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UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION

REPORT

on

Assistance in Equipment Selection to Participants from Developing Countries
in the LIGNA 1977 International Trade Fair for^{1/}
Machinery and Equipment for the Wood Industries^{1/}

18 - 24 May 1977, Hanover (FRG)

(TF/INT/77/011)

by

H. Eldag
Industrial Development Officer

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1. Background Information

UNIDO has been conscious for some time of the need for developing countries to obtain impartial assistance in the selection of appropriate technology for their woodworking industries. To that effect a Technical Meeting on selection of wood working machines was convened in Vienna in 1973. A complementary meeting (Workshop on wood processing) was convened in Vienna in 1975.

Among the recommendations of the first meeting were those that requested UNIDO to compile information on woodworking equipment deemed suitable for use in developing countries and prepare a manual on advice how to proceed in the purchase of machines. This project provided this assistance on an ad hoc basis to actual purchasers at the LIGNA Fair.

Hanover Fair authorities have contacted staff members of the Agro-Industries Section early in 1977 requesting a UNIDO presence at the Fair. This project is a direct result of these conversations. A project, financed fully by the LIGNA Fair authorities and costing US\$ 6.000 was approved by the Programming Committee on 12 April (TF/INT/77/011).

The Woodworking Machinery Show LIGNA included 779 exhibitors covering a display-space of 67.064 sqm. 379 exhibitors were foreign manufacturers and 400 were German manufacturers. (for details see Annex I)

The LIGNA Fair is the world's most important show for the Woodworking Industry. More than 60.000 visitors participated about one third came from abroad.

2. UNIDO participation in the LIGNA 1977

A team of three consultants and a staff member (team leader) were made available, as foreseen under the project, to advise visitors at the LIGNA exhibition on their equipment selection and other technical problems. They were: Heinz Eldag - UNIDO staff member (team-leader)
Mervyn W. Page (Australia) - Consultant in sawmilling
Harald Mueller Eckhardt (FRG) - Consultant in wood based panel prod.
Desmond P. Cody (Ireland) - Consultant in furniture and joinery prod.

They were present at the Fair from 9.00 a.m. to 6.00 p.m. during the period from 18 to 24 May (i.e. for the entire duration of the Fair).

UNIDO's participation was characterized by the diverse nature of the enquiries received, and information sought from people who had come to the Fair from almost every part of the world. These included many industrialists from developing countries, and, in the main, appeared to represent a growing industrial awareness as well as a recognition of the role of UNIDO in fulfilling its function.

3. Enquiries

A significant aspect of the nature of the enquiries received was that they demonstrated considerable interest in new technology and added value processes at the source of supply of raw materials. For example, better quality control and more effective utilization of logs in primary conversion, as well as the provision of added value at the source of supply was frequently discussed. Many enquiries were also concerned with capital investment in integrated woodworking complexes, joint ventures and the negotiation and operation of agreements to produce under license.

Most of the enquiries were made by persons involved directly in wood processing at decision-making level both technical and financial and included the following: production of plywood, blockboard, fibreboard and particleboard, logging, sawmilling, kiln drying, production of blanks or components for the furniture industry, lumber engineering, joinery and furniture production and occasional wood products.

Enquirers originated from Africa, Europe, Middle East, North America, Oceania, South America and South East Asia (see Table I below).

Table I

Enquiries according to country and subject:

Country	Sawmilling	Prod. of wood based panels	Furniture	Joinery	Others
Argentina	1	1			
Australia		1			
Canada		2			
Egypt	1	1			
France					1
FRG	3				
Ghana	2	1	2		1
Hongkong					1
Indonesia			2	1	1
Iran					1
Iraq				1	
Jamaica			2	1	
Kuwait			1	1	1
Malaysia	2				
Malta			1		
Nigeria					1
Pakistan		1			
Papua New Guinea	1	1			
Peru					1
Philippines				1	
Spain	1			1	
Turkey			2	1	
United Arab Emirates				1	
United Kingdom				1	
USA		1			1
Yugoslavia					1
Total	11	9	10	9	10

Most enquirers represented top management both technical and commercial in the various fields of wood processing.

