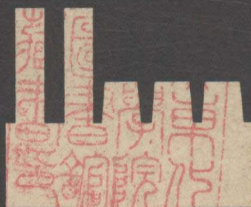


World Guide to Fertilizer Plant Equipment

Second Edition



The British Sulphur Corporation Limited

World Guide to Fertilizer Plant Equipment

Second Edition



The British Sulphur Corporation Limited

The greatest care has been taken
to ensure accuracy, but the publishers
cannot accept responsibility for
errors or omissions.

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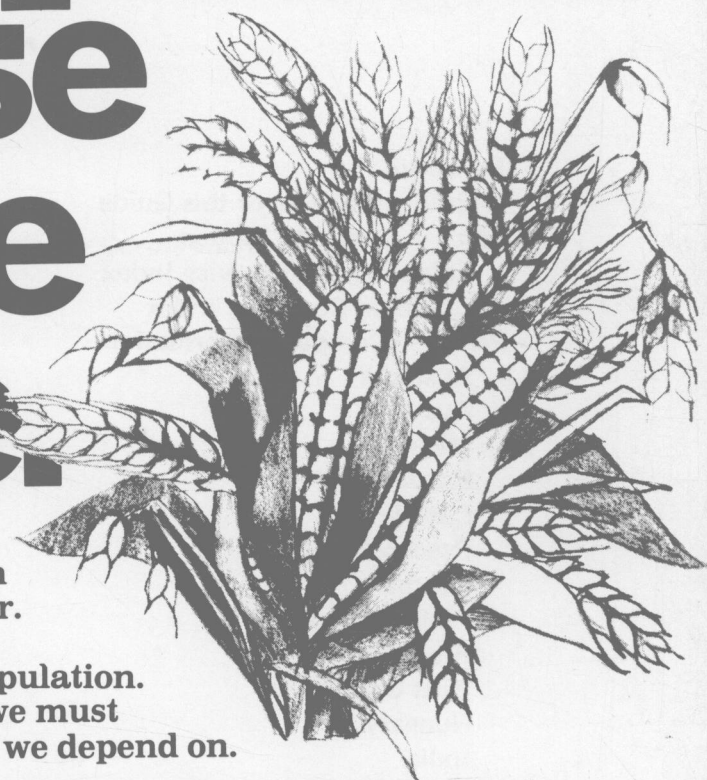
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1977
THE BRITISH SULPHUR CORPORATION LIMITED
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London SW1V 1NH, England

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Lurgi plants promise a fertile future.



World agricultural production
increases each year.
It has to, in order to feed
an ever-growing population.
But the more we reap, the more we must
replenish the soil we depend on.

Without fertilizer factories, this would be an impossible task:
Lurgi builds them – complete plants for the production
of ammonia, urea, phosphoric acid, Ammoniumphosphates
(MAP/DAP), Superphosphates (TSP), as well as granulated
and prilled fertilizers. Lurgi's extensive experience in the
design, supply and construction of fertilizer plants
promises a fertile future for the
land and the men that serve it.

LURGI

**...the plants are
built by Lurgi**

Lurgi Chemie und Hüttentechnik GmbH
D-6 Frankfurt (Main), Federal Republic of Germany, Gervinusstrasse 17/19, P.O.B. 119181
Amsterdam · Bruxelles · Johannesburg · London · Madrid · Melbourne · Mexico D.F. · Milano
New Delhi · New York · Paris · Rio de Janeiro · Stockholm · Tokyo · Toronto · Wien · Zürich

Lurgi is an engineering group. Lurgi Apparate-Technik GmbH: Dust collection, "Chemotechnik" (environmental protection, activated carbon), "Dampftechnik" (special separation technology), pulp technology, "GOTEK" (surface coating). □ Lurgi Chemie und Hüttentechnik GmbH: Inorganic chemistry, ferrous metallurgy, non-ferrous metallurgy. □ Lurgi Mineralöltechnik GmbH: Refinery design, coal technology, gas technology, petrochemistry, fiber technology.

Foreword

There could probably be no such thing as a definitive directory of fertilizer plant equipment producers. Fabrication of the relatively small proportion of specialized equipment items that are exclusively for use in the types of plant used in the fertilizer industry is, in any case, often undertaken to special order by general equipment manufacturers as a mere sideline and forms a comparatively unimportant part of their activities. Furthermore, much of the equipment used in fertilizer plants is applicable in other industries as well; but it is no less important in the fertilizer plant for that.

For the purposes of this publication, therefore, a broad interpretation has been given to the term "fertilizer plant equipment", encompassing certain categories of equipment not necessarily produced only for the fertilizer industry as well as those which are. But it would be pointless — and impossible besides — to list the many tens of thousands of manufacturers of general equipment for chemical and mineral processing and mechanical handling that exist throughout the world. What the *World Guide to Fertilizer Plant Equipment* does instead is to present details of those equipment manufacturers that have come to the notice of The British Sulphur Corporation Ltd. in the course of its research and general activity as consultant and publisher in the fertilizer industry and related fields.

This second edition has been prepared mainly (but not entirely) on the basis of questionnaires sent out to appropriate companies. Where possible, entries for companies which have failed to return their questionnaires or have not completed them properly have been compiled from other sources of information; such companies have only themselves to blame if the information given is inaccurate or if they have been left out.

