A. BATTERY COMPONENTS (LEAD(II) OXIDES, ELECTROLYTE, SEPARATORS, ETC.)

A13. Separators and their effect on lead-acid battery performance.

J.B. Doe and P.W. Lemke (*GNB Inc., Langhorne, USA*).

Conf. Proc. INTELEC '86: International Telecommunications Energy Conference (Cat. No. 86CH2328-3), 19-22 Oct. 1986, Toronto, Canada, IEEE, New York, USA, pp. 67-71.

A14. Advances in high-efficiency lead-acid rechargeable battery technology.

R. Walk, G. Mayer, P. Howard, R. Blanyer, C. Mathews and B.E. Jay (*Tracor Inc., Austin, USA*).

Proc. Int. Power Sources Symp., 32 (1986) 368-79.

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A15. Current technology of separators for sealed (recombination) lead/acid batteries.

Y. Fujita (*Dexter Corp., Windsor Locks, USA*).

J. Power Sources, 19 (1987) 175-9.

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A16. Separator technology for lead/acid batteries.

J.W. Reitz (*Evanite Battery Sep., Inc., Corvallis, USA*).

J. Power Sources, 19 (1987) 181-8.

CA: 106(26) 216900y.

A17. Development of synthetic resin containers for large stationary lead-acid batteries.

T. Iwamura and A. Yokogi (*Yuasa Denchi, Japan*).

Yuasa Jiho, 62 (1987) 16-22.

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B50. Corrosion testing of lead alloys used as cathode grids in batteries.

V.M. Jediovszky (*Villamosipari Kut, Intez., Hungary*).

Korros. Figy., 25 (1985) 10-14.

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B51. Electrochemical recovery of lead from used lead batteries.

A. Dimitrov, D. Ampov, T. Maksimov, D. Slavkov, B. Mincev and S. Hadzi-Jordanov (*Teh.-Met. Fak. "Rudjer Boskovic, 91000, Skoplje, Yugoslavia*).

In R. Adzic and B. Nikolic (eds.), Rad.-Jugosl. Simp. Elektrohem., 9 (1985) 552-4.

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B52. Positive grid corrosion in maintenance-free lead-acid batteries during storage.

M. Shinpo, H. Nakashima, Y. Matsumaru and A. Kita (*Cent. Res. Lab., Yuasa Battery Co., Ltd., Takatsuki, Japan*).

Yuasa Jiho, 61 (1986) 18-24.

CA: 106(6) 36016f.

B53. Metallographic and corrosion studies of partially reinforced Pb - 1.45%Sb - 1.45%Cd alloy battery grids.

W.A. Ferrando and K.L. Vasanth (*Nav. Surf. Weapons Cent., Silver Spring, USA*).

Proc. Int. Power Sources Symp., 32 (1986) 359-67.

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B54. Lead and lead alloy grids for lead-acid cells: implications for communications applications.

F.R. Smith (*Dept. of Chem., Memorial Univ. of Newfoundland, St. John's, Canada*).

Conf. Proc. INTELEC '86: International Telecommunications Energy Conference (Cat. No. 86CH2328-3), 19-22 Oct., 1986, Toronto, Canada, IEEE, New York, USA, pp. 35-42.

B55. Determination of microamounts of sulfur in grid alloys of lead-acid batteries.

G. Chen (*Chem. Dep., Fudan, Peop. Rep. China*).

Fudan Xuebao, Ziran Kexueban, 25 (1986) 351-4.

CA: 106(6) 43071y.

B56. On the design of lead-acid battery grids.

M. Maja, P. Spinelli and M. Lazzari (*Dipartimento di Sci. dei Materiali e Ingegneria Chimica, Politec. di Torino, Italy*).

Energ. Elettr., 63 (1986) 355-62.

B57. Shaft-furnace smelting of untreated lead battery scrap.
M.M. Tarasenko (*USSR*).
Tsvetn. Met. (Moscow), 8 (1987) 27-9.
CA: 107(22) 202716b.