The nature and extent of the enquiries received covered every aspect of the wood processing industries from production to marketing, viz:

New Plants

Training Centre	India
Flushdoor production	United Arab Emirates
Hardboard plant	Karachi/Pakistan
Louvers and Doors	Philippines
Furniture and Joinery	Turkey
Furniture	Indonesia
Laminating plant for particle board	Argentina

Assistance requested

Furniture production Jamaica

Machinery and Equipment

Sawmilling equipment	Malaysia
Various machines	Papua, New Guinea
Electric motors	Iran
Kiln drying equipment	England

Marketing requested

Plywood production Australia

Topics discussed included:

Technical information, advice on selection of machinery and equipment and wood processing, lumber drying, waste reduction, special purpose machines, material handling and internal transport, quality control, production planning and control, marketing for wood products, sources for timber and veneers, standard specifications, industrial training, recruitment of technical management, joint ventures and licensing agreements.

Enquiries were formulated and recorded on the specially prepared sheets (see Annex II).

Some enquiries require follow-up action by UNIDO Headquarters: Possibility for marketing of lumber, rough sawn blanks, etc., re-organization of existing plants to increase productivity. This will be provided by the team leader before end June.

For those participants who requested information through demonstration, the team leader made the necessary contacts to exhibitors and whenever possible arrangement of factory visits organized by various exhibiting manufacturers.

UNIDO documentation was provided for all callers to the bureau. However, there was not sufficient relevant publicatic available concerning specific aspects of wood processing. (see page 9 - Need for UNIDO manuals)

Research students from developing countries at present in Germany need more information about existing UNIDO documents.

4. Contacts of visitors with the UNIDO Consultants

a) Visitors from developing countries:

- in the bureau	42	
- in the exhibition halls	<u>57</u>	
	<u>Sub-Total</u>	<u>99</u>

b) Visitors from developed countries:

- general information on UNIDO	68	
- desire to collaborate with UNIDO		
public Sector	17	
private Sector	<u>36</u>	
	<u>Sub-Total</u>	<u>121</u>
	<u>Grand Total</u>	<u>220</u>

The relevant UNIDO documentation was exhibited at the bureau and copies were made available. It consisted of:

- UNIDO - What it is, what it does (4 languages) PI/001/Rev.1
- Organization Charts (3 languages) (76-7169)
- UNIDO - An experiment in International Industrial Co-operation (PI/53)
- Industry and the Developing Countries (3 languages) (PI/34/Rev.2)
- Newsletter No. 109-May 1977

Press Releases:

- Catalytic Role of UNIDO at LIGNA Fair IDO/678
- Helping Developing countries to use their Forest Resources } IDO/582
- UNIDO activities in Promoting Wood Processing Techniques }
- UNIDO-Technical Assistance for Industry (ID/B/Rev.1)

Special Documentation:

- Complete set of papers presented at the Technical Meeting on the Selection of Woodworking Machinery, November 1973 (ID/WG.151)
- Complete set of papers presented at the Workshop on Wood Processing for Developing Countries, November 1975 (ID/WG.200)
- Three volumes of the furniture and joinery Seminar, Finland ID/108
- Various documents on Panel Products, Timber Housing, etc.

5. Physical arrangements of the UNIDO Bureau (within the Service Centre, Hall 18)

An office space of 25 square metres was made available for the UNIDO bureau. In front of the bureau was a counter to display general information material about UNIDO.

The office included table, chairs, type writing table, wardrobe stand, sideboard with telephone and refrigerator.

The location was opposite to the general information counter of the Fair at the main entrance of the Service Centre near its interpreter pool. Free service of interpreters were given to UNIDO Consultants whenever necessary by the Fair authorities.