The new edition contains over 40% more companies than the first, even after a number of companies which were improperly included in the first edition have been left out. Users of the Guide can help to ensure the accuracy of future editions by notifying the Editor of any errors or omissions in the Guide which may come to their notice, and particularly of any companies which do not offer equipment or services which their entries say they do.

The publishers once again thank the many companies which have co-operated in the preparation of this Guide by supplying details of their activities.

A. I. More
Editor

A Note on the Use of this Guide

The object of the *World Guide to Fertilizer Plant Equipment* is to enable manufacturers or suppliers of specific equipment items or services to be identified as quickly and easily as possible. To that end, the Guide is divided into two main parts: a classified section (Part I) and a company information section (Part II).

In the Classified Company Index (pages 11 to 49), the names of the appropriate companies, in alphabetical country and alphabetical name order, are listed under each individual equipment type or service. To facilitate the use of this section, an Equipment and Service Index will be found at the beginning of Part I on pages 9 and 10, in which all equipment and service categories are listed with the appropriate page references to the Classified Company Index.

Addresses, telecommunications details and information on the activities of the companies named in Part I will be found in the Company Information section (pages 51 to 189) listed in alphabetical country and alphabetical name order. The full range of companies included in the Guide and the page references for their individual entries in the Company Information section are shown in the Alphabetical Company Index immediately following the end of the Company Information section (pages 191 to 197).

It should be noted that where a Post Office box number has been given in addition to a street address, it is normally only necessary to address postal communications to the box number and the town, without also giving the street address. This does *not* apply where a "box number" appears immediately after a street address on the same line; this is not a Post Office box number but merely refers to a mailbox in the building concerned. In such a case, both street address and box number *should be given*.

Telephone dialling (or area) codes are shown as a bracketed prefix to the number itself. In the United Kingdom, genuinely "all-figure" numbers have so far only been introduced in the six major urban areas. The dialling codes given are appropriate for calling from London or (without the initial "0") from other countries. Exchange names have been given to enable callers in other parts of the United Kingdom to check the dialling code in their local Post Office codebook.

Part I

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ABSORPTION TOWERS

Australia

Bernard-Smith P.D.M. Pty. Ltd.
W. G. Crossle & Co. Pty. Ltd.
Crown Corning Ltd.
The Hornibrook Group
Johnson & Sons (Engineering) Pty. Ltd.
Simon-Carves Australia

Austria

Simmering-Graz-Pauker AG
VOEST-Alpine Montan AG

Belgium

Granges-Graver SA — NV

Brazil

Cobrasma SA
Jaragua SA

Canada

Ellett Copper & Brass Co. Ltd.
Keene Corp. of Canada Ltd.
J. H. Lock & Sons Ltd.
Ralfor Steel Ltd.

Finland

Oy JA-RO AB

France

B.S.L., Bignier Schmid-Laurent
Le Carbone-Lorraine
Sybron SA
Wiegand SA

West Germany

Didier-Werke AG
Jenaer Glaswerk Schott & Gen.
Krupp-Koppers GmbH
Luwa — SMS GmbH
Mikro Pul GmbH
Pfaudler-Werke AG
SIGRI Elektrographit GmbH
Johann Stahl Kessel- und Apparatebau

India

Bakubhai Ambalal
Kinetics Technology India Ltd.
Larsen & Toubro Ltd.

Italy

QVF Italiana SpA

Japan

Chiyoda Chemical Engineering & Construction Co. Ltd.
Hitachi Shipbuilding & Engineering Co. Ltd.
Ishikawajima-Harima Heavy Industries Co. Ltd.
Mitsubishi Kakoki Kaisha Ltd.
Mitsui Miike Machinery Co. Ltd.
Mitsui Shipbuilding & Engineering Co. Ltd.
Niigata Engineering Co. Ltd.
Sumitomo Shipbuilding & Machinery Co. Ltd.
Tsukishima Kikai Co. Ltd.

Netherlands

Escher BV
Kinetics Technology International BV
Noord Nederlandse Roestvrijstaal Ind BV
Oving-Diepeveen-Struycken NV (O-D-S)
Sombroek — Zaandam BV

South Africa

APV Kestner (S.A.) (Pty.) Ltd.

Sweden

AB Celleco

Switzerland

R. W. Fischer AG
Koehler Bosshardt AG
Romabau AG
United Kingdom
Alfred Allen & Son Ltd.
Asme Vessels Ltd.
A.P.V.-Kestner Ltd.
Burnett & Rolfe Ltd.
Capper-Neill Ltd.
Corning Ltd.
ETA Process & Effluent Plant Ltd.
Mass Transfer Ltd.
Plastics Design & Engineering Co.
Schauman (U.K.) Ltd., JARO Division
Leonard Smith (Engineers) Ltd.
Sutcliffe, Speakman & Co. Ltd.
Topcast Engineering Ltd.
Whessoe Ltd.

United States

Aaron Equipment Co.
Ametek Process Systems
Barnard & Burk Inc.
Beetle Plastics Inc.
Brill Equipment Co.
Corning Glass Works
CryoChem Eng. & Fab. Inc.
J. W. Equipment Corp.
Maurice A. Knight Co.
Koch Engineering Co. Ltd.
Metex Process Equipment Corp.
Pennwalt Corp.
The Pfaudler Co.
Prairie Tank & Construction Co.
Sauder Industries Inc.
Vulcan Cincinnati Inc.
Vulcan Mfg. Co.
Wyatt Industries Inc.

