Oct., 1110-1114] (G)
- BISI 10125 (G. Berger, et al.)  
Method of micrographic assessment of inclusions in stainless steel tubes [Rev. Met., 1971, Dec., 839-847] (F)
- BISI 10194 (German Standard)  
Testing of ferrous materials hardenability test by end quenching [German Standard DIN 50191, 1971, Feb].
- BISI 10311 (G. D. Dupill, et al.)  
Modifications of defects of hot-rolled tubes as a result of cold-working [Stal', 1972, (2), 151-153] (R)

BISI 10325 (G. Benko, et al.)  
Study of the origin of exogenous oxide inclusions in killed and rimming steels using activated isotopes [Neue Hutte, 1972, Jan., (1), 40-43] (G)

BISI 10398 (A. P. Okenko et al.)  
The nature of small cracks in dressed semi-products of Kh23N13 steel [Stal', 1972, (3), 267] (R)

BISI 10399 (L. I. Armyanova & S. I. Filippov)  
Study of the properties of sulphides from the e. m. f. of a solid electrolyte cell [Izv. VUZ Chern. Met., 1972, 15, (3), 9-14] (R)

BISI 10459 (P. I. Polukhin, et al.)  
effect of temper-rolling schedules and roll frosting on the surface roughness of the rolled stock [stal', 1972, (4), 327-29] (R)

#### Protection of Materials

BISI 10043 (K. Schmid.)  
Construction and functioning of a coil coating plant [Blech, 1971, (12), 511-517] (G)

BISI 10411 (I. N. Kidin et al.)  
Sintering of silicided layers on armco iron. [Izv. VUZ. Chern. Met., 1972, (3), 139-42] (R)

#### Rolling

BISI 9565 (W. Dietl)  
Experience with a modern rod mill [Stahl Eisen, 1970, 90, (22), 1223-1234] (G)

BISI 9705 (K. H. Weber and E. Schuh)  
Investigation of the roll crown in the cold rolling of steel strip. [Neue Hutte, 1969, 14, (10), 602-609] (G)

BISI 10198 (M. G. Lopatkin & P. P. Sokhrin)  
Effect of high-angle flexibility in universal spindles equipped with plastic inserts on the dynamic loading of the main drive train of a 950 Blooming mill [Izv. VUZ Chern. Met., 1971, 14, (12), 163-6] (R)

BISI 10393 (Yu. A. Eremin, et al.)  
Investigation of the deformation of slabs in the breakdown group of a wide-sheet mill [Stal' 1972, (3), 239-243] (R)

BISI 10394 (Yu. I. Odinokov & V. Ya. Shklovskii)  
Investigation of the rolling of slabs in grooved passes (in the nature of a discussion) [Stal', 1972, (3), 244-246] (R)

BISI 10395 (Yu. P. Litvinenko and A. I. Yakovlev)  
Deformations and stresses during the rolling of oval rolled stock in round pass grooves [Stal', 1972, (3), 246-249] (R)

BISI 10406 (P. I. Polukhin et al.)  
The question of the geometric parameters of the rolling process [Izv. VUZ. Chern. Met. 1972, 15, (3), 75-79] (R)

BISI 10413 (N. E. Skorokhodov et al.)  
Warping parameters of the strip during cold rolling. [Izv. VUZ. Chern. Met., 1972, 15, (3), 100-102] (R)

BISI 10460 (M. L. Zaitsev.)  
Calculation of intermediate ovals in the pass systems round-oval-round [Stal', 1972, (4), 332-335] (R)

BISI 10475 (Yu. A. Enifantsev, et al.)  
Determining the coefficient of friction between semi-finished rolled stock and roller tables. [Izv. VUZ, Chern. Met., 1972, (4), 179-180] (R)

BISI 10476 (R. P. Lebedeva.)  
Statistical laws for stoppages of the rolls and spindles in the auxiliary equipment of plate rolling mills [Izv. VUZ. Chern. Met., 1972, (4), 181-4] (R)