Offices of the following leading European Associations were adjacent to the UNIDO Bureau:

EUMABOIS:	European Association of Woodworking Machinery Manufacturers
France:	Machinery Manufacturers Association
Germany:	Machinery Manufacturers Association Tooling Manufacturers Association Wood Workshop Manufacturers Association Safety Institute for the Woodworking Industry Machinery and Tools Wholesale Association
Italy:	Machinery Manufacturers Association
Spain:	Machinery Manufacturers Association
United Kingdom:	Machine Tool Trade Association

The appointment schedules of the consultants and the staff member in the office and in the halls had been scheduled so that one German-English and one English-French speaking person was in the bureau at all times. All UNIDO consultants could make use of the LICNA Club at any time to meet with visitors from developing countries for further discussions about their equipment selection.

Performance of the three consultants:

Mr. M. Page: We know Mr. Page, who is specialized in sawmilling, for a long time. He was working for us several times. Because of his experience in developing countries he could advise any visitor requesting assistance in sawmilling and related machinery industry.

Mr. Mueller-Eckhardt: He was, after his permanent work in Calcutta, working for UNIDO in the field. The experience in developing countries and his knowledge in the production of wood based panels and in the related machinery industry made it possible to outline in detail the requests for this branch.

Mr. D. Cody: Several assignments in developing countries for UNIDO and his experience in furniture and joinery production qualify him to advise technical personnel from developing countries.

More details about the consultant's professional work may be found in the UNIDO roster file.

Composition of the Team:

The selection of the three consultants was good, their teamwork well organized. From time to time two of them worked together whenever an enquirer needed more information or advice beyond his specific field.

They exchanged their information on new equipment exhibited so that everyone of the team became acquainted with the machinery which highlighted developments and will determine development trends.

In future the consulting team should be more specialized - Team of seven - viz:

1. logging, skidding, etc. (should be provided by FAO)
 2. primary woodworking
 - 2.1. sawmilling
 - 2.2. plywood, blockboard and plymould production
 - 2.3. particle board and fibreboard production
 - 2.4. wood wool cement and particle cement building boards
 3. kiln drying and wood preservation
 4. secondary woodworking
 - 4.1. dimension production
semifinished products
 - 4.2. furniture production
 5. joinery production
 6. prefab wooden houses and prefab trusses
 7. timber engineering
6. Other contacts made during the LIGNA Fair of interest to UNIDO:

Mr. J. Swiderski: Acting Director of the Forst Industries Division of FAO, visited the Fair to discuss with the private industry small scale labour intensive studies for the wood based panel industry. In discussion with the UNIDO staff member about future participation in exhibitions FAO considers contributing and co-operating in this type of activity with UNIDO.

German Woodworking Machinery Manufacturers Assoc (VDMA)

Dr. Theis, Secretary to the German Woodworking Machinery Manufacturers Assoc. asked Mr. Eldag to continue according to the discussions UNIDO staff members had with him on February 10, 1977, in Vienna, with the planning for a UNIDO presence at the 1979 LIGNA Fair.

A workshop or a training course during the LIGNA 1979 should be considered under one of the following aspects:

Machining technologies in Woodworking; or
Economic considerations in purchasing woodworking machines

Proposals are requested before the end of June 1977 because the LIGNA policy meeting is scheduled to meet early in July.

Consultants: 3 consulting firms offered their literature including case studies and lay-out for various woodworking plants. (see annex III)

Training Facilities: Mr. Scholz, Bundesverband des Holz- und Kunststoff-verarbeitenden Handwerks, who is in charge for craftsmen training and education will provide at the end of this year the latest syllabuses for carpentry, joinery, cabinet making and wood-cutting machinists' work which can be used as basic education and training means for developing countries.

Pilot Workshops: Pilot plants for woodworking workshops are planned in Germany for various developing countries in different sizes. These workshops have been financed by the Provincial Government of Baden-Württemberg. Layouts are available upon request. We may contact Mr. Mayer, Schreinerverband Württemberg, 7000 Stuttgart 1, Danneckestr. 35.

Manufacture under license: Three woodworking machinery manufacturers (see annex III) now producing new developed equipment are ready to transfer licenses for the manufacture of their basic woodworking machinery range.

They propose to include in the license the following data:
Leaflet of Machine Type: Production drawings + Service Manuals + Patterns.

The license can include drawings only or drawings including manufacturing time calculations and/or patterns. A certain amount of the license fee could be paid in form of machines produced by the purchaser of the license.