ACTUATORS

United Kingdom

Vanton Pumps & Equipment Corp.

ADSORBENTS

Activated carbon

Belgium

Lurgi Benelux SA — NV

Japan

Nihon Otto Kabushiki Kaisha
Niigata Engineering Co. Ltd.

United Kingdom

Sutcliffe, Speakman & Co. Ltd.

United States

Hoyt Mfg. Corp.
The Norton Co.
Vulcan Cincinnati Inc.

Molecular sieves

Australia

Johnson & Sons (Engineering) Pty. Ltd.

Canada

Keene Corp. of Canada Ltd.

Japan

Nihon Otto Kabushiki Kaisha
Niigata Engineering Co. Ltd.

United Kingdom

Hydronyl Ltd.
United States
Aaron Equipment Co.
The Norton Co.
Union Carbide Corp.

AGITATORS

Australia

Dorr-Oliver Pty. Ltd.
The Hornibrook Group
Johnson & Sons (Engineering) Pty. Ltd.
Belgium
NV Geveke Belgium SA, Metraco Division
Canada
Dorr-Oliver-Long Ltd.
Greey Mixing Equipment Ltd.
Patterson Industries (Canada) Ltd.
Prochem Ltd.
Ralfor Steel Ltd.
Toronto Coppersmithing Co. Ltd.

Finland

Oy JA-RO AB

France

Rheinlutte France SarL
Sybron SA
West Germany
Balcke-Dürr AG
Bran & Lütbe
Pfaudler Werke AG

Hungary

Lampart Enamel Industry Works

India

Dorr-Oliver (India) Ltd.
Larsen & Toubro Ltd.

Italy

Cibec SpA
Pressindustria SpA

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.
The Japan Steel Works Ltd.
Mitsubishi Kakoki Kaisha Ltd.
Mitsui Miike Machinery Co. Ltd.
Nihon Otto Kabushiki Kaisha
Niigata Engineering Co. Ltd.

Netherlands

B.V. Koninklijke Maatschappij "De Schelde"
Stork — Velsen BV
Machinefabriek Zwitter BV

South Africa

A.P.V. Kestner (S.A.) (Pty.) Ltd.
Edward L. Bateman Ltd.

Spain

Tamese SA
Ramon Vizcaino SA

Switzerland

FRYMA-Maschinen AG
Schneider AG
United Kingdom
A.P.V.-Osborne Craig Ltd.
Capper-Neill Ltd.
Dorr-Oliver Co. Ltd.
Esmil-Envirotech Ltd.
Lightnin Mixers Ltd.
Podmores (Engineers) Ltd.

Schauman (U.K.) Ltd., JARO Division

Whesoe Ltd.

United States

Aaron Equipment Co.

Beetle Plastics Inc.

Brill Equipment Co.

Chemineer Agitators

Cryochem Eng. & Fab. Inc.

Dorr-Oliver Inc.

Eastern Industries

Ferguson Industries

The Galigher Co.

Hypco Inc.

J. W. Equipment Corp.

Mixing Equipment Co. Inc.

Philadelphia Mixers Corp.

Rapids Machinery Co.

AMMONIA CONVERTERS

France

Struthers Wells SA

West Germany

Gutehoffnungshutte Sterkrade AG (GHH)

AMMONIATORS

India

Dorr-Oliver (India) Ltd.

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Netherlands

AL Techniek BV

Switzerland

Romabau AG

United Kingdom

Wallace & Tiernan Ltd.

United States

C-E Raymond/Bartlett-Snow

Feeco International Inc.

The A. J. Sackett & Sons Co.

Vulcan Cincinnati Inc.

ANALYSERS

Canada

Keene Corp. of Canada Ltd.

West Germany

Bran & Lütke

Netherlands

AL Techniek BV

United States

Orion Research Inc.

AUTOCLAVES

France

Struthers Wells SA

Sybron SA

West Germany

Thyssen Maschinenbau Apparatechnik

Netherlands

Sombroek — Zaandam BV

Switzerland

Romabau AG

BAG-FILLING MACHINES

Belgium

SA Alfa Laval NV

Buhler-Miag SA

Canada

Firing Industries Ltd.

J. W. Paterson Associates Ltd.

Czechoslovakia

Pragoinvest

West Germany

Maschinenfabrik Gustav Eirich

Haver & Boecker

Japan

Nara Grinding Machinery Works Ltd.

Niigata Engineering Co. Ltd.

Nikkiso Co. Ltd.

Netherlands

Schugi BV

Sweden

Iwema AB

United Kingdom

Ames Crosta Ltd.

Arenco-Alite Ltd.

Autopack Ltd.

Avery Parsons

Babcock-Moxey Ltd.

Christy & Norris Ltd.

Driver Southall Ltd.

Lodematic Group

United States

Aaron Equipment Co.

Howe Richardson Scale Co.

J. W. Equipment Corp.

Mateer-Burt Co.

Möllers Corp. of America

Smico Corp.

Thayer Scale Hyer Industries Inc.

BAG FILTERS

Australia

American Machine & Foundry Co. (Aust.)
Pty. Ltd.

W. G. Crossle & Co. Pty. Ltd.

DCE Vokes (Australia) Pty. Ltd.

Simon-Carves Australia

Belgium

Buhler-Miag SA

Ets. A. Soudron-Sacre Sprl

Canada

GATX-Fuller Ltd.