#### Metalworking, Excluding Rolling

BISI 9789 (V. M. Svekrov & V. K. Kobzyev.)  
Optimum parameters of milling cutters for dressing metal in the rolling line [Stal', 1971, (8), 730-733] (R)

BISI 10120 (W. Kuppers and K. Schmitz)  
Determination of limiting drawing ratio using drawing force and tear strength application to stainless steel sheet. [Blech, 1971, 356-359] (G)

BISI 10396 (V. A. Ovobotenko, et al.)  
Measurement and automatic control of the tube wall thickness on a 20-102 electric welding unit [Stal', 1972, (3), 250-255] (R)

BISI 10407 (I. N. Potapov et al.)  
Use of planned experiments in the investigation of different billet piercing schedules' [Izv. VUZ. Chern. Met., 1972, (3), 87-91] (R)

BISI 10408 (V. Ya. Osadchii et al.)  
Investigation of the piercing process of a mill with mushroom-type rolls. [Izv. VUZ. Chern. Met., 1972, (3), 92-95] (R)

BISI 10462 (I. A. Grekhov, et al.)  
The technical and economic advantages of spirally wound and brazed clad steel tubes [Stal', 1972, (4), 364] (R)

BISI 10463 (A. F. Karmadonov, et al)  
Use of molybdenum disulphide as a lubricant in the production of wire rope wire [Stal', 1972, (4), 371] (R)

BISI 10472 (V. N. Vydrin, et al.)  
Derivation of a differential equation for the contact stresses during the rolling of a variable cross-section in four-roll passes. [Izv. VUZ. Chern. Met., 1972, (4), 115-120] (R)

#### Steels and Alloys (Technical Applications and Methods of Production), Cermets

BISI 10017 (Anon)  
Conventional designation of heat-treatable plain carbon steels and alloy steels. (Steel Spec. NFAO2-005, 1970, Oct.) (F)

BISI 10114 (Anon.)  
High-grade medium-soft chromium-molybdenum steels 16 CD4-12CD4E. [Peugeot Spec. 11-02-202] (F)

#### Casting and Cast Metals

BISI 8743 (E. K. Modl & M. Briner)  
The behaviour of S. G. irons under conditions of variable stresses [Schweizer Maschinenmarkt, 1970, (17), 46-55] (G)

BISI 9726 (U. Ehlbeck)  
Critical evaluation of the method of producing moulds [Giesserei, 1970, 57, (25), 777-782]