Field experts: We had the opportunity to discuss with 16 engineers (see annex III) and technicians the possibility of working as experts for field assignments. P.13 forms will be sent to them for possible inclusion in the UNIDO roster by the author.

Overhauling of second-hand machinery:

The report of the Technical Meeting in Vienna 1973 (ID.133) states that "second-hand equipment that had been reconditioned could be used for secondary processing where the utilization factor was less intensive and the machines were not normally integrally linked units of the processing line." Discussions were held with representatives of Woodworking Machinery Maintenance and Service Stations. A specialized firm (see annex II) will recondition second-hand equipment to fulfill the performance tests of new machines.

Further notes referring to second-hand equipment may be found in UNIDO document ID/WG.151/6 page 9.

Safety on machines

The German Safety Institution for the Woodworking Industry submitted the following literature:

- Accident preventing regulations, issue 1977;
- Safety on Woodworking Machines;
- Information Magazine of the Safety Institute;
- Noise pollution regulations;
- Classification of Milling Tools and Terminology;
- Regulations for safety tests for toolings for woodworking machines.

UNIDO can make use of all the literature of this Institute which is available in German only. They will provide us with pictures if UNIDO will issue this literature in English. (It must be pointed out that the safety regulations for woodworking machines in the Federal Republic of Germany are the most developed).

7. Conclusions and Recommendations

The participation by UNIDO at the LIGNA 1977 was generally successful but could have been better. The number and nationality of visitors to the UNIDO bureau at the Fair indicated considerable interest in and need for its services throughout the world. The objective and impartial advice provided was particularly appreciated. It is considered that the present method of personal contact between enquirers and UNIDO bureau staff is the most effective kind of participation.

Press coverage of UNIDO's participation was not adequate.
Press releases should be distributed three months ahead of the Fair.

The Fair authorities should inform both exhibitors and foreign visitors of the UNIDO service as early as possible.

Technical Data sheets (more detailed than the one shown in annex I) should be available for different machinery groups as a help for participants' equipment selection. The information about the UNIDO bureau at the exhibition should be distributed six months before. Information about possibilities of consultation during the Fair days should be given four months in advance with the request to give pre-notice by mail on the subject to be discussed when attending the Fair.

Invitations for visitors announcing the "Diary Date" to meet a UNIDO consultant should be advertised and sent out three months before opening the exhibition.

There was not sufficient preparatory time for the most effective presentation at the LIGNA 1977.

Recommendations

UNIDO should continue to provide similar services in specialized Woodworking Machinery and Ancillary Materials Fairs;

A decision to participate in any such Fair should be taken sufficiently early so that there is adequate time for effective preparation;

Preparations for participation should include: appropriate media coverage including international trade journals; bureau design and presentation; permanent co-operation with Fair organizers; early recruitment of bureau personnel; closer liaison with other industry related Associations;

Time schedule:

Permanent contacts through fair representatives in Vienna

Decision of participation with aide-memoire	10 months before date of Fair
Information through technical journals	6 months (see also conclusion)
Recruitment of consultants	4 months
Press releases and contacts with profess.assoc.	3 months

The present method of personal contact between enquirers and bureau personnel should continue as the main activity of fair participation;

UNIDO Headquarters should provide immediate and appropriate follow-up to individual contacts where assistance has been offered;

Some form of limited hospitality should be available for visitors to the bureau since this is commonly done at fairs.

UNIDO participation in specialized Fairs

The concentration of manufacturers exhibiting in specialized Fairs aggravates not only visitors from developed countries but also and particularly those from developing countries to find within few days what they need and to look at new developments and inform about new technologies. Therefore a permanent service covering the needs of developing countries has to be considered. Whenever possible the "UNIDO-Fair-Contributions" should combine in a very flexible way the "Fair Information Centre" with a Workshop, a Training Course or a Seminar. So-called International Seminars covering subjects of interest to specialists of industrialized countries should be open to visitors from developing countries. International Fairs, International Seminars and similar events have to provide simultaneous interpreting facilities. Woodwork related associations and their member firms predominantly those covering the small- and medium-scale industry should co-ordinate UNIDO field activities in favour of visitors from developing countries, e.g. plant visits, how to manage small scale component machining as delivery to industries with mass production, etc.