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H.P. Sander (*Abt. Umweltpol. Bundesverbandes der Deutschen, Cologne, FRG*).
Metall. (Berlin), 41 (1987) 927-30.
CA: 107(24) 222519t.

B59. Lead supply and demand.
P.J. King (*Australian Min. & Smelting Ltd., Melbourne, Australia*).
J. Power Sources, 19 (1987) 113-20.

B60. The significance of secondary lead.
G.L. Rae (*Broken Hill Assoc. Smelters, Pty. Ltd., Melbourne, Australia*).
J. Power Sources, 19 (1987) 121-31.

B61. Trends in lead/acid battery use and metallurgy.
W.F. Gillian (*Broken Hill Assoc. Smelters Pty. Ltd., Melbourne, Australia*).
J. Power Sources, 19 (1987) 133-42.
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B62. Casting technology for lead-calcium grids.
J. McLane (*Wirtz Manuf. Co., Inc., Port Huron, USA*).
J. Power Sources, 19 (1987) 143-6.
CA: 106(26) 216938s.

B63. Electrochemical investigation of lead-calcium alloys in sulfuric acid.
K. Bass, S.R. Ellis, M. Johnson and N.A. Hampson (*Dep. Chem., Loughborough Univ. Technol., UK*).
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Y. Guo, S. Hua and G. Xu (*Dep. Chem., Shandong Univ., Jinan, Peop. Rep. China*).

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CA: 107(22) 202036e.

B65. Electrochemical and spectroscopic methods of characterizing lead corrosion films.

K.R. Bullock (*Johnson Controls, Inc., Milwaukee, USA*).

J. Electroanal. Chem., 222 (1987) 347-66.

CA: 107(2) 14504g.

B66. The corrosion mechanism of lead and its alloys at a constant anodic potential.

E. Hameenoja, T. Laitinen, G. Sundholm and A. Yli-Pentti (*Technol. Cent., Neste Oy, SF-06850, Kulloo, Finland*).

Finn. Chem. Lett., 14 (1987) 154-5.

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B67. Corrosion in lead-acid batteries during storage.

A. Kita, Y. Matsumaru, M. Shinpo and H. Nakashima (*Yuasa Battery Co., Ltd., Japan*).

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B68. Corrosion of lead battery grids.

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B69. Role of antimony in lead-acid batteries.

A.H. Le (*Nav. Surf. Weapons Cent., Silver Spring, USA*).

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A.A. Jenkins, W.C. Maskell and F.L. Tye (*Gestetner Manuf. Ltd., London, UK*).

J. Power Sources, 19 (1987) 75-80.

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B71. Copper-stretch-metal technology and applications.

R. Kiessling (*Hagen Batterie A.-G., Soest, FRG*).

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K. Takahashi, M. Shiomi, M. Tsubota and K. Yonezu (*Nippon Denchi K. K., Kyoto, Japan*).

GS News Tech. Rep., 46 (1987) 20-6.

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J. Garche, H. Dietz and K. Wiesener (*Dep. Chem., Dresden Univ. Technol., GDR*).

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H. Dietz, J. Garche and K. Wiesener (*Dep. Chem., Dresden Univ. Technol., GDR*).

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C48. Effect of anisotropic graphite on discharge performance of positive plates in pasted-type lead-acid batteries.

A. Tokunaga, M. Tsubota, K. Yonezu and K. Ando (*Japan Storage Battery Co., Ltd., Kyoto, Japan*).

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C49. Modelling the recharge kinetics of the positive electrode active mass of a lead-acid battery.

P. Björnbom (*Dep. Chem. Technol., R. Inst. Technol., Stockholm, Sweden*).

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C50. Lead dioxide discharge mechanism. A reinvestigation of Pohl/Rickert theory.

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C51. The electrochemical activity of lead dioxide. A nuclear magnetic resonance study of hydrogen in battery and chemically prepared material.

R.J. Hill and A.M. Jessel (*CSIRO Div. Miner. Chem., P.O. Box 124, Port Melbourne, Vic., 3207, Australia*).