- (G)  
BISI 10323 (V. A. Romenets, et al.)  
The efficiency of top and uphill casting of stainless steel [Metallurg, 1972, Feb., 19-21] (G)
- BISI 10352 (N. S. Silaev, et al.)  
Method for assessment of oxygen content from the type of rimming in the mould [Metallurg, 1972, Mar., 22-24] (R)
- BISI 10429 (A. M. Bigeev, et al.)  
Selection of corrugation parameters on the surface of a steel ingot. [Izv. VUZ. Chern. Met., 1970, (8), 50-54] (R)
- Heat Treatment**  
BISI 9964 (R. Meyer and Schmidt)  
The problem of carbon transfer during gas carburizing [Harterei-tech. Mitt., 1971, 26, 85-92] (G)
- BISI 10397 (L. E. Alekseeva et al.)  
Improving the resistance of hardened and tempered steels to small strains by tempering under load [Stal', 1972, (3), 259-262] (R)
- Fuel, Combustion and Refractories**  
BISI 8263 (G. Bouvier & H. Barthel)  
Interaction between sintered magnesite and chromium ore at different temperatures [Ber. Deutsch. Ker. Ges., 1969, 46, (7), 357-365] (G)
- Welding and joining**  
BISI 9606 (A. Zapletalek)  
Heterogeneity of plastic deformation of weld joints under creep conditions [Zvarahie, 1971, 3, 68-72] (C)
- BISI 10119 (V. Cihal and N. Lehka)  
Knife-edge corrosion of weld connections of corrosion resistant steels, produced with automatic welding equipment. [Werkstoffe Korr., 1971, 22, 768-774] (G)
- Ores and Minerals Handling and Beneficiation**  
BISI 9860 (M. Prouza)  
Quality of basic sinter [Hutn. Listy, 1971, (3), 153-157] (C)
- BISI 10389 (G. V. Korshikov, et al.)  
Dynamics and mechanism of the pelletization process of a mix in a cylindrical drum 3.2 × 12.5 m in size [Stal', 1972, (3), 205-210] (R)
- BISI 10402 (V. M. Studentsov)  
Metallurgical properties of the slightly-metalized product obtained by reduction firing of green pellets [Izv. VUZ Chern. Met., 1972, (3), 32-34] (R)
- BISI 10466 (B. M. Nosovitskii, et al.)  
The effect of oh melt dust on the process of sintering and the quality of the sinter [Izv. VUZ Chern. Met., 1972, (4), 37-40] (R)
- Ironmaking and Ferro-Alloys**  
BISI 9847 (D. Borgnat, et al.)  
Use of auxiliary fuels in the blast furnace [Rev. Met. 1971, July/Aug. 469-483] (F)
- BISI 10167 (R. Jeschar et al.)  
Thermal aspects and problems of flow in the operation of blast furnaces. [Stahl Eisen, 1971, 91, (12), 665-678] (G)
- BISI 10303 (G. Stanculescu & V. Landes)  
Investigations regarding the production of ferro-manganese in Romania [Metalurgia, 1971, (11), 721-723] (Ru)
- BISI 10467 (V.I. Lobanov, et al.)  
The combustion of gas in a dense layer of iron ore pellets-1 [Izv. VUZ Chern. Met., 1972, (4), 41-46] (R)
- BISI 10471 (V. F. Zavada, et al.)  
Effect of the method of charge preparation on the process of interaction of silica with carbon. [Izv. VUZ, Chern. Met., 1972, (4), 75-79] (R)
- Steelmaking**  
BISI 9970 (O. M. Puhlinger.)  
A new type suspension for oxygen converters [Stahl Eisen., 1971, 91, (20), 1136-39] (G)
- BISI 10319 (G. A. Bachinina, et al.)  
Properties and breakdown of pellets during reduction in a shaft furnace [Stal', 1972, (2), 97-101] (R)
- BISI 10390 (V. K. Komel'kov, et al.)  
Refining of open hearth steel with synthetic lime-alumina slags containing a high content [Stal', 1972, (3), 216-218] (R)
- BISI 10391 (G. A. Podolskaya, et al.)  
The amount of solid oxidant to be charged during the blowing of an open hearth furnace with oxygen [Stal', 1972, (3), 218-220] (R)
- BISI 10392 (M. A. Glinkov, et al.)  
Investigation of the scrap-oxygen process with scrap charged into the molten bath [Stal', 1972, (3), 223] (R)
- BISI 10403 (A. F. Vishkarev, et al.)  
Carbon and chromium elimination in nickel alloys injected with oxygen [Izv. VUZ Chern. Met., 1972, (3), 50-52] (R)
- BISI 10405 (Shchepetkin, F. S. and P. Ya. Ageev)  
The question of removing hydrogen from metal with solid particles. [Izv. VUZ. Chern. Met., 1972, 15, (3), 72-74] (R)
- BISI 10465 (G. G. Mikhailov, et al.)  
Equilibrium distribution of chromium between metal and basic slag [Izv. VUZ Chern. Met., 1972, (4), 18-21] (R)
- BISI 10469 (I. Grankovskii, et al.)  
Certain electrical phenomena which take place in the baths of open hearth furnaces [Izv. VUZ. Chern. Met., 1972, (4), 65-67] (R)
- BISI 10470 (V. G. Sergienko, et al.)  
Process of the transfer of nitrogen by metal shot to an open hearth furnace bath [Izv. VUZ. Chern. Met., 1972, (4), 72-74] (R)
- Extraction and Refining**  
BISI 10177 (Anon.)  
Conventional designation of non-ferrous metal and alloy [French Spec. NF 02-004, 1970, Nov.] (F)
- BISI 10400 (S. I. Filippov, et al.)  
Analysis of the process of recovery of calcium with aluminium from fluoride slags [Izv. VUZ