Need for UNIDO Manuals

UNIDO manuals such as "Low Cost Automation for the woodworking industry" found the interest of visitors from developing countries as well as of visitors and technical personnel of exhibitors from developed countries. These technical aids gave a lot of ideas what engineers from developing countries have to look for and presenting ideas to proceed in their development to mechanize production.

On the other hand engineers from developed countries had to learn in which way UNIDO is proceeding within the programme of technology transfer.

Acknowledgements:

The author wishes to thank Mr. H.H. Krüger, Executive Director of the Fair authority board who initiated the meeting with Mr. H. Theis, Secretary of the Woodworking Machinery Manufacturers Section, part of the German Machinery Manufacturers Association, who organized the UNIDO Bureau within the Service Centre. We appreciated very much the permanent contact of Mr. K. Orthofer, Permanent Representative of the Hanover Fair Authorities in Vienna, who co-ordinated all preliminary work for the UNIDO Bureau together with Mr. H. Rosenbaum, Section Chief of the Conference Section during the duration of this assignment and the assistance given. Last but not least thanks to Mr. O. Zuckermann, EUMABOIS-Delegate to the advisory council of the LICNA Fair and those colleagues of the European Woodworking Machinery Industries who supported the idea of UNIDO's participation at the International LICNA Fair in Hanover.

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Mr. K. Orthofer (Messe AG. Vienna)

STATISTIC OF LIGNA HANOVER

International Woodworking Machinery, Equipment and Tool
Exhibition

Participation acc.to country	1977		1975	
	No. of Exhibitors total	Exhib. Space total	No. of Exhibitors total	Exhib. Space total
FRG	400	40.635	388	38.434
Belgium	13	1045	17	1302
Brazil	1	20	1	48
CSSR	2	140	1	84
Denmark	17	1114	18	1001
Finland	5	389	4	542
France	40	3000	40	2492
Greece	1	20	-	-
Great Britain	23	1447	18	966
Italy	142	10535	124	7630
Japan	10	391	7	315
Yugoslavia	5	185	2	84
Canada	9	460	13	491
Luxembourg	1	35	-	-
Netherlands	9	622	7	520
Norway	6	440	5	293
Austria	24	1736	16	1362
Poland	1	135	-	-
Portugal	2	150	4	202
Rep. San Marino	1	20	1	16
Spain	18	716	6	276
Sweden	16	1681	18	1595
Switzerland	23	1703	19	1858
USSR	1	81	-	-
Hungary	-	-	1	63
USA	9	364	10	510
All foreign part.	379	26.429	322	21.652
26 countries	779	67.064	720	60.086

Participation from FRG and other countries

LIGNA Hanover 1977: 779 Exhibitors Total
 400 Exhibitors (51.3 per cent) from FRG
 379 Exhibitors (48.7 per cent) from other countries

Comparison to 1975: 720 Exhibitors Total
 388 Exhibitors (53.9 per cent) from FRG
 332 Exhibitors (46.1 per cent) from other countries

LIGNA Hanover 1977: 67.064 m2 Net Exhibition Space
 40.641 m2 covered by German manufacturers
 26.423 m2 covered by foreign manufacturers

Comparison to 1975: 60.086 m2 Net Exhibition Space
 38.455 m2 covered by German Manufacturers
 21.631 m2 covered by foreign manufacturers

Covered exhibition space in the halls and the open airground

LIGNA Hanover 1977

	Net Exhibition Space	No. of exhibitors
Hall 13	5.295	66
Hall 14	2.450	64
Hall 16	6.462	74
Hall 17	9.819	155
Hall 18	3.674	56
Hall 19	6.684	49
Passage way between hall 19-20	117	7
Hall 20	6.501	69
Hall 21	10.459	92
Hall 22	5.219	72
Hall 23	6.335	52
Open airground	4.049	36
Exhibitors covering 2 or 3 different exhib.space (minus).		minus 13
10 Halls	67.064	779