Keene Corp. of Canada Ltd.

Ralfor Steel Ltd.

Denmark

Møller & Jochumsen A/S

West Germany

Buhler-Miag GmbH

Haver & Boecker

KHD Industrieanlagen AG Humboldt Wedag

Mikro Pul GmbH

H. Spelleken Nachf. Kom.-Ges.

India

Nara Chakravorty Pte Ltd.

Italy

Cibec SpA

Japan

Ishikawajima-Harima Heavy Industries Co.
Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Mitsui Miike Machinery Co. Ltd.

Niigata Engineering Co. Ltd.

Netherlands

Machinefabriek Kiekens BV

Naaykens' Luchttechnische Apparatenbouw
BV

Stork — Velsen BV

South Africa

A.P.V.-Kestner (S.A.) (Pty.) Ltd.

Edward L. Bateman Ltd.

Switzerland

Buhler Brothers Ltd.

United Kingdom

Begg, Cousland & Co. Ltd.

Buell Ltd.

Dustraction Ltd.

Esmil-Envirotech Ltd.

GAF Corp. (European Operations)

Lodge-Cottrell Ltd.

Neu Engineering Ltd.

Peabody-Holmes Ltd.

Provenair Ltd.

Tilghman Wheelabrator Ltd.

P. M. Walker & Co. (Halifax) Ltd.

United States

Aaron Equipment Co.

Aerodyne Machinery Corp.

Air Purification Methods (APM) Inc.

Burlington Engineering Sales Co.

Dover Corp., Ronningen-Petter Div.

Fluidizer Inc.

Fuller Co.

GAF Corp.

J. W. Equipment Corp.

Smico Corp.

Sprout-Waldron/Koppers Co. Inc.

BAG-HANDLING EQUIPMENT

Brazil

Fabrica de Aco Paulista SA

France

Fives-Cail Babcock

West Germany

Buhler-Miag GmbH

Maschinenfabrik Gustav Eirich

Haver & Boecker

Maschinenbau Louise GmbH

Maschinenfabrik Möllers GmbH & Co.

Japan

Mitsui Miike Machinery Co. Ltd.

Niigata Engineering Co. Ltd.

Nikkiso Co. Ltd.

Netherlands

Escher BV

Rapistan Van der Lande BV

South Africa

Spencer (Melksham) SA (Pty.) Ltd.

Sweden

Iwema AB

Switzerland

Buhler Brothers Ltd.

United Kingdom

Avery Parsons

British Ropeway Engineering Co. Ltd.

Jenkins of Retford Ltd.

Jonge Poerink Wire (U.K.) Ltd.

Lodematic Group

Peabody Nusoil Ltd.

Geo. Robson & Co. (Conveyors) Ltd.

Universal Conveyor Co. Ltd.

Whitehall Machinery Ltd.

United States

Air Purification Methods (APM) Inc.

Cloud Machine Corp.

Flexoveyor Conveyor Co.

Fluidizer Inc.

Howe Richardson Scale Co.

Möllers Corp. of America

Stewart-Glapat Corp.
WPM Systems Inc.

BAG-OPENING EQUIPMENT

United States
Stewart-Glapat Corp.

BAG-SEALING EQUIPMENT

France
Fives-Cail Babcock
West Germany
Buhler-Miag GmbH
Maschinenfabrik Gustav Eirich
Haver & Boecker
Japan
Nikkiso Co. Ltd.
Switzerland
Buhler Brothers Ltd.
United Kingdom
Avery Parsons
Whitehall Machinery Ltd.
United States
Doboy Packaging Machinery
Howe Richardson Scale Co.
Möllers Corp. of America
Smico Corp.

BLOWERS

Japan
Ebara Mfg. Co. Ltd.
Hitachi Ltd
Ishikawajima-Harima Heavy Industries Co.
Ltd.
Mitsubishi Heavy Industries Ltd.
United Kingdom
Peabody-Holmes Ltd.

Axial

Australia
Allis Chalmers Australia Ltd.
W. G. Crossle & Co. Pty. Ltd.
Belgium
Buhler-Miag SA
NV Geveke Belgium SA, Metraco Division
Canada
Air-Care Ltd.
Alcore Fabricating Ltd.
Fabricated Plastics Ltd.
Sulzer Bros. (Canada) Ltd.
West Germany
Buhler-Miag GmbH
DEMAG Verdichtertechnik
Maschinenfabrik Gustav Eirich
Gutehoffnungshutte Sterkrade AG (GHH)
Italy
Nuovo Pignone SpA
Franco Tosi SpA
Japan
Mitsui Miike Machinery Co. Ltd.
Mitsui Shipbuilding & Engineering Co. Ltd.
Nara Grinding Machinery Works Ltd.
Nihon Otto Kabushiki Kaisha
Netherlands
Machinefabriek Kiekens BV

Naaykens' Luchttechnische Apparatenbouw
BV
Switzerland
Buhler Brothers Ltd.
E. Rawyler Ltd.
United Kingdom
Plastic Constructions Ltd.
Sulzer Bros. (U.K.) Ltd.
P. M. Walker & Co. (Halifax) Ltd.
United States
Aaron Equipment Co.
Allis-Chalmers Corp.
Ammerman Co. Inc.
Beetle Plastics Inc.
Elliott Co.
Fluidizer Inc.