Chern. Met., 1972, (3), 19-24] (R)  
 BISI 10468 (I. Arzamastsev, et al.)  
 Treatment of steel by synthetics slags made  
 from refuse ferro-alloy slags [Izv. VUZ Chern.  
 Met., 1972, (4), 60-64] (R)  
**Engineering**  
 BISI 9793 (H. U. Schlolz)

Development of gas cleaning for electric steel  
 furnaces [Giessereitechnik, 1971, 17, (1), 11-  
 14] (G)  
 BISI 10324 (German Specification.)  
 Bodie wagons with radial exles [German Spec.,  
 DIN 25042, 1962, Feb.)

書 評

X 線 分 析 の 進 歩 IV

X線分析は今日あらゆる分野の工業分析や研究に広く用いられ、今や分析技術の中でも非常に重要な地位をしめるに至っている。これはX線分析の持つ種々の特性、すなわち無人化・自動化分析への適用が比較的容易であり、非破壊分析・連続分析・表面分析が可能であること以外にも状態分析・構造分析などにも適用できると言つたすぐれた特性が認識されてきた結果であるのは言うまでもないが、この間にあつて日本分析化学会X線分析研究懇談会の活動のはたしてきた役割りを忘れることはできない。

X線分析研究懇談会が設立されたのはもう十数年も前のことであるが、これまでも活動の成果は“X線工業分析”続いて“X線分析の進歩”に逐一報告されており関係者に好評を博している。これらの図書を通読すると日本におけるX線分析技術の進歩変遷がよく理解され興味深いものがあるが、今回発刊された“X線分析の進歩IV”は最近の研究成果を巧妙な編集でうまくまとめてあり、読者に蛍光X線分析の現状をこの一冊でもよく理解できるような工夫が諸所にしてあるのは嬉しい。

本書の内容は第1章状態分析、第2章X線マイクロアナリシス、第3章X線分析の応用で、最近とくに話題になつてこれらの問題について詳細な解説・研究の紹介を行なつており、これから研究を始めようとする人々にとつては手頃な解説書となつている。第4章の研究報告の中からとくに“X線による環境管理分析”の特集を第5章に設けてあるが、環境管理の充実の面でのX線分析への期待度が大きいだけにこれは心にくい企画である。その他X線分析のあゆみ・X線分析装置などについても参考資料は豊富であり、この分野での研究者・技術者にとつて本書は参考になることがらが多い。是非ご一読をすすめた。 (川村和郎)

(日本分析化学会X線分析研究懇談会 A4版 221 ページ 定価 1700 円)

「化学抄報」誌 創刊お知らせ

化学情報協議会より標記について依頼がありました。ここにご紹介致します。当協会も協議会の構成メンバーの一つになつております。

科学情報の効果的な流通の強化が重要となり、一方 Chemical Abstracts を発行しているアメリカ化学会からの要請がありましたので、11学協会（化学工学協会、高分子学会、石油学会、日本化学会、日本金属学会、日本生化学会、日本鉄鋼協会、日本農芸化学会、日本分析化学会、日本薬学会、窯業協会）が協力し、財界の援助を得て、昨春化学情報協議会を設立いたしました。

その一事業として、日本の化学系主要学協会誌に掲載されている報文（綜報、原報、ノート、短報など）の著者抄録を集め分類索引をつけた現状追従調査用資料「化学抄報」を発行することになりました。さしあたり加盟11学協会誌の48年1月号から抄録を開始しますので、下記により多数ご購入下さるようお願いいたします。

記

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