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INFORMATION SHEET FOR UNIDO TECHNICAL ASSISTANCE
 TO THE
 VISITORS FROM DEVELOPING COUNTRIES - LICNA 1977 FAIR

Name of Visitor:

Name of Company or Organization:

- Industry (Public Sector)
- Industry (Private Sector)
- Research Institutes
- Government Department
- Consulting Engineers

Street or P.O. Box:

City

Country

Field of Interest:

- | | | |
|---|---|---------------------------------------|
| Logging <input type="checkbox"/> | Wood Preservation <input type="checkbox"/> | Wood Drying <input type="checkbox"/> |
| Sawmilling <input type="checkbox"/> | Veneers <input type="checkbox"/> | Plywood <input type="checkbox"/> |
| Particle Board <input type="checkbox"/> | Fibre Board <input type="checkbox"/> | Joinery <input type="checkbox"/> |
| Prefab Houses <input type="checkbox"/> | Timber Engineering <input type="checkbox"/> | Furniture <input type="checkbox"/> |
| | | Other Fields <input type="checkbox"/> |

Information Sought:

FIELD EXPERTS:

ANNEX III

Languages

Mr. Detleff Bahr 4151 SW LOOP 820 Apt. 208 Forth Worth, Texas 75 132 USA	G, E, S
Mr. Claus Niederlöhner c/o Nitsche + Co A 5111 Bürmoos Austria (lived 10 years in Mexico)	G, E, S
Mr. Petrić Zodenko Ažbetova 7 61000 Ljubljana Yugoslavia	Yu, E
working for: Industrijski Biro Parmova 33 61000 Ljubljana, Yugoslavia	
Mr. K. Dziobek 2 Hamburg 53 - Lurup Luruper Hauptstr. 106-122 Germany	G, E
Mr. Rohrbach 8631 Ahorn b/Coburg Littenacker 8, Germany	G, E
Mr. K.P. Post D-7531 Neuhausen Sebastianstr. 4, Germany	G, E
Mr. H.P. Schneider P.O.B. 229 Wheaton, Illinois 60187, USA	G, E
Mr. Otto Betzler D-6972 Tauberbischofsheim Gartenstr. 43, Germany	G, E
Mr. K. H. Middlehauve P.O.B. 8 WOXALL, PA 18979 USA	G, E
Mr. H. Funke D-8200Rosenheim Seestrasse 9, Germany	G, E
Mr. S. Heidrich D-7317 Wendlingen/Neckar Behrstr. 83, Germany	G, E

	<u>Language</u>
Mr. Otto Gohl D-7082 Oberkochen Am Feldrain 3	G, E
Mr. K. Perscheid D-7515 Linkenheim Friedrichstrasse 52, Germany	G, E
Mr. V.R. Ross, CMC 33 Mineral Springs R.D. USA Asheville, N.C.	E
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Mr. G. Geiger P.O.B. 638 King of Prussia, Pennsylv. 19406 USA	G, E
Mr. Blidon Gaspoltshofen A-4673 Austria	G, E, S
Knoop Industrieanlagen Export G.m.b.H. 4150 Krefeld (Engelhardt) Ostwall 171-175 Postfach 1648 Germany	
Norman Springate + Associates Ltd. 1847 W. Broadway Vancouver, British Columbia V6J 1Y6 (Canada)	
Zuckermann KG. Maschinenfabrik Anastasio Grün Gasse 22-24 Postfach 66 A-1181 Vienna	

CONSULTING FIRMS

LICENSE MANUFACTURE OFFERED:

J.A. Buerle Maschinen- und Werkzeugfabrik
D-7082 Oberiochen/Württ.
Postfach 15 + 16
FRG