Centrifugal

Australia
Allis Chalmers Australia Ltd.
W. G. Crossle & Co. Pty. Ltd.
Austria
AG Alfa-Laval
Belgium
Buhler-Miag SA
Canada
Air-Care Ltd.
Alcore Fabricating Ltd.
Fabricated Plastics Ltd.
GATX-Fuller Ltd.
Industrial Combustion & Equipment Ltd.
Sulzer Bros. (Canada) Ltd.
Denmark
Møller & Jochumsen A/S
West Germany
Maschinenfabrik Gustav Eirich
Gutehoffnungshutte Sterkrade AG (GHH)
H. Spelleken Nachf. Kom.-Ges.
Italy
Franco Tosi SpA
Japan
Mitsui Miike Machinery Co. Ltd.
Mitsui Shipbuilding & Engineering Co. Ltd.
Nara Grinding Machinery Works Ltd.
Nihon Otto Kabushiki Kaisha
Netherlands
Bronswerk Apparatenbouw BV
Machinefabriek Kiekens BV
Naaykens' Luchttechnische Apparatenbouw
BV
Switzerland
E. Rawyler Ltd.
United Kingdom
Alldays, Peacock & Co. Ltd.
CompAir Industrial Ltd.
Hoffman Air & Filtration Systems Ltd.
Neu Engineering Ltd.
Plastic Constructions Ltd.
Sulzer Bros (U.K.) Ltd.
P. M. Walker & Co. (Halifax) Ltd.
United States
Aaron Equipment Co.
Allis-Chalmers Corp.
Ammerman Co. Inc.
Beetle Plastics Inc.
Elliott Co.
Fluidizer Inc.
Fuller Co.
Rotoflow Corp.
Sundstrand Corp., Fluid Handling Division

BLUNGERS

India
Binny Ltd., Engineering Division

BOILERS

Australia
Babcock & Wilcox Australia Ltd.
W. G. Crossle & Co. Pty. Ltd.
A. Goninan & Co. Ltd.
International Combustion Australia Ltd.
Austria
Simmering-Graz-Pauker AG
Brazil
Cobrasma SA
Canada
Ellett Copper & Brass Co. Ltd.
Sulzer Bros. (Canada) Ltd.
Va-Power Ltd.
France
Le Carbone-Lorraine
Fives-Cail Babcock
Struthers Wells SA
West Germany
Balcke-Dürr AG
Clarke Chapman (Deutschland) GmbH
Degendorfer Werft und Eisenbau GmbH
Johann Stahl Kessel- und Apparatebau
Thyssen Maschinenbau Apparatechnik
Italy
Del Monego SpA
Franco Tosi SpA
Japan
Ebara Mfg. Co. Ltd.
Hitachi Shipbuilding & Engineering Co. Ltd.
Ishii Iron Works Co. Ltd.
Kawasaki Heavy Industries Ltd.
Mitsubishi Heavy Industries Ltd.
Mitsui Shipbuilding & Engineering Co. Ltd.
Sugino Machine Ltd.
Netherlands
B.V. Koninklijke Maatschappij "De Schelde"
Stork Boilers
South Africa
James Brown & Hamer
Switzerland
Koehler Bosshardt AG
Luwa AG
Schneider AG
United Kingdom
Alfred Allen & Son Ltd.
Babcock & Wilcox (Operations) Ltd.
Capper-Neill Ltd.
Clarke Chapman Ltd., International
Combustion Division
Clarke Chapman Ltd., Thompson Cochran
Division
Thos. W. Ward Ltd.
United States
Brill Equipment Co.
Burlington Engineering Sales Co.
Dyna-Therm Corp.
Energy Conversion Systems (ECS)
Luwa Corp.
Tower Iron Works
Henry Vogt Machine Co.

Waste heat
France
Struthers Wells SA
United States
Dyna-Therm Corp.

Tower Iron Works
Vulcan Mfg. Co.

BRIQUETTING MACHINES

France

Sahut, Conreur & Cie.

West Germany

KHD Industrieanlagen AG Humboldt Wedag

BULK-HANDLING PLANT

Australia

W. G. Crossle & Co. Pty. Ltd.

A. Goninan & Co. Ltd.

International Combustion Australia Ltd.

Lockers Pty. Ltd.

Simon-Carves Australia

Austria

Sandvik in Austria GmbH

Belgium

Buhler-Miag SA

Brazil

Fabrica de Aco Paulista SA

Canada

Allis-Chalmers (Canada) Ltd.

Firing Industries Ltd.

Toronto Coppersmithing Co. Ltd.

Denmark

Møller & Jochumsen A/S

France

Fives-Cail Babcock

West Germany

Buhler-Miag GmbH

Maschinenfabrik Gustav Eirich

Haver & Boecker

Krupp-Koppers GmbH

Maschinenbau Louise GmbH

Maschinenfabrik Möllers GmbH & Co.

Pfister Waagen GmbH

Japan

Mitsui Miki Machinery Co. Ltd.

Niigata Engineering Co. Ltd.

Nikkiso Co. Ltd.

Netherlands

Escher BV

Oving-Diepeveen-Struycken NV (O-D-S)

South Africa

Lockers Engineers SA (Pty.) Ltd.

Switzerland

Buhler Brothers Ltd.

United Kingdom

Babcock-Moxey Ltd.

Braham Millar Group Ltd.

British Ropeway Engineering Co. Ltd.

Capper-Neill Ltd.

Chemical and Thermal Engineering Ltd.