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C52. Orthorhombic lead monoxide formation during the discharge of lead-acid batteries lead dioxide active mass.

D. Pavlov, I. Balkanov and P. Rachev (*Cent. Lab. Electrochem. Power Sources, Bulgarian Acad. of Sci., Sofia, Bulgaria*).

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C53. Determination of the density of lead dioxide films by in situ laser interferometry.

S.A. Campbell and L.M. Peter (*Dep. Chem., Univ. Southampton, UK*).

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C54. The application of photoacoustic spectrophotometry (PAS) to the study of positive plates in lead-acid batteries.

M.A. Slifkin, A.P. Kushelevsky and M. Pilling (*Dep. Electron. Electr. Eng., Univ. Salford, Salford, UK*).

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C55. Electrochemical studies of the kinetics of lead dioxide layer formation on lead in sulfuric acid solution.

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C56. The positive electrode of the lead storage battery. I: Change in the composition during the chemical preparation and the initial electrochemical charging.

L. Zerroual and J. Guitton (*Unite Rech. Electrochim., INES Chim. Ind., Setif, Algeria*).

Surf. Coat. Technol., 31 (1987) 253-64.

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C57. An electron diffraction study on the fine structure of α-PbO_2 and β-PbO_2 in the positive active material of lead-acid battery.

H. Nishikawa, K. Fujii, H. Ochi and S. Minami (*Osaka Inst. Technol., Osaka, Japan*).

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K. Das and K. Bose (*Dep. Chem., Jadavpur Univ., Calcutta, India*).

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I.S. Manjunath (*M/s Willard India Ltd., New Delhi, India*).
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J.E. Dix (*Linklafer Corp., Corsta Mesa, USA*).
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E.S. Napoleon (*Oven Syst. Inc., New Berlin, USA*).
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E47. Developments in paste mixing for lead/acid batteries.
W.R. Kitchens (*Super. Steel Fabr. Inc., Austell, USA*).
J. Power Sources, 19 (1987) 163-7.

E48. Mass transport during lead-acid battery plate formation.
G. Papazov (*Cent. Lab. Electrochem. Power Sources, Sofia, Bulgaria*).
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E49. Quality-control techniques for dry charging lead/acid batteries.
J.E. Manders (*Zinc Lead Asian Serv., Melbourne, Australia*).
J. Power Sources, 19 (1987) 181-8.
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E50. System for controlling lead fumes and sulfuric acid mist pollution.
X. Wang (*Peop. Rep. China*).
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E51. Have the basics been overlooked in stationary battery design?

D. Berndt.

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M.S. Baxa, R.A. Hamann and R.J. Scarvaci (*Johnson Controls Inc., Milwaukee, USA*).

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A.A. Elimam and M.M. Sartawi (*Dept. of Appl. Syst. Kuwait Inst. for Sci. Res., Kuwait*).

IEEE Trans. Reliab. (USA), Vol. R-35 (1986) 369-74.

E55. Frequencies of sister chromatid exchanges (SCE) in lead exposed workers.

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F41. Battery chargers for motive power lead batteries.

A. Stamberger.

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T.F. Sharpe and R.S. Conell (*Dept. of Electrochem., General Motors Res. Labs., Warren USA*).

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H. Schlussel (*Accumulatorenfabrik Oerlikon, Zurich, Switzerland*).

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F. Klein and U. Wagner (*Rheinisch-Westfalisches Elektrizitatswerk AG, Essen, FRG*).

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C. -I. Nam (*Global & Yuasa Battery Co. Ltd., Seoul, South Korea*).
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B.M. Radimer, A. Pivec and E.A. Hyman (*Public Serv. Electr. Gas Co., Newark, USA*).

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I105. Lead-acid batteries for electrical load management.

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I108. Lead/acid batteries for load-levelling applications.

R. Kiessling (*Hagen Batterie A.-G., Soest, FRG*).

J. Power Sources, 19 (1987) 227-30.

I109. Sealed maintenance-free lead-acid batteries for standby applications.