Ferdinand Fromm Maschinenfabrik
Friedrich-Liszt-Str. 2
Postfach 1440
D-7012
FRG

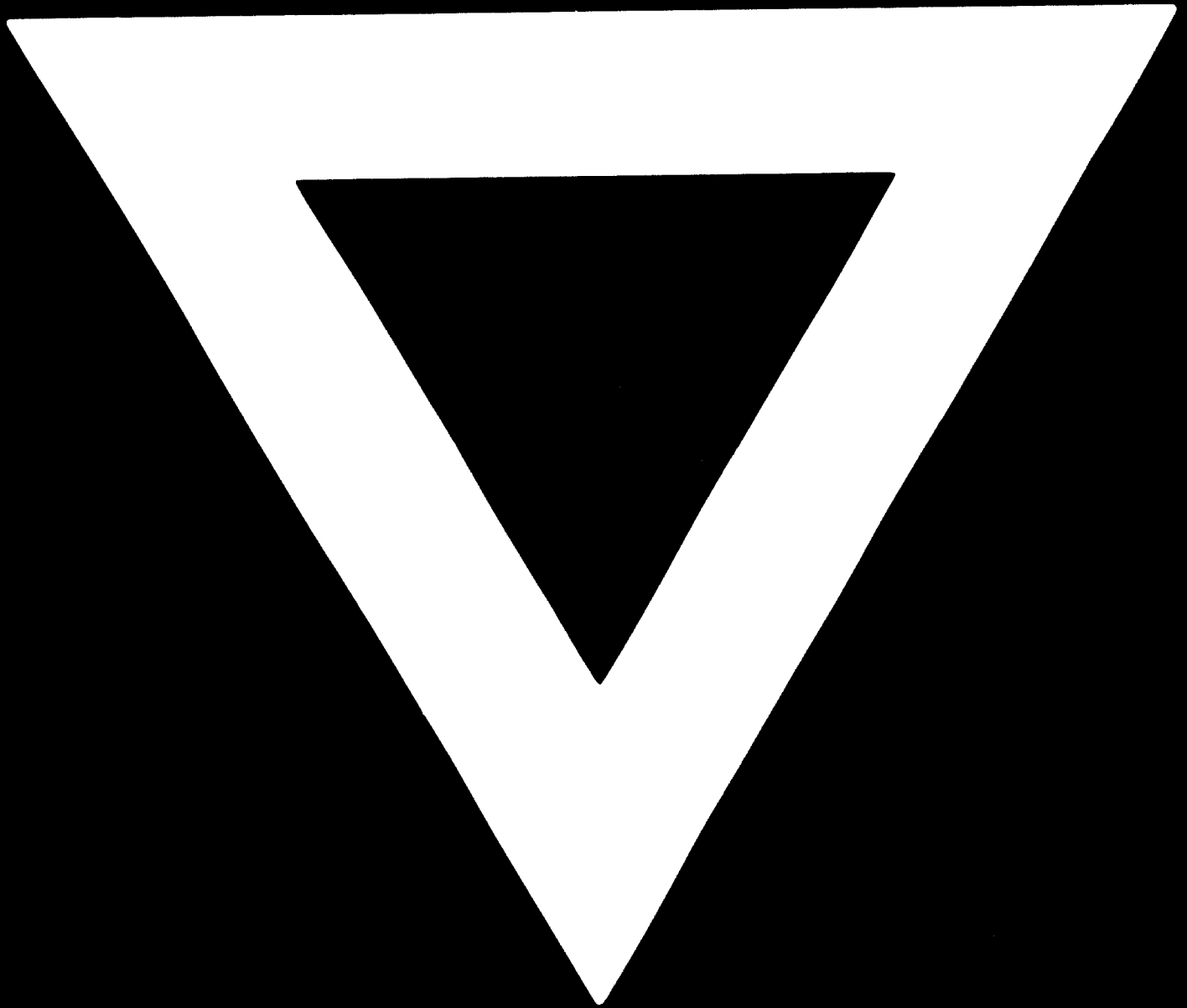
Zuckermann KG. Maschinenfabrik
Anastasio Grün Gasse 22-24
Postfach 66
A-1181 Vienna

SERVICE STATIONS (RECONDITIONING OF SECOND-HAND MACHINERY)

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Op'n Hainholt 316, Germany
- 2) Pennigsen
3257 Springe 2
Birkenstrasse 3, Germany
- Renardy 3) 32 Hildesheim
Godehardstrasse 11, Germany



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