Christy & Norris Ltd.

Clarke Chapman Ltd., International

Combustion Division

Delmec Engineering Ltd.

Helix Conveyors Ltd.

Jenkins of Retford Ltd.

Lodematic Group

Louise Engineering Ltd.

Neu Engineering Ltd.

Numec Ltd.

Peabody Nusoil Ltd.

Portasilo Ltd.

Geo. Robson & Co. (Conveyors) Ltd.

Scottish Mechanical Light Industries Ltd.

Leonard Smith (Engineers) Ltd.

Torvale Engineering Ltd.

Universal Conveyor Co. Ltd.

Vickers Ltd.

United States

Aaron Equipment Co.

Aerodyne Machinery Corp.

Barnard & Burk Inc.

Bucket Elevator Co.

Feeco International Inc.

Fluidizer Inc.

McDowell Wellman Engineering Co.

Möllers Corp. of America

The A. J. Sackett & Sons Co.

Sprout-Waldron/Koppers Co. Inc.

Vulcan Cincinnati Inc.

BUNKERS

Australia

W. G. Crossle & Co. Pty. Ltd.

A. Goninan & Co. Ltd.

International Combustion Australia Ltd.

J. F. Thomson Pty. Ltd.

Austria

VOEST-Alpine Montan AG

Canada

Fabricated Plastics Ltd.

Toronto Coppersmithing Co. Ltd.

West Germany

Maschinenfabrik Gustav Eirich

Krupp-Koppers GmbH

India

Binny Ltd., Engineering Division

Netherlands

Oving-Diepeveen-Struycken NV (O-D-S)

Switzerland

Romabau AG

United Kingdom

Alfred Allen & Son Ltd.

Braham Millar Group Ltd.

Capper-Neill Ltd.

Lodematic Group

Louise Engineering Ltd.

Peabody Nusoil Ltd.

Geo. Robson & Co. (Conveyors) Ltd.

Universal Conveyor Co. Ltd.

Whesoe Ltd.

BURNERS

India

Kinetics Technology India Ltd.

Italy

Del Monego SpA

CALCINERS

Australia

Dorr-Oliver Pty. Ltd.

Simon-Carves Australia

Austria

VOEST-Alpine Montan AG

Brazil

Soc. Tecnica Industrial e Commercial

Dorr-Oliver (Brasil) Ltda.

Jaragua SA

Canada

C-E Bauer

Patterson Industries (Canada) Ltd.

West Germany

Krupp-Koppers GmbH

India

Binny Ltd., Engineering Division

Larsen & Toubro Ltd.

Italy

Del Monego SpA

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Ishikawajima-Harima Heavy Industries Co. Ltd.

Tsukishima Kikai Co. Ltd.

South Africa

Newell Dunford Hadfields (Pty.) Ltd.

Spain

Española Pecquet, Tesson y Cia

Switzerland

Dipl. Ing. Heinz List

Romabau AG

United Kingdom

A.P.V.-Mitchell Dryers Ltd.

Buell Ltd.

Henry Balfour & Co. Ltd.

Dorr-Oliver Co. Ltd.

Lodge-Cottrell Ltd.

Newell Dunford Engineering Ltd.

Tolltrek Ltd.

Whesoe Ltd.

Widnes Foundry & Engineering Co. Ltd.

United States

Aaron Equipment Co.

Brill Equipment Co.

C-E Raymond/Bartlett Snow

Copeland Systems Inc.

Dorr-Oliver Inc.

Fuller Co.

Kennedy Van Saun Corp.

Perry Equipment Corp.

Whiting Corp., Swenson Division

CENTRIGUES

Canada

Firing Industries Ltd.

West Germany

KHD Industrieanlagen AG Humboldt Wedag

Japan

Sumitomo Shipbuilding & Machinery Co. Ltd.

United Kingdom

Pierson & Co. (Manchester) Ltd.

United States

The Pfaudler Co.

Basket

Austria

AG Alfa-Laval

Belgium

SA Alfa-Laval NV

NV Geveke Belgium SA, Metraco Division

Canada

De Laval Co. Ltd.

Firing Industries Ltd.

Denmark

Alfa-Laval Zeta A/S

West Germany

Gebrüder Heine

Krauss-Maffei AG

Carl Padberg GmbH

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Nihon Otto Kabushiki Kaisha

Tsukishima Kikai Co. Ltd.

Netherlands

AL Techniek BV

New Zealand

Alfa-Laval (NZ) Ltd.

South Africa

Alfa-Laval South Africa (Pty.) Ltd.

Spain

Alfa-Laval SA

Sweden

Alfa-Laval AB

Switzerland

Escher Wyss AG

R. W. Fischer AG

United Kingdom

Alfa-Laval Co. Ltd.

Baker Perkins Chemical Machinery Ltd.

Sulzer Bros. (U.K.) Ltd.

Topcast Engineering Ltd.

United States

Aaron Equipment Co.

Bird Machine Co. Inc.

Brill Equipment Co.

The De Laval Separator Co.

J. W. Equipment Corp.

Perry Equipment Corp.

Universal Oil Products Co., Johnson Division

Whiting Corp., Swenson Division

Clarifying

Australia

Dorr-Oliver Pty. Ltd.

Austria

AG Alfa-Laval

Belgium

SA Alfa Laval NV

NV Geveke Belgium SA, Metraco Division

Brazil

Soc. Technical Industrial e Commercial

Dorr-Oliver (Brasil) Ltda.