H. Tuphorn (*Accumulatorenfabrik Sonnenschein GmbH, Budingen, FRG*).

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I110. The development of sealed lead-acid stationary battery having large capacity for improving telecommunication systems.

M. Sasaki, S. Sasabe and Y. Kasai (*Yuasa Battery Co. Ltd., Osaka, Japan*).

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I111. Sealed lead-acid batteries for telecommunications applications.

M. Goldstein and J.J. Larkin (*Bell Commun. Res., Morristown, USA*).

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I112. Rack mounted battery power for modern telecommunication systems - four years down the track.

A.I. Harrison (*Chloride Ind. Batteries Ltd., Manchester, UK*).

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I113. Line charged batteries to power telecommunications equipment.

F.R. Cloke (*Varta Ltds., Crewkerne, UK*).

Conf. Proc. INTELEC '86: International Telecommunications Energy Conference (Cat. No. 86CH2328-3), 19-22 Oct. 1986, Toronto, Canada, IEEE, New York, pp. 351-4.

I114. Large-capacity and long-life sealed lead-acid batteries for telecommunications systems.

T. Matsushima, T. Take, M. Ichimura and T. Ueda (*Electron. & Mech. Technol. Labs., NTT, Tokyo, Japan*).

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I115. Lead/acid batteries for solar (photovoltaic) systems.

K. Shimizu (*Furukawa Battery Co. Ltd., Yokohama, Japan*).

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I116. The lead/acid appliance battery - a popular power source remote from the grid.

N.H. Rickard (*Broken Hill Assoc. Smelters Pty. Ltd., Melbourne, Australia*).

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I117. Selection and application of sealed rechargeable batteries.

G.D. Easton (*Gates Energy Products, Denver, USA*).

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I118. New-type sealed lead-acid battery 'F-Act'.

S. Fukuda, K. Koike, Y. Susuki, H. Jinbo, A. Sano, Y. Kikuchi, S. Murochi, S. Sunagawa, K. Kobayashi, Y. Kobayashi, Y. Sakata and M. Sugimoto (*Storage Battery Div., Matsushita Battery Ind. Co. Ltd., Tokyo, Japan*).

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J.J. Kelly and C.K. McManus (*Exide Corp., Horsham, USA*).

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I120. Medium-capacity sealed lead-acid batteries (MSE type).

H. Sugiyama, T. Ozaki, S. Kuwabara, Y. Onodo, H. Manabe and T. Gamachi (*Matsushita Battery Ind. Co. Ltd., Tokyo, Japan*).

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D.H. McClelland.

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I122. Modern power supply back-up using sealed lead-acid batteries.

P.D. Driver (*Gates Energy Products, London, UK*).

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I123. Sealed lead-acid battery for agricultural machinery uses.
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I124. Sealed lead batteries.
H. Strothteicher.
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I125. Development of rechargeable sealed lead-acid batteries.
H. Tanaka and S. Kanou (*Nippon Denchi K.K., Kyoto, Japan*).
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T. Hatanaka, M. Tsubota, K. Yonezu, H. Tanaka and K. Nakazawa (*Nippon Denchi K.K., Kyoto, Japan*).
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I127. Market-trends for gas recombination batteries.
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I128. Small-sized sealed lead/acid batteries.
S. Sasabe, K. Yamasaki and Y. Kasai (*Yuasa Battery Co. Ltd., Takatsuki, Japan*).
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K. Takahashi, H. Yasuda and T. Hasegawa (*EE, Kyoto, Japan*).
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I130. Sealed lead-acid batteries for cost-effective standby power.
M. Hughes (*Chloride Ind. Batteries Ltd., Swinton, UK*).
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I131. Renewed scope for lead-acid in UPS schemes.

D. Berndt.

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W. Greife (*Accumulatorenfabrik Sonnenschein Batterie GmbH, Budingen, FRG*).

J. Power Sources, 19 (1987) 201-9.