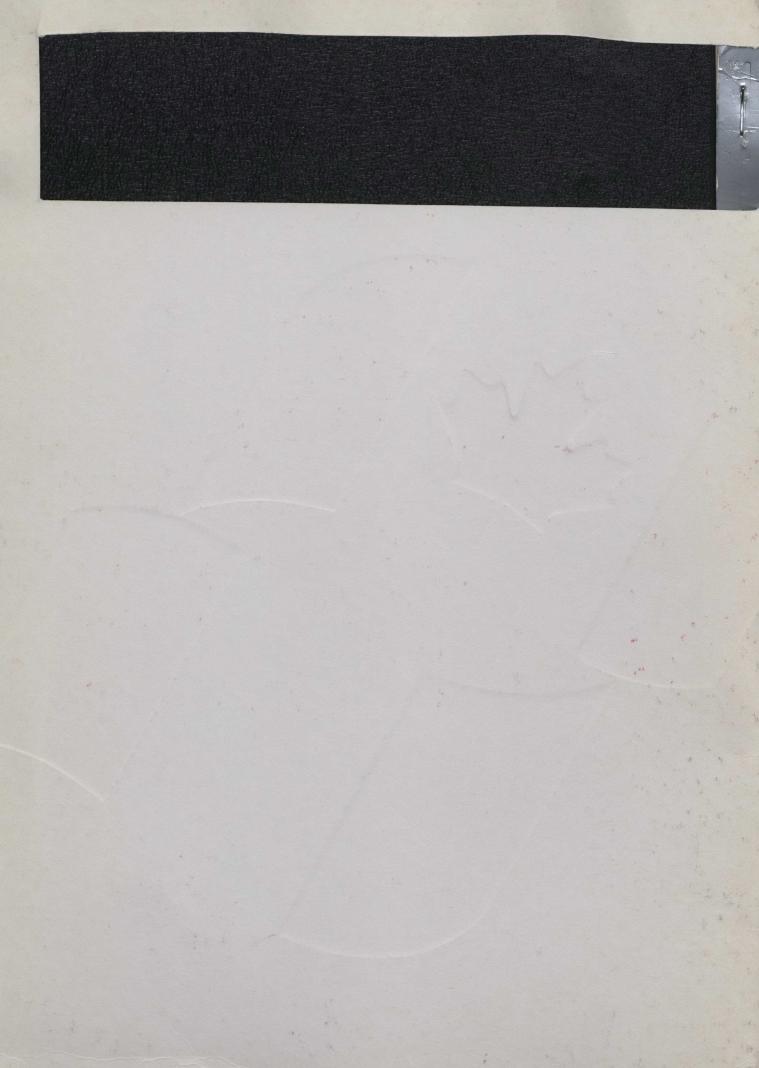
MARKET STUDY ON MACHINE TOOLS AND METALWORKING EQUIPMENT IN MEXICO



INFORMATION FOR CANADIAN BUSINESSMEN PREPARED BY THE COMMERCIAL DIVISION, CANADIAN EMBASSY, MEXICO.



MARKET STUDY ON MACHINE TOOLS AND METALWORKING EQUIPMENT IN MEXICO

Dept. of External Affairs Min. des Affaires extérieures

OCT 18 1990

RETURN TO DEPARTMENTAL LIBRARY RETOURNER A LA BIBLIOTHEQUE DU MINISTERE

This market guide booklet has been prepared with the problems inherent to the initiating exporter in mind. However it is not exhaustive; individual circumstances, interests and needs will dictate how companies should tailor their approach and strategy to the Mexican market. While every attempt has been made to ensure accuracy in this study, no responsibility can be accepted for errors or omissions.

Further assistance can be obtained by addressing requests directly to the Commercial Division of the Canadian Embassy in Mexico City located at Calle Schiller No. 529, Col. Polanco, 11560 México, D.F., Telephone 254-32-88, telex 177 1191 and fax (sending from Canada) 011 (525) 545-17-69; or the Latin American Division Department of External Affairs, Industry Science and Technology Canada, 125 Sussex Drive, Otttawa, Ontario, K1A 0G2. Phone 9950460 fax (613) 996-0677.

3-257-565

Dopt, of External Atlanta Min, des Affeires exterioures

0881 81 136

VELUE OF THE STREET OF THE STR

This market guide booklet has been prepared with the problems interact to the initiating exporter in mind. However it is not exhaustive; individual companies should tailor their approach and strategy to the Maxicon market. While every actompt has been and to ensure accuracy in this study, to responsibility out to accuracy in this study, to responsibility

MARKET STUDY ON MACHINE TOOLS AND METALWORKING EQUIPMENT IN MEXICO

INDEX

1.	BACKGROUND	2
2.	ECONOMIC ENVIRONMENT	2
3.	MARKET ASSESSMENT	3
3.1	IMPORTS	4
3.2	DOMESTIC PRODUCTION	5
4.	END USERS	6
4.1	GOVERNMENT AGENCIES	6
4.2	AUTOMOTIVE INDUSTRY	7
4.3	STEEL INDUSTRY	8
4.4	OTHER .	9
5.	MARKET ACCESS	9
	APPENDIX	11
1.	Registration procedures for foreign companies wishing to supply the Mexican Federal Government or its Decentralized Agencies.	
II.	Industrial Chambers and Associations	
111.	Manufacturers, distributors and potential agents/representatives	

HAMREY STUDY ON WACHINE TODGE AND METALWORKING

X30M

GALORONOAR

POONOMIC ENTRONMENT

WARREST ASSESSMENT

ST COLUMN

NONZOUGO PROGUCTION

SPERIFORE

COVERNMENT AGENCIES

VETEL HOLD THE PROPERTY OF

YFTRUGH ESTE

HENTO

SARRIGET ACCESS

APPEAUNCE.

Registration procedures for lossign companies wishing to supply

Inc. selflet Champons situ Associalións

Manufact destributors and potential agental/agreematives

1. BACKGROUND

Mexico has a high propensity to import capital goods, to the point that their importation tends to accelerate at 10 times the rate of increases in GDP. The origin of this behavior can be found in the import substitution policies adopted during the 1950's. These consisted in closing the borders to all imports of industrial raw materials and consumer goods in order to encourage their domestic production. On the other hand, the importation of machinery, equipment, their parts and components was permitted. This has resulted in a very high dependency on imported machinery and equipment, in particular of machine tools.

During 1982, the total market for machine tools and metalworking equipment in Mexico grew by almost 71% reflecting the accelerated rate of industrial development of the Mexican economy. Imports of machine tools reached their all time high of close to \$700 million. The following year, however, the market contracted significantly and imports decreased by 60% dropping to \$284 million. This decline was due to the general reduction in economic activity and to the virtual impossibility of obtaining dollars for private sector imports. Starting in 1984, as the economy began growing again and foreign exchange was made more readily available, imports resumed a halting but upward trend. Purchases of foreign made equipment increased 35% between 1983 and 1988.

Mexico is the 13th largest consumer of machine tools in the world but only the 33rd world producer. Imports have therefore played a very important role in this market, supplying an average 90% of total apparent consumption, estimated at \$450 million in 1989. This market is expected to grow eight percent per annum during the next five years as a result of government priorities in the petroleum, automotive and steel sectors and because modern machine tools and equipment will be needed, if Mexican manufacturers are to compete successfully with foreign goods both in the domestic and international markets. This market, as many others, will be much more open to foreign competition under the Mexican goernment's increasingly liberalized economic and trade policy.

2. ECONOMIC ENVIRONMENT

Over the past two years, Mexican economic policy has featured a tough anti-inflationary program called the Economic Solidarity Pact, combining traditional austerity measures (tight fiscal and monetary policies) and heterodox measures (price, wage and exchange rate controls). The program has been successful in reducing inflation, from an annual 159.2% in 1987 to 51.7% in 1988 and an 20.3% by 1989. The general criteria for Mexico's macroeconomic policy in 1990, are to consolidate and fortify the progress made in price stabilization, to reaffirm gradual and sustained economic recuperation, to increase investment, both national and foreign, and to improve living standards.

Mexico's gross domestic product (GDP), after increasing 3.7% and 2.7% during 1984 and 1985 respectively, diminished by 3.6% in 1986. In 1987, it increased a moderate 1.6% and an additional 1.4% in 1988. Domestic economic activity recovered for the third consecutive year in 1989 with an estimated growth rate of 2.9% in 1989 to reach \$200 billion (1). With an 84.5

^{1.} NOTE: All values in this report, unless otherwise stated (\$Mexican pesos, Canadian dollars Cdn\$, etc.) are quoted in United States dollar equivalents.

GILLORENOAS

Making has a tight propagation or amount capital goods to the point that the importation to the central capital and the composition of the central capital ca

The part of the state of the second s

Mexico is no 13th largest consumer of machine tools in the world out only the 35th world an moderar, imports have therefore played a very important role in this market, supplying an every important role in this market, supplying an every an every experience of total apparent consumption, estimated at \$450 million in 1903. This market is every experient to grow eight parcent per sentum during the next live years as a result of consument promises in the periodeum, automotive and size! sectors and beckuse modern compete market book and square and total promises the markets. This market are not of the modern markets that markets the market will be much more open to be sign competion under the Maxicon and trade policy.

ECONOMIC ENVISORMENT

Care the past two years steeded to economic policy has featured a taugh anti-infallionary program called the Economic Sociality Pact combining undicinal susteinty measures (fight scales) and monetary policies) and helescook ressures (cince, wage and exchange has contained the program has been successful in reducing infation, from an annual 158 call in the program of the page of the general crisena to Maxico's called to 51.7% in 1988 and as 20.3% by 1989. The general crisena to Maxico's called to 51.7% in 1990, are to consolidate and fortilly the progress made in crice seconomic policy in 1990, are to consolidate and fortilly the progress made in crice seconomic policy in regional and to improve living standards.

stration's gloss demostic product (GDP), when increasing 3.7% and 2.7% during 1864 and 1984 respectively, diministration by 3.6% in 1986, in 1987, it increased a moderate 1.6% and an additional 1.5% in 1988. Demostic according activity recovered for the third consecutive year additional 1.5% in 1988. Demostic according to 1989 to the child science (1). With an 28.5 in 1989 with an estimated provide of 2.8% in 1989 to the child science (1). With an 28.5

NOTES: All values in this topert, unless otherwise stated and united season, canadian delians tone, att quoted in United to the delian squitzer of the contract of the contrac

million population, per capita GDP is estimated at \$2,375. During the 1990-1994 period GDP is expected to maintain an average annual growth rate of 2%-3%.

In an effort to revitalize and open the Mexican economy, the Mexican Government undertook a series of structural changes, including the accession to the General Agreement on Tariffs and Trade (GATT) on August 24, 1986 leading to an extensive trade liberalization process. The automotive and computer industries have also been liberated and items in these categories are now importable without prior import permit requirements.

Major changes were made in the Foreign Investment Law, which now allows direct foreign investment of up to 100% in several sectors of the economy, previously restricted to a minimum 51% Mexican ownership.

According to official data from the Mexican Secretariat of Commerce and Industrial Development (SECOFI), Mexico's previous trade surplus changed to a deficit of \$1.7 billion in 1989. Total exports increased 10.7% totalling \$22.7 billion, while imports increased 24% from \$19.7 billion to \$24.5 billion. Imports of consumer products increased 82%, while those of intermediate goods grew by 17% and capital goods by 18% in 1989. Total Mexican imports from Canada increased 24% in 1989 to Cdn\$603 million. In 1989, total trade between Mexico and Canada was valued at Cdn\$2,301 million: Cdn\$603 million in the sale of Canadian goods and services to Mexico and Cdn\$1,698 million in Canadian purchases from Mexico. Mexico and Canada have traditionally been strong trading partners. According to Mexican figures, in 1989, 1.9% of Mexico's imports came from Canada, while 1.3% of its exports were to Canada. This makes Canada Mexico's fifth largest exporter and sixth largest importer.

3. MARKET ASSESSMENT

The total Mexican market for machine tools and metalworking equipment amounted to \$421 million in 1988, up 50% over the \$280 million of 1987. Preliminary data for 1989 place the market size at \$451 million, reflecting a further 7% growth. As a result of Mexico's open investment and trade policy, total demand is expected to increase at an 11% annual rate and reach \$759.6 million in 1994. In conjunction with Mexico's general economic growth, a variety of new projects are underway in the steel and automotive sectors, which have boosted demand for this type of equipment and will continue to do so in the future.

TABLE 1 THE MEXICAN MARKET FOR MACHINE TOOLS AND METALWORKING EQUIPMENT (million US dollars)

	1987	1988	1989 ^e	1994P	88-91 ANNUAL GROWTH
Production + Imports - Exports	orts 245.8	59.5 384.8 22.9	63.6 411.7 24.5	89.2 708.1 37.7	7.0% 11.5% 9.0%
TOTAL	279.9	421.4	450.8	759.6	11.0%

Source: Import and export statistics - Secretaría de Comercio y Fomento Industrial.

which possible to read on menge arriver grown site of the Dunny has 1990 1984, on of the

In an offerd to revisit a sign of the transport of social to the Massican Tutterships of Tarial and a sign of the social to the General Apparent of Tarial and trade of the formal trade of the formal trade of the social trade o

Major changes were made in the Foreign kneement Law which new allows direct by equiinvestment of up to 100% in several sectors of the economy, previously restricted to a minimum of the Mexican ownership.

According to official open from the Mission Secretarial of Commerce and trained in the Property of Commerce of Secretarian (SECOS), whiston's previous made surgius charged to a deficit of \$1.7 billion in the surgius appears in the surgius of the

MARKET ASSESSMENT

The total Maxican market for resonance while and metallundring adultionant announced to EAST design in 1985, up 30% over one \$280 million or 1987. Preliminary data for 1989 place many arrived size or death and market size or death and market size or death and the size of the annual rate and another than the size of the annual rate and read or increase at an 11% annual rate and read for increase at an 11% annual rate and rate of 1988 present and the annual rate and the size of the annual rate and the size of the size of source and will continue to do so in the future.

THE MEXICAN MARKET FOR MACHINE TOOLS AND METALWORIDING EQUIPMENT SHRIPE US dolors)

Source source and sending shared a Secretaria de Comercio y Francia de Senale

3.1 IMPORTS

The weakness of the domestic industry has meant that imports have played a paramount role in the Mexican market for machine tools and metalworking equipment. Total imports were \$245.8 million in 1987 and grew 56.5% in 1988 as a result of general economic growth, trade liberalization policies and several new projects undertaken in the various end user sectors. Total 1988 imports of \$384.8 million can be divided into \$226 million of machine tools, \$81 million of metalworking equipment and \$77 million of ovens and furnaces. Preliminary figures indicate a further 7% growth in 1989 placing total imports at \$411.7 million. Imports of machine tools are expected to grow at an average annual rate of 11.5% in the next five years within the same framework set by the administration of President Salinas. Even though this figure may seem high, it is not unrealistic if it is remembered that in 1981 imports of machine tools reached a peak of approximately \$680 million, a figure slightly below estimated imports for 1994 of \$708 million.

Metal cutting machine tools represent approximately 40% of total imports. These are followed closely by metal forming equipment with approximately 32%. This is expected to be the fastest growing segment of the market, as it has been in the last few years, even though metal cutting machine tools are the most important segment in dollar terms. The remainder is composed of lathes, metal drawing machines, grinding and finishing machines, boring, milling, drilling machines and machining centers.

Imports of parts and attachments for machine tools represented 12% of total imports in 1988, up from 22% in 1987, and increased to 18% in 1989. At a time when credit is scarce and a large portion of the Mexican industry is working below capacity, parts will continue to represent a flourishing market. Nevertheless, purchases of new machinery have already been resumed on a major scale, given the demand backlog existing since the market contraction began in 1981. In light of Mexico's accession to GATT, the Mexican industry will have to be more productive and more competitive, both internationally and at home. This means increased demand for new, improved technologies, of capital goods in particular.

As is the case with the majority of Mexican imports of capital goods, most machine tools originate in the U.S., which has accounted for an average 50% of total imports. In 1988, this market share was 51%, representing total sales of \$197 million. Other countries' share in 1988 were as follows: the United Kingdom (14.8%), West Germany (10.9%), Hong Kong (6.3%), Japan (4.4%), Italy (2.4%) and Canada (1.0%).

The source of supply of Mexican machine tool imports varies mostly in terms of their relative degree of sophistication. With regard to simpler types of equipment, Latin American, Asian and Eastern European countries have made major inroads in the Mexican market. Countries such as Spain, Italy, Hong Kong, China and Brazil have achieved increasing levels of penetration in the medium technology bracket. Finally, countries such as the U.S., Japan, West Germany and the U.K. dominate the high technology, high quality market segment. Japan and West Germany have been making strong efforts to capture a larger proportion of this segment through extended credit terms and/or low prices. Tight domestic financing is forcing Mexican buyers to give greater weight to financing than quality when purchasing equipment, and this has favored countries willing to finance large sales.

The weak rate of the dollers in action to the mean and imports have alleged a determined and an action meaning to the acquired to the action of the acquired to the action of the acquired to the action of actions acti

Metal cuming magnered todis represent approximately 40% of total imports. These are tolking discrete our matel carming equipment with approximately 20%. This is expected to be the factors growing regiment of the mesket, as it has been in the last tew years, even traught motal current todes are the most imported eagment in dollar terms. The remaining a regiment of lathest metal drawing machines, grinding and findshing machines, borers, making, criting machines and machines are machines, borers.

moons of care and attachments for machine tools represented 12% of loss imports in 1988, and a care and attachments for machine to 18% in 1989. At a time when credit is scarce and any care control of the Afexican including have already is working below capacity care will control of the Afexican market. Hereaches, purchases of new mechican have already and a major easies, given the demand backlog existing since the market and the transition of the Afexican inclusive the market and any care productive and envire corresponds of capital goods in particular the market process of the analysis of capital goods in particular market particular transitions and any particular market particular transition of the capital goods in particular market particular transitions of capital goods in particular market particular transitions.

As in the tase with this majority of Mexican Imports of capillar goods, most majorite in 1988 mile or the U.S. which has account an average 50% of total imports in 1988 mile matrix af use was 197% representing total sales of \$197 million. Other pounties' share in 1988 were as solicity ten United Kingdom (14.8%), West Germany (10.9%), Hood Kong Kong (6.4%) Jay (2.4%) and Canada (1.0%).

The Appendix of Supply of Massers machine and imports varies mostly in terms of their earliest of services at socialistication. With regard to employ types of equipment, Letin American Asian description of services at socialistic process in the Mexican market. Countees and services and draza have activated increasing terms of their as tipes their treatment and the U.S. dominate the high technology, but quant measured segment from the services and the U.S. dominate the high technology, high quant maket segment and was demand have been making shorts to depute a larger procording the segment through extended drack terms and/or on prices. High domestic framons is the segment demands of the processor of the segment making strong that outsity when portnamed and making the strong that quality when portnamed and making making that calling when portnamed and making maki

CANADIAN IMPORTS AND EXPORTS WITH MEXICO OF MACHINE TOOLS AND METALWORKING EQUIPMENT

(000 Canadian dollars)

	CDN EXPORTS TO MEX 1988	CDN IMPORTS FROM MEX 1988	CDN EXPORTS TO MEX 1989	CDN IMPORTS FROM MEX 1989
Saw blades	30	10	237	134
Pliers	35	32	0	25
Wrenches	7	0	0	0
Tools & dies	363	1,467	606	1,126
Machine tools	3,224	0	944	33
Parts & accessories	1,476	50	668	193
Furnaces and ovens	110	0	132	60
TOTAL	5,245	1,559	2,587	1,571

Source: Statistics Canada - International Trade Division

Canadian exports to Mexico increased 83% in 1988 to Cdn\$5.2 million, but decreased again 51% in 1989 prompted by a drop in exports of machine tools and their accessories. Canadian products are well accepted in Mexico, but Canadian exporters should be more aggressive in marketing their products in Mexico, by offering financing alternatives, participating in trade shows, establishing a repreentative or distributor or investing in Mexico.

Foreign products with best sales prospects in Mexico include: numerically controlled machine tools, machining centers, lathes, milling machines, grinding machines, centering, honing, punching, shearing, bending & forming machines, jig and vertical boring machines, horizontal drilling machines, gear cutting and finishing machines, polishing and molding machines, copying machines, shaping machines, sawing machines, cutoff machines, arc welding machines, wire drawing machines, presses, cutting pliers, saws, wedges, knives, blades, special dies & tools, parts and attachments.

3.2 DOMESTIC PRODUCTION

Domestic production of machine tools has at most represented 12% of total apparent consumption in the last several years. In 1987 it was valued at \$59.5 million and is estimated to have increased to \$63.6 million in 1989, of which \$24.5 were exported. It is restricted to the more basic, less sophisticated and traditional specifications of equipment. Among machine tools manufactured in Mexico are drills, blades, tips, spare parts, cutting and welding equipment, tool holders, shears, rolling trains, smooth-roll mills, grooved-roll mills, handsaw jigs, electric furnaces, horizontal mechanically controled small lathes, station and transfer machines, pneumatic and hydraulic presses, horizontal and vertical mechanical presses, mechanical and hydraulic guillotines, circular sawing machines, mechanical shears and curtain presses. Many of these products are exported to the United States, Central and South America.

The Mexican Government has stated its desire to develop the domestic industry's capacity to produce machine tools, metalworking machinery and the intermediate goods necessary for

CEMADIAN REPORTS DES EXPORTS VETH MESOCO. OF HALD RIVE TOXIL A AND METAL MORROVE EDUPAMENT.

normal Statistics Canada - International Trade Of Islan

Canadian expons to Mexico increased SSN in 1988 to Odn\$5.2 million, but decreased again the kinn 1999 promoted by a drop or expons of machine tools and their accessories. Canadian amount are well accepted in Mexico, but Osnadian exponent should be more appressive in numerical trial products in Mexico, by offering financing elementatives, periodicating a representative or distributor or investing to Mexico.

For sign products with bein sales prospects in Maxico includer materically controlled machine controlled machines, parking machines, parking machines, perking controlled machines, perking controlled to the controlled machines, included and tricking exchanes, policing and molding machines, controlled machines, shaping anachines, sales are well-controlled with discount machines, and exchange machines, as with discount machines, as with exchange machines, as well-controlled machines, and exchange places, country parking machines, blacks.

M.S. EXOMERTIC PRODUCTION

Contraction of machine tools has at most represented 12% of total assistant of the contraction and the series of the contraction of the contractio

The Maidden Government has stated its desire to develop the competic todustry's capacity to decide machine tools, metalworking machinery and the intermediate goods necessary too.

their production, in particular in the areas of metal rolling and wire production (drawing process). Scarce government resources and financing, increased competition from abroad and poor economic conditions have so far limited the success of this development plan. However, the Mexican parastatal policy of buying national whenever possible has helped local producers make some progress in recent years.

Local producers face a variety of obstacles when competing with imported products, including high prices and lower quality of raw materials in comparison to international standards, high interest costs, and scarcity of trained personnel and technicians. But the most cited causes of slack demand for domestically manufactured machine tools is the perception that quality is low, that deliveries are likely to be delayed and that their technological level is inadequate. Due to the above reasons, Mexican machine tools are almost only used in technical schools, small scale industries and job shops, not in heavy industry. The Mexican capital goods industry operated at 30%-40% capacity in 1984. In 1985 and 1986 it rose again to 50%-55% and is estimated at 55%-60% in 1989. This was partly due to an improvement in the quality of Mexican made equipment due to licensing agreements and joint ventures with firms from the U.S., West Germany, Brazil, The U.K., Spain, Italy and Japan. The ability of Mexican companies to continue improving their quality and technological state-of-the-art will determine their growth and market participation in the future. During the next few years, however, domestic production is expected to grow at a 5% annual rate, still below that of imports.

Approximately 16 major companies in Mexico manufacture machine tools. Of the three government owned companies, which previously supplied approximately 40% of the market, Fábrica Nacional de Máquinas-Herramienta (FANAMHER) was closed and Oerlikon Italiana de México was put up for sale. Major private companies are Cormetal, Dizher Industrial, Dreis & Krump de México, Empresas Tosa, Fábrica de Máquinas y Accesorios (FAMA), Fundición y Talleres Anáhuac, Gimbel, Hidromex, Industrial de Partes, Industrias Jego, Lukas, Máquinas Monterrey, Potencia Hidráulica, Strojimport de México and W.A. Whitney.

4. END USERS

The most important end-user sectors of machine tools in Mexico are the automotive industry, the steel industry, electric and non-electric machinery and equipment, as well as the following industry groups: metal furniture & fixtures, construction, metal products, cutlery and tableware, fasteners, textiles, chemicals and petrochemicals, plastics, packaging, electrical appliances and electronic products.

4.1 GOVERNMENT AGENCIES

The Mexican Government is the principal force of the economy. It is presently involved in approximately 450 state-owned firms and government agencies, down from 1,155 in 1982 as a result of a major effort of the past administration to reduce government involvement in the economy. In 1989 the total budget assigned to physical investment is \$6.5 billion, of which \$3.9 billion were assigned to Pemex and other parastatal companies. Government agencies account for approximately 40% of total machine tool imports. Among government institutions with the greatest market potential for imported machine tools are:

their exocution in president in the expense of every locate and water production in the expense of the competition from states of the competition and the competition from the competition of the competiti

Loss inducers not a variety of observes when contracting with another product product and process and lower quality of swinces in process and lower could be swinced personnel and reducting such as the standards in the swinces of standard for domestically manufactured macrifices holds as the most created of swinces of standard for domestically manufactured macrifices holds as the personnel and that their process of standard of the domestically manufactured macrifices holds and that their sections level is leaded at the swinces of the swinces

Approximately 16 major companies at Mexico manufacture mache a tools 19 the (lines approximately event of the major companies, which previously supplied approximately event of the major o

BREW OUR

The table programs enduced vertices of predate tools or Marco are the quadrative industry and an industry electric produces and equipment, as well as the following distance produces are produced carried as States, construction, metal produces, others and selections taken and selections are leader and tools and selections and controls are controls and controls and controls and controls and controls and controls and controls are controls and con

BEIDREOATVENNIENOE 11

The standard Government is the shirts of the economy in a predently involved in end and expendently all the standard of the economy in the involved in the expendent and the end of the end of the expendent of the end of t

- Petroleos Mexicanos (PEMEX), the national petroleum and gas monopoly, was assigned a \$1.6 billion investment budget for 1989, mostly for exploration drilling, production, oil and gas pipes, storage, projects under construction (development of marine platforms in the Campeche marine area and in the Souteast), increased exports of refined products and increased efficiency in its nine refineries and 20 petrochemical complexes;
- Comisión Federal de Electricidad (Federal Electricity Comission-CFE), the sole generator and distributor of electricity in Mexico, is undergoing a significant structural change with the aim of increasing its efficiency and profitablity. The 1989 investment budget will be used to increase installed capacity by 318 MW (for a total 25,305 MW) and to continue construction in existing coal fired, nuclear and oil fired generating plants;
- Caminos y Puentes Federales de Ingreso (Federal Income Generating Roads and Bridges), the parastatal company responsible for the construction and maintenance of toll highways and bridges, has been authorized to increase its tariffs, which will enable it to modernize and expand the existing infrastructure of 939 kms;
- CONCARRIL, the sole manufacturer of rail cars in Mexico, satisfying 90% of total demand, has undergone a major restructuring, mostly by adding new production lines, such as passenger cars, light trains, subway trains and locomotive reconstruction, to the previous subway and freight cars. The use of installed capacity increased from 23% in 1986 to an estimated 70% in 1988 and has translated into exports and the coverage of local demand;
- Diesel Nacional (DINA), the government owned manufacturer of trucks and buses, and SIDERMEX, the largest steel producing enterprise in Mexico will be discussed below.

4.2 AUTOMOTIVE INDUSTRY

The most important end user of machine tools in the private industry is the automotive sector. The largest automotive manufacturers in Mexico are:

Chrysler General Motors Dina Ford Nissan Volkswagen

These firms operate a total of 16 plants in Mexico, of which ten are American, two German, three Japanese and one Mexican. These 100% foreign owned plants manufacture automobiles, trucks and motors, providing 90% of Mexico's total automotive production. The other plants are majority Mexican owned and produce truck trailers, tractors for agriculture and buses. All passenger car manufacturers are 100% foreign owned and, since they were established prior to 1973, they were exempted from the majority Mexican ownership regulation imposed later by the Foreign Investment Law.

According to the Mexican Association for the Automotive Industry, total production reached 641,275 units in 1989, reflecting a 25% increase over the 512,626 units produced in 1988. Of total production, 68% corresponded to automobiles, 31% to trucks and the balance to trailer-tractors and buses. Market participation by company, was as follows: Nissan 21.5%, Chrysler 20.9%, Ford 19.6%, Volkswagen 19.3% and General Motors 16.3. Total internal demand for cars and trucks has also increased significantly (30%), from 341,919 units in 1988 to 445,863 in 1989, as have exports.

A new decree was published in December 1989 for the automotive industry allowing locally established car and truck manufacturers to import new cars from their foreign facilities,

Petrolipos Mexicatros (PERIEN INS. reform) per recipio de casionates directos procursos of and an objecto de casional pudades projectos de casionales de cas

Congettin Federal de Electrodoct (Federal Section) Congettin (FE), the sole geteral of and distribution of electrodry in Mexico, a undergoing a significant solutional charge with the and of increasing its efficiency and professory. The 199 investment burget will be used to bure electrose installed departly by 318 MW (for situate 25 905 MW) and to continue constitution in existing cost freed, nuclear and of fired generating country.

terminos y guerrias Federales de royreso (Federal rodome Generatiro, Roads and Strikjest, the caracteris company responsible for the construcción and maintenance of tol regment and bridges, tota bean autroased to response la rarits, which will enable if the modernical and expand the expand to expand the second to expand the second to expand the second the second the second the second the second the second to the second the second to the second to the second to the second the

CNGARRIL, travelle manufacturies of reil care to historic sealitying 90% of total definition has undergone a analog restricturing, mosely by earlying new production fines, such as passenger care, inche trains, subway trains and locumotive reconstruction, to une are increased and insight care. The use of installed passeng increased from 12% in 1888 in 1888 in the coverage of locumous states of the coverage of locumous card the coverage of locumous card the coverage of locumostation.

block Nacional (DRVA), the covernment owned translational of fruchs and puses, and sacretainty, the farcest aleas producing enterprise in Maximo will be discussed calow.

VEITELIGHT SYTTOMOTHE IN THE

The count reported and used of machine topic in the private inclusive is the automotive second

Charater General Mondra

nsazió nsazió rapowanov

The a form operate a rotal of the plants in Maxica of which ten are American, two German who separate sand one Maxican. These 100% foreign owned plants manufacture, the automotive production, the cities are market, Maxican owned and produce muck trained (recipie for agriculture plants are market). Maxican owned and produce muck trained and since they was all owned and since they was activated prior to 1973, they were exempted from the majority Maxican owned and since they was activated imposed later by the Foreign investment law.

According to the Mexican Association for the Automobile Industry, total production resolved out the case of the constant of th

descriptions of the property o

provided they show an overall trade surplus and imported units do not exceed 15% of locally produced units during 1991-1992 and 20% in 1993. The minimum local contents requirement (60% on cars and 70% on trucks) has been eliminated, as well as previous restrictions regarding the number of lines and models produced.

Virtually all of the major auto companies have expanded their manufacturing facilities in recent vears:

 Nissan has built two new plants, one for body stamping and the other for motor assembly, in Aguascalientes, with the capacity to produce 8,000 units per month. These plants are expected to be operational in 1992.

- Ford built a motor plant in Chihuahua and completed its auto assembly plant in Hermosillo

in 1987.

- Chrysler's Mexico City plant is the sole worldwide producer of its Ramcharger, a light luxury

truck line.

 General Motors enlarged its two plants located in Coahuila. In 1990, Packard Electric, a division of G.M., under the name of Alambrados Automotrices S.A., will invest \$50 million in two new plants to produce condensers.

Volkswagen is in the process of increasing the export capacity through its plant in Puebla. It
will invest \$300 million in 1990 to expand its production capacity and \$90 million in autopart

manufacturing.

Renault has suspended its production of finished cars in Mexico since 1987, but still
manufactures six cylinder motors for export at its Durango plant. Renault will invest \$453
million during the next three years to increase its capacity.

- The Japanese firm Honda opened two motor assembly plants in Jalisco and Sonora to

supply the U.S. market.

The parastate company Diesel Nacional (DINA) was restructured in 1989. It consisted of Dina Camiones, Dina Autobuses and Mexicana de Autobuses in passenger buses; Motores Perkins, Dina Motores, Dina Cummins and Moto Diesel Mexicana in the production of motors; Plásticos Automotrices Dina, Maquiladora Automotriz Nacional and Servicios Alimentarios in the autoparts industry; and it also held shares in Dina Rockwell and Dina Komatsu. The Grupo G company from Jalisco bought DINA for \$100 billion pesos (\$40 million), including Dina Camiones, Dina Autobuses, Dina Motores and Dina Plásticos.

The demand for machine tools and metalworking equipment has grown with the automotive industry's increase in production, both for the domestic market and for export. General Motors and Ford have the most innovative equipment at their plants. G.M. has 30 numerically controlled transfer machines at its Coahuila plant and Ford is automatizing its plants, where robots will be used in the grinding and polishing processes, while materials handling and storing will be done in a numerically controlled facilities. Every automobile manufacturer purchases eight to ten hydraulic presses annually, as car models are changed. Robots are used by Ford, Chrysler, Volkswagen and General Motors.

4.3 STEEL INDUSTRY

The government owned SIDERMEX is the most important steel and alloy producing group in Mexico, with total output of 5.1 billion tons in 1988. It comprises two major companies: Altos Hornos de México and Siderúrgica Lázaro Cárdenas "Las Truchas" (SICARTSA), in addition to the NKS complex, a joint venture between Nacional Financiera, SIDERMEX and Kobe Steel (Japan) which began full scale production in 1986 at their steel mill and castings plant in Lázaro Cárdenas. By 1990, it is expected to operate at full capacity.

Femals has suspended its production of forshed cars in Mexico since 1987, pur suit

The Mexican steel industry is undergoing a period of reorganization, mostly through the privatization of several steel companies and the optimization of existing production. In 1987 the Mexican government assumed SIDERMEX's \$700 million foreign and internal debt in order to keep it afloat, and increased its budget to \$25 million in 1988. Simultaneously it began reorganizing the industry by privatizing 55 steel companies between 1982 and 1988: selling 35, closing 15, merging four and resectorizing four. A major action consisted in closing the troubled Fundidora Monterrey, a major company associated to SIDERMEX. This restructuring was partially encouraged by Japanese capitals in the amount of \$260 million flowing into the second phase of the SICARTSA steel project on the coast of Michoacán. New and ongoing projects in addition to the modernization of existing facilities should increase demand for machine tools and metalworking equipment.

Additionally, in March 1990, the Mexican government put the SIDERMEX complex up for sale. It is expected that the sale of AHMSA and SICARTSA will be included within the debt to equity swap program, which was created to foster private investment in infrastructure projects and those involving the sale of public sector assets. Offers to buy are expected from Mexican, British, West German and particularly Japanese investors.

4.4 OTHER

The construction industry is another important user of machine tools. After several years of negative growth, in 1989 it showed at 1.4% increase and is expected to grow 2.5% in 1990. In 1989, the Mexican government launched the Private Investment in Toll Highways Program for 1989-1994 enabling private Mexican and foreign investors to participate in the construction of 3,200 kms. of toll highways with a total projected investment of \$1.6 billion. Participation will be made through international bidding and swap programs.

Approximately 4,100 companies manufacture non-electric machinery and equipment, while another 600 produce electric machinery. The metal working machinery and capital goods sector plays a strategic role in Mexico's industrialization process and growth. It is therefore a sector that will continue to be promoted by the government in the future.

5. MARKET ACCESS

Sales in Mexico are usually made through local agents and distributors, normally operating on a commission basis. Decisions should be taken on whether to use an agent, joint venturing or licensing with a Mexican company. Mexico's market is highly competitive and companies which maintain an active presence in the market and establish a good track record by virtue of product performance, competitive price and service will do well.

All suppliers of equipment or services, whether local or foreign, to a Mexican Government entity must be registered with the Secretariat of Programming and Budget (SPP) and with the Purchasing Department of the agency itself. All purchases over a specified minimum are subject to bidding.

Over the past four years, Mexico has hosted an international machine tool show held in Mexico City, and which to date has received favorable acceptance with local industry. The last event was MAQUINAMEX EXPO '90 held in late June over a four day period. This show featured over 150 manufacturers of machine tools from Mexico, Japan, Germany, Italy, the U.S.A. and China amongst others. A wide range of equipment, from the more simple tools

The stationar areal industry of undergoing a derice of reaspendation mostly through the province of stations of stating production in 1901 and 1901 are included to marging four and reservance out. A major action consider in closing the formation of the second to station and 1901 an

Additionally, in March 1980, the Mexican government set the SIDERMEX contriber to lot sale as a superied that the sale of AHMSA and SICARTSA set be included within the dapt to equity a ware program, which rate orested to toster private investment in intrastruction original program or interest ucture original and prose involving the sale of public eactor tests. Others to buy are expected from Mexican Entish, Wast German and carricularly Japanese investors.

AMOTO AL

Approximately 4,100 companies washing anon-electric machinery and equipment, while another 600 produce electric recomment. The metal working machinery and capital goods section places a prategor role in Maxima's industrialization process and growth. It is therefore a section trait will continue to be progressed by the government in the future.

MARIGET ACCESS

sates in Marico are usually mede firrough local agents and distributors, normally operating on a commission date. Decisions should be taken on whether to use an agent, rom variating or applicating with a Mewdon company, Medico's market is inginiv competitive and competitive and catalism a good track contract by virtue of smooths perfertnence, competitive once and service will do well.

At suppliers of exclorent or services, whether local or foreign, to a Mexican Government and suppliers of services of Programming and Budger (SPP) and with the promoting Desperance of or the agency racel. All purchases over a coordinat manual architect to hadring

Over the past four years, Mexico has hosted an international machine tool enquisite the last in Maxico Dity, and which to date has received reversible scoepiance with focal industry. The last event was MACOURLANIEX EXPO '90 held in late June over a four day period. This show earlied over 150 manufacturers of machine roots from Mexico, Japan, Germany, last, ore said Cirana amongst others. A wide range of equipment, from their simple focal

and dies to sophisticated and robot units are displayed. This type of trade show can be a favorable means of displaying Canadian machinery to establish a foothold in the Mexican market, or to visit with a view of establishing contacts with further representation in the marketplace. The organization responsible for this exhibition is Fapezal Comunicación S.A. de C.V., Paseo de la Reforma 300 - 11th floor, Colonia Juárez, México D.F. 06600. Telephone: 525-3902, 533-1486, Fax: 525-4103. Interested parties should write directly for further information.

As a result of Mexico's accession to GATT, the Mexican Government has gradually opened the economy to international suppliers. Import duties have been lowered from a maximum 100% in 1983, to 20% since December, 1988. The official import price system has been totally eliminated and import permits are required on only 325 of the total 11,950 items in the Mexican Tariff Act, none of which correspond to this industry. Mexico adopted the Harmonized System of Tariff Nomenclature on July 1, 1988.

The import conditions for machine tools have improved significantly as a result of Mexico's commercial liberalization policies. Maximum duty rates have been reduced to 20% and prior import permits are no longer required on items in this category. Metalworking euipment is classified under headings 8202 to 8204 and 8207 to 8209; machine tools under numbers 8456 to 8463 and 8466; and ovens and furnaces under 8514 and 8515.

Imports of machine tools and metalworking equipment are subject to a 0% to 20% ad valorem duty assessed on the F.O.B. invoice value. In addition, a 0.8% customs processing fee is assessed on the invoice value. A 15% value added tax is then assessed on the cumulative value of invoice plus the above taxes.

There are no official metric requirements applicable to imports into Mexico, However, since the metric system of units is by law the official standard of weights and measures in Mexico, importers will usually require metric labeling for packaged goods, although the English system is also used. Dual labeling is acceptable. Imported products should be labeled in Spanish containing the following information: name of the product, trade name and address of the manufacturer, net contents, serial number of equipment, date of manufacture, electrical specifications, precautionary information on dangerous products, instructions for use, handling and/or product conservation and mandatory standards. Mexico adheres to the International System of Units (SI). Electrical standards are the same as in the U.S. Electric power is 60 cycles with normal voltage being 110, 220 and 400. Three phase and single phase 230 volt current is also available.

Prepared by:
Caroline Verut
for the Canadian Embassy
Mexico City
June 1990

mo dies to explicationed and open units are displayed. This special massing in the traveless of displaying Canadian machinery to establish a routined in the traveless of displaying Canadian machinery to establish a series of the contraveless of t

As a result of Mexico's expession to CATT, the Mexicon Government has gradually obans of the economy to international suppliers, import duties have been towered from a meadourn 100% in 1683, to 20% sence December, 1986. The others import once system has been totally eliminated and aregon permits are required on only 325 of the total 11,950 items in the Mexicon Tariff Act, nong of which correspond to this industry. Mexico adopted the reamonized Systems of Tariff Nomendature on July 1, 1985.

The import conditions for reachine tools have improved significantly as a result of Mexico's commercial liberalization policies. Maximum duty rates have been requised to 20% and principal permits are no longer required on Items in this category. Matalworking eulopean is classified under headings 6202 to 8204 and 8207 to 8209; machine tools under numbers state to gates and each and sunder state overs and furnaces under 8514 and 9663.

Impacts of reaching tools and metal-vorting equipment are subject to a CRI to 20% advanced by assessed on the E.O.B. invoice value. In addition, a 0.8% customs processing fee is easiered on the invoice value. A 15% value added tax is then assessed on the cumulative value of invoice after the above taxes.

There are no official metho requirements applicable to imports and messures in Maylou tha metho dystem of units is by law the chickel eranged of weights and messures in Maylou in poners will usually require metho labeling to policaged goods although the Brokel in poners will usually require metho labeling to acceptable, imponed product should be labeled in Specific method of the manufacture, restrictions and normalism of the manufacture, restriction as dangerous products, instructions for use appointed or objects of manufactures for use appointed or objects of the manufactures of the dangerous products of the U.S. Electrical standards are the same as in the U.S. Electrical powers in the U.S. Electrical powers in the U.S. Electrical standards are the same as in the U.S. Electrical powers of the objects of the power of the content is also existence of the content of the power of the content is also every the content of the c

Precising Vent Caroling Vent for the Canacian Embass Maxico City Maxico City

WHEN SELLING TO THE MEXICAN GOVERNMENT AND ITS AGENCIES, IT IS REQUIRED TO HAVE REGISTRY NUMBER AS FOREIGN SUPPLIER. FOLLOWING IS RELATED INFORMATION.

REGISTRATION WITH SECRETARIA DE PROGRMACION Y PRESUPUESTO

(SPP)

Following is a summary of Registration Procedures for Canadian Companies wishing to sell to the Mexican Government and its decentralized agencies.

Note: Registration procedures now cannot be done by the foreign (Canadian) supplier, and <u>must be done</u> by the company's official local agent/representative in Mexico.

To obtain registry, the following documents should be submitted to the Registro de Proveedores Office of the Secretaría de Progrmación y Presupuesto (SPP) (Ministry of Planning and Budgeting) located at the following address:

Registro de Contratistas y Proveedores de la Administración Pública Federal S.P.P. Av. San Antonio Abad No. 124 - Piso 1 Col. Tránsito 06380 México, D.F.

- a) Applications for registration of foreign supplier forms SPP in original and 3 copies, all signed separately.
- b) A copy of the company's balance sheet and profit and loss stateent with data not older than two months with respect to the date of application entry into the Foreign suppliers registry, also translated into Spanish and legalized by the Mexican Consulate.
- c) Copy of power of company's legal representatives in Canada notarized, and certified by Mexican Consul (documents mentioning full name of person or persons, legally authorized to sign documents on behalf of company showing his (their) signature.
- d) Copy of agency/representative contract in Mexico notarized and then certified by Mexican Consul.
- e) Copy of a document that proves and guarantees legal existence of company in Canada.

 A certificate of incorporation from a Canadian -

LI TI DESTRUCTOR STOLER STRUCTURE STRUCTURE MET ST. PALATE TON.

SERVICE DE LE SERVICE DE SERVICE D

A SECTION A

companies wishing to well to the maxion Covernment and its

Hote: Peqististion procedures now carnot be done by the foreign (Canadian) supplier, and must be done by the company's citicial

to cetain registry, the following documents should be substited to

Requestro de Contratistas por coverdores de la Administración municos Pederal S.P.P.
Av. San Antonio Abad Ho. 124 - Piso 1 Col. Praesito

- al Applier terms are registration of foreign and a copies, surplier terms are in original and a copies, all signed acparatory.
- and lose stateest with data not older than two months with transpart to the date of application control with transpart to the date of application entry into the foreign suppliers registry, also translated into spanish and legalized by the mexican consulates
- Capy of power of company's legal representatives in Canada notarized, and certified by Mexican Consultationing sull mame of person as persons legally sutherized to sign documents on behalf of company showing his their signature
 - Copy of agency/representative contract in Maxico
- e) Copy of a document that proves and quarantaes legal existence of company in Canada.

 A cortificate of incorporation from a december

Chamber of Commerce or Industry Chamber. This letter must be presented in its original form and must state that interested company has been legally incorporated in accordance to the laws of the country and must include the date of incorporation. The letter cannot be more than six months old from the date it was issued. In addition it must be translated into Spanish and legalized by the Mexican Consulate.

- f) Limited power to local agent to act on behalf of foreign firm on disputes and collection matters.
- g) A photocopy of sample past invoices for each product to be supplied duly translated and legalized by the Mexican Consulate with the date and the names of the buyer and the seller underlined and highlighted.
- Once application forms and supporting documents are approved, registration number is issued in two to four weeks time. To claim registration number, foreign firm's representative will have to present original and copy of HD-1 form "Declaración General de Pago de Derechos" duly paid.
- As first step, payment of \$366,000 Mexican Pesos (as of April 1990 and rate subject to changes) should be made at any office of the Secretaría de Hacienda y Crédito Público (SHCP) in cash, or with Mex. Peso bank draft in favor of the "TESORERIA DE LA FEDRACION" payable through a Mexican bank located in Mexico City and should be accompanied by four (4) payment forms DH1. Each form should be signed separately. Forms can be obtained at any SHCP's offices.

IMPORTANT

TO AVOID REFUSAL OF APPLICATIONS

- Copies of documents b, c, d, e, f, g, must be translated into Spanish by certified local translator if done in Mexico. However if documents b, c, d, e, f, g and respective translations are done into Spanish in Canada, these do not have to be done by certified translator, as above, but documents and translations must be duly notarized, and then certified by nearest Mexican Consul in your area.
- Original and copies of application forms must be signed separately by company's legal representative.

Chamber of Generics of Industry Chamber This letter suct he presented in its original form and must state them incorporated anapsay has been legally indexposated in accordance to the laws of the courty and cost include the date of incorporation of the letter cannot be more than aix months old from the date is was issued. In addition it must be translated into Spanish and legalised by the most can depaid the design of t

to limited power to local agent to see on beside to

A photocopy of sample past invoices for each product to be supplied duly translated and legalized by and Healdan Consulate with the date and the names of the buyer and the saller underlined and highlighted

Once application torms and supporting documents are approved, registration ababas is issued in two to four weeks time. To claim registration number, foreign firm's representative will have to present original and copy of MD-1 form "Declaration Canarai de Pags de Derechor duly paid.

To cot aim the terms, payment of \$166,000 Mexican Peecs (as of April 1900 and rate subject to changes) should be made at any office of the cot case secretaria de Nacienda y Credito Público (SMCP) in cot, cas secretaria de Nacienda y Credito Público (SMCP) in cot, ci visa Mex. Paso cank draft in lavor of the "Issoural and LA PROBACIONE payable through a Mexican bank located in terms ball. Sech form should be accompanied by four (a) payment forms ball. Sech form should be signed separately forms can se obtained at any SMCP's offices.

RESTROOM

TO STOLD REFURDE OF VERTICALIONS

Copies of documents b. c. d. e. f. o. mpot be translated into Epacial by certified local examplator if tone in Mexico. However if documents b. d. e. f. o and respective translator are thought to done into Spanish in Canada, these do not have to be done by destified translator, as above our documents and erancisted translator, as above our documents and erancisted by nearest Nextons Coned in February and then certified by nearest Nextons Coned in February

or the second second of the legal representative of the le

III Corporate name should appear exactly the same in all documents: (i.e.: spelling, company names which have changed over the years).

Legal representative's signature should be signed separately on following documents:

. DH-1 Payment forms

. Registry application forms (both pages)

- . Power of legal representative of company in Canada.
 - Copy of agency/representative contract in Mexico.
- . Limited power to local agent.

While every effort has been made to provide the above information accurately, the Canadian Embassy cannot assume responsibility for errors, omissions or subsequent changes in procedure which may occur.

Information
updated April/90
Canadian Embassy
Mexico City

documents fired applify dompany name which they change which

Legel representative's signature should be signed separately on following documents:

DH-1 Payment forms
Registry application forms (both pages)
Power of lagal representative of compony Cenada.
Copy of agency/representative contract in
Menico.
Limited power to local means

while every effort has been made to provide the above information accurately, the Canadian Embrasy cannot maxume responsibility for effort, omissions or subsequent changes in procedure which may occur.

Information Updated Aprilyso Capadism Habsasy Novice City

USEFUL COMMERCIAL, INDUSTRIAL AND TRADE ASSOCIATIONS.

CAMARA NACIONAL DE LA INDUSTRIA METALICA DE GUADALAJARA 16 de Septiembre 730-1708/1709 Col. Centro 44100 Guadalajara, Jal. (91-36) 12-2127

CAMARA REGIONAL DE LA INDUSTRIA
DE TRANSFORMACION DEL EDO. JALISCO
Ave. Washington 1920
44100 Guadalajara, Jal.
(91-36)11-7309

CAMARA NACIONAL DE LA INDUSTRIA
DE TRANSFORMACION
Ave. San Antonio 256
Col. Ampliación Nápoles
Del. Benito Juárez
03849 México, D.F.
Tel. 563-34-00
Tlx 1777466

CAMARA DE LA INDUSTRIA DE TRANSFORMACION DE NUEVO LEON Ocampo Pte. 250-4 piso Col. Centro 64000 Monterrey, N.L. (91-83)43-6453

ASOCIACION DE INDUSTRIALES
DEL ESTADO DE MORELOS, A.C. (AIDEDM)
Río Balsas 102
Col. Vista Hermosa
62290 Cuernava, Mor.
(91-731)2-04-33

CAMARA NACