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〈BISITS Translations List No. 1112~1114〉

Management Planning and control.

BISI 21488 THE CONCEPT OF WATER ECONOMY SYSTEM IN THE NHKG WORKS.

(Czech)

C. Senfluk and M. Navratil (Hutn Listy 1981 (10) 717-722)

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(Rum.)

Ov. Hatarascu et al. (Metalurgia (Bucharest) 1982 34 (4) 202-207)

Physical Structure of Materials and Crystallography.

BISI 21559 DUCTILITY OF METALS DURING NON-STEADY DEFORMATION. (Russ.)

G. D. Del' et al. (Izv VUZ Chernaya Metall 1982 (6) 34-37)

Physical Metallurgy and Metallography.

BISI 21565 SPECIAL FEATURES OF THE STRUCTURE OF THE SPHEROIDAL GRAPHITE IN MASSIVE CASTINGS. (Russ)

V. G. Lutsyak et al. (Izv VUZ Chernaya Metall 1982 (6) 89-92)

Physical Properties and Chemical Analysis.

BISI 21253 CHEMICAL COMPOSITIONS OF CALCIUM-FERRITES IN PLANT SINTERS.

(Korean)

C. Yang (Yongu-Pogo 1980 8 (1) 133-138)

BISI 21480 DETERMINATION OF LOW SULPHUR CONTENTS IN STEEL. (Ger.)

Anon. (Handbuch Eisenhüttenlab 1977 5 (7) C21. 4-1-5)

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BISI 20561 ULTRASONIC METHOD FOR THE VOLUMETRIC RATING OF INCLUSIONS.

(Ger.)

J. Kilen and J. Maka (Proceedings 1st. European Conference "Non-destructive Testing. Recent developments and special methods of NDT" Dtsch. Ges. Zerstörungsfreie Prüfung. Mainz 24-26 April 1978)

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H. Gaessler and M. Sawitzki (3R International 1981 10 (10) 550-554)

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Anon. (German Standard DIN 50049 July 1982)

BISI 21563 INFLUENCE OF STRUCTURAL CHANGES IN SERVICE ON IMPACT STRENGTH OF HEAT-RESISTANT STEEL.

(Russ.)

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BISI 20949 DETERMINING THE CORROSION RESISTANCE OF EVAPORATOR TUBES.

(German)

W. M. M. Huijbregts (VGB Kraftwerkstechnik 1981 61. (9) 773-782)

Protection of Materials.

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I. M. Katser et al. (Stal' 1982 (6) 75-76)

BISI 21578 SHEATHING OF DUCTILE CAST IRON PIPES. (Ger.)

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Rolling

BISI 21306 CONTROLLED COOLING OF ROLLED WIRES IN CZECHOSLOVAKIA.

(Rumanian)

K. Mitura and E. Stejskal (Metalurgia 1981 33 (12) 640-647)

BISI 21560 DIGITAL MODEL OF CONTINUOUS COLD ROLLING. (Russ.)

L. A. Kuznetsov (Izv. V. U. Z. Chernaya Metall. 1982 (6) 44-47)

BISI 21561 OPTIMUM DIAMETERS OF ROLLS OF CONTINUOUS LIGHT-SECTION MILLS. (Russian)

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I. Lundborg (Stahl Eisen. 1983 103 (4) 51-56)

Metalworking, Excluding Rolling.

BISI 20957 SERVICE LIFE OF PIPELINES:

INVESTIGATIONS ON WELDED FLAT SPECIMENS UNDER RANDOMLY PULSATING LOADS (Ger.)

P. Mackenstein and A. Kittel (3R International 1981 20 (12) 658-662)

BISI 21403 PHYSICAL METALLURGY ASPECTS OF COLD FORMING. PART 1. VARIATIONS IN STRUCTURE AND TEXTURE AT COLD FORMING. (Czech)

J. Faltus (Hutn Listy 1982 (2) 108-114)

BISI 21469 ANALYSIS OF CONTACT REACTION DURING LONGITUDINAL MANDEL ROLLING OF TUBES. (Russ.)

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BISI 21579 PROCESSES FOR PREVENTING INTERNAL DEFECTS DURING TUBE-MAKING. (Ger.)

H. Bartkowski (German Patent 31 22046 dated 16-12-1982)

Steels and Alloys, Cermets.

BISI 21523 PRECIPITATION OF ALUMINIUM AND VANADIUM NITRIDES WHEN HEATING AND COOLING MICROALLOY, LOW CARBON STEELS. (Rum.)

P. Ianc (Metalurgia (Bucharest) 1982 34 (7) 371-379)

BISI 21681 IMPROVEMENT IN THE FATIGUE STRENGTH OF WELDED JOINTS IN HIGH STRENGTH, WATER QUENCHED AND TEMPERED, FINE GRAIN CONSTRUCTIONAL STEELS BY THERMAL AND MECHANICAL POST TREATMENT OF THE SEAMS.

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Casting and Cast Metals.

BISI 21648 CASTING OF HIGH-CARBON FERROCHROMIUM IN A CONVEYOR-TYPE MACHINE. (Russ.)

S. V. Bezobrezov et al. (Stal' 1982 (8) 50-52)

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K. F. Starodubov et al. (Izv. V. U. Z. Chernaya Metall. 1982 (5) 112-115)

BISI 21477 MECHANICAL PROPERTIES OF BORIDED AND ALUMINIZED STEELS IN TORSION. (Russ.)

V. I. Andryushechkin et al. (Izv VUZ Chernaya Metall 1982 (5) 117-121)

BISI 21659 OPTIMIZATION OF STABILIZING HEAT TREATMENT OF GREY IRON BASED ON THE RESULTS OF ELASTIC PROPERTY MEASUREMENTS. (Russ.)

A. A. Zhukov and Yu. N. Ivanov (Izv. V. U. Z. Chernaya Metall. 1982 (8) 78-81)

Heating, Heating Furnaces and Electric Heating.

BISI 21548 INCREASING THE OUTPUT OF LIGHT-SECTION MILLS WHEN ROLLING HARDENED AND TEMPERED METAL.

(Russian)

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Fuel, Combustion and Refractories.

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H. Gotthelf et al. (Rev. de Met. 1973(5) 359-373)

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M. Kosina et al. (Hutn Listy 1982 (11) 800-806)

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BISI 21084 MANUAL ARC WELDING OF DUCTILE IRON PIPES FOR PUBLIC GAS AND WATER SUPPLY SYSTEMS-PART 1: WELDING CRITERIA. (Ger.)

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V. I. Sheiko (Sudostroenie 1979 (10) 38-39)

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(Russ.)

I. G. Riznitskii et al. (Izv VUZ Chernaya Metall 1982 (6) 11-15)

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BISI 21076 METHOD OF DETERMINING THE CRUSHING STRENGTH OF IRON-ORE PELLETS. (Ger.)

W. Kaas et al. (Stahl Eisen. 1982 102 (17) 825-828)

Steelmaking

BISI 21558 FEATURES OF THE MASS TRANSFER OF ELEMENTS UNDER CONDITIONS OF OXYGEN TOP BLOWING. (Russ.)

E. Ya. Zarvin et al. (Izv VUZ Chernaya Metall 1982 (6) 29-34)

Extraction and Refining.

BISI 21549 REGENERATION OF TIN FROM HOT-TINNING WASTE MATERIALS CONTAINING TIN BY METHOD OF CENTRIFUGAL FILTRATION. (Russ.)

R. I. Cherkasskii et al. (Stal' 1982 (6) 52-54)

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P. Szelag (Koroze Ochr Mater 1980 (3) 52-55)

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L. Bulkowski and U. Galisz (Hutnik (Katowice) 1976 43 (10) 431-437)

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V. K. Afanas'ev et al. (Izv. V. U. Z. Chernaya Metall. 1982 (8) 95-98)

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BISI 21392 STUDY OF LUBRICANT AND TOOL INFLUENCE DURING DEEP DRAWING OF RECTANGULAR PIECES MADE OF LIGHT STEEL SHEET. (Bulg.)

T. Penchev (Mashinostroene 1982 (2) 73-75)

統 計

航空機用ジェットエンジンの構成材料の推移及び予測

1960年頃までは鋼が大きな比率を占めていたが、エンジンの高性能化に伴うガス温度の上昇により超合金が使用されるようになった。1970年代前半はロストワックス（精密 casting 材）及び鍛造材が約70%の比率であったが、1970年代後半になると粉末冶金法による超合金が増してきた。2000年には粉末冶金材料、一方向凝固材料、複合材料の増加を予測している。

出典 特殊鋼：(社)日本航空宇宙工業会（わが国航空機用素材産業の調査），31（1982）11，p. 55