Canada

De Laval Co. Ltd.

Dorr-Oliver-Long Ltd.

Firing Industries Ltd.

Denmark

Alfa-Laval Zeta A/S

West Germany

Gebrüder Heine

Krauss-Maffei AG

Carl Padberg GmbH

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Netherlands

AL Techniek BV

Noord Nederlandse Roestvrijstaal Ind BV

New Zealand

Alfa-Laval (NZ) Ltd.

South Africa

Alfa-Laval South Africa (Pty.) Ltd.

Spain

Alfa-Laval SA

Sweden

Alfa-Laval AB

Switzerland

Escher Wyss AG

R. W. Fischer AG

United Kingdom

Alfa-Laval Co. Ltd.

Baker Perkins Chemical Machinery Ltd.

Clarke Chapman Ltd., International

Combustion Division

Sulzer Bros. (U.K.) Ltd.

United States

Aaron Equipment Co.

Bird Machine Co. Inc.

Brill Equipment Co.

The De Laval Separator Co.

Dorr-Oliver Inc.

J. W. Equipment Corp.

Perry Equipment Corp.

Continuous (pusher)

Austria

AG Alfa-Laval

Belgium

SA Alfa Laval NV

NV Geveke Belgium SA, Metraco Division

Brazil

Soc. Tecnica Industrial e Commercial

Dorr-Oliver (Brasil) Ltda.

Canada

De Laval Co. Ltd.

Firing Industries Ltd.

Sulzer Bros. (Canada) Ltd.

Denmark

Alfa-Laval Zeta A/S

West Germany

Gebrüder Heine

Krauss-Maffei AG

India

Bakubhai Ambalal

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Nihon Otto Kabushiki Kaisha

Niigata Engineering Co. Ltd.

Netherlands

AL Techniek BV

New Zealand

Alfa Laval (NZ) Ltd.

South Africa

Alfa-Laval South Africa (Pty) Ltd.

Edward L. Bateman Ltd.

Spain

Alfa-Laval SA

Sweden

Alfa-Laval AB

Switzerland

Escher Wyss AG

R. W. Fischer AG

United Kingdom

Alfa-Laval Co. Ltd.

Baker Perkins Chemical Machinery Ltd.

Clarke Chapman Ltd., International

Combustion Division

Sulzer Bros. (U.K.) Ltd.

Topcast Engineering Ltd.

United States

Aaron Equipment Co.

Baker Perkins Inc.

Bird Machine Co. Inc.

Brill Equipment Co.

The De Laval Separator Co.

J. W. Equipment Corp.

Perry Equipment Corp.

Disc

Australia

Dorr-Oliver Pty. Ltd.

Austria

AG Alfa-Laval

Belgium

SA Alfa Laval NV

NV Geveke Belgium SA, Metraco Division

Canada

De Laval Co. Ltd.

Dorr-Oliver-Long Ltd.

Firing Industries Ltd.

Denmark

Alfa-Laval Zeta A/S

France

Le Carbone-Lorraine

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Niigata Engineering Co. Ltd.

Netherlands

AL Techniek BV

Noord Nederlandse Roestvrijstaal Ind BV

New Zealand

Alfa-Laval (NZ) Ltd.

South Africa

Alfa-Laval South Africa (Pty.) Ltd.

Spain

Alfa-Laval SA

Sweden

Alfa-Laval AB

Switzerland

R. W. Fischer AG

United Kingdom

Alfa-Laval Co. Ltd.

Baker Perkins Chemical Machinery Ltd.

Dorr-Oliver Co. Ltd.

United States

Aaron Equipment Co.

Brill Equipment Co.

The De Laval Separator Co.

Dorr-Oliver Inc.

Perry Equipment Corp.

High-speed

Australia

Dorr-Oliver Pty. Ltd.

Austria

AG Alfa-Laval

Belgium

SA Alfa Laval NV

NV Geveke Belgium SA, Metraco Division

Canada

Dorr-Oliver-Long Ltd.

Firing Industries Ltd.

Denmark

Alfa-Laval Zeta A/S

West Germany

Krauss-Maffei AG

Carl Padberg GmbH

Japan

Hitachi Shipbuilding & Engineering Co. Ltd.

Mitsubishi Kakoki Kaisha Ltd.

Niigata Engineering Co. Ltd.

Netherlands

AL Techniek BV

New Zealand

Alfa-Laval (NZ) Ltd.

South Africa

Alfa-Laval South Africa (Pty.) Ltd.

Edward L. Bateman Ltd.

Spain

Alfa-Laval SA

Sweden

Alfa-Laval AB

Iwema AB

Switzerland

R. W. Fischer AG

United Kingdom

Alfa-Laval Co. Ltd.

Baker Perkins Chemical Machinery Ltd.
Clarke Chapman Ltd., International
Combustion Division
United States
Aaron Equipment Co.
Brill Equipment Co.
The De Laval Separator Co.
Dorr-Oliver Inc.
J. W. Equipment Corp.

CHIMNEYS

Australia
J. F. Thomson Pty. Ltd.
Austria
VOEST-Alpine Montan AG
Brazil
Cobrasma SA
West Germany
Clarke Chapman (Deutschland) GmbH
Didier-Werke AG
Johann Stahl Kessel- und Apparatebau
India
Binny Ltd., Engineering Division
Italy
Del Monego SpA
Japan
Chiyoda Chemical Engineering &
Construction Co. Ltd.
Hitachi Shipbuilding & Engineering Co. Ltd.
Kawasaki Heavy Industries Ltd.
Niigata Engineering Co. Ltd.
Netherlands
Escher BV
Spain
Tamese SA
Switzerland
Jäggi AG Bern
Romabau AG
United Kingdom
Alfred Allen & Son Ltd.
A.P.V.-Kestner Ltd.
John Bellamy Ltd.
Born Heaters Ltd.
Capper-Neill Ltd.
Clarke Chapman Ltd., Thompson Cochran
Division
Plastics Design & Engineering Co.
Geo. Robson & Co. (Conveyors) Ltd.
Tolltrek Ltd.
Thos. W. Ward Ltd.
United States
Beetle Plastics Inc.
Born Inc.
Metrol Corp.
Pennwalt Corp.
Pullman Inc., Pullman Kellogg Division

CHIMNEY LINERS

Canada
Alcore Fabricators Ltd.

CLASSIFIERS

Canada
Sweco (Canada) Ltd.
West Germany
Krauss-Maffei AG
United Kingdom
Locker Industries Ltd.
Pierson & Co. (Manchester) Ltd.

Russell Finex Ltd.
United States
Koppers Co. Inc., Hardinge Operation

Cyclone

Australia
American Machine & Foundry Co. (Aust.) Pty.
Ltd.
W. G. Crossle & Co. Pty. Ltd.
Sala Australia Pty. Ltd.
Simon-Carves Australia
Austria
AG Alfa-Laval
VOEST-Alpine Montan AG
Belgium
SA Alfa Laval NV
Buhler-Miag SA
NV Geveke Belgium SA, Metraco Division
Ets. A. Soudron-Sacre Sprl
Brazil
Soc. Tecnica Industrial e Commercial
Dorr-Oliver (Brasil) Ltda.
Canada
Dorr-Oliver-Long Ltd.
J. W. Paterson Associates Ltd.
Ralfor Steel Ltd.
Czechoslovakia
Pragoinvest
West Germany
Bergsmann Apparatebau
Buhler-Miag GmbH
Maschinenfabrik Gustav Eirich
H. Spelleken Nachf. Kom.-Ges.
India
Nara Chakravorty Pte Ltd.
Japan
Hitachi Shipbuilding & Engineering Co. Ltd.
Mitsui Miike Machinery Co. Ltd.
Nara Grinding Machinery Works Ltd.
Niigata Engineering Co. Ltd.
Netherlands
F.I.B. Industriële Bedrijven BV
South Africa
A.P.V.-Kestner (S.A.) (Pty.) Ltd.
Edward L. Bateman Ltd.
R. J. Spargo Ltd.
Switzerland
Buhler Brothers Ltd.
R. W. Fischer AG
United Kingdom
Buell Ltd.
Capper-Neill Ltd.
Clarke Chapman Ltd., International
Combustion Division
Dorr-Oliver Co. Ltd.
Esmil-Envirotech Ltd.
Lodge-Cottrell Ltd.
Provenair Ltd.
Tolltrek Ltd.
P. M. Walker & Co. (Halifax) Ltd.
United States
Aerodyne Machinery Corp.
Dorr-Oliver Inc.
Fluid Energy Processing & Equipment Co.
Kennedy Van Saun Corp.
Universal Road Machinery Co.

Flotation
Australia
Sala Australia Pty. Ltd.
Czechoslovakia
Pragoinvest

West Germany
Bergsmann Apparatebau
Maschinenfabrik Gustav Eirich
KHD Industrieanlagen AG Humboldt Wedag
India
Dorr-Oliver (India) Ltd.
Japan
Mitsui Miike Machinery Co. Ltd.
Netherlands
F.I.B. Industriële Bedrijven BV
Machinefabriek G. J. Nijhuis BV
South Africa
Edward L. Bateman Ltd.
R. J. Spargo Ltd.
Switzerland
R. W. Fischer AG
United Kingdom
Clarke Chapman Ltd., International
Combustion Division
Esmil-Envirotech Ltd.
Tolltrek Ltd.
United States
Komline-Sanderson Engr. Co. Inc.

Magnetic

Australia
Mecal (Aust.) Pty. Ltd.
Sala Australia Pty. Ltd.
Simon-Carves Australia
Canada
J. W. Paterson Associates Ltd.
Czechoslovakia
Pragoinvest
West Germany
Bergsmann Apparatebau
Maschinenfabrik Gustav Eirich
India
Nara Chakravorty Pte Ltd.
Japan
Nara Grinding Machinery Works Ltd.
Niigata Engineering Co. Ltd.
South Africa
Edward L. Bateman Ltd.
United Kingdom
Boxmag-Rapid Ltd.
United States
Aaron Equipment Co.
S. G. Frantz Co. Inc.

CLOD BREAKERS

United States
Feeco Internatioanl Inc.

COLUMN INTERNALS

West Germany
SIGRI Elektrographit GmbH
United Kingdom
ETA Process & Effluent Plant Ltd.
Hydronyl Ltd.
United States
Metrol Corp.
The Norton Co.
Wyatt Industries Inc.

COMPACTORS

Australia
Allis Chalmers Australia Ltd.
Belgium
Ats. Ed. Courtoy
NV Geveke Belgium SA, Metraco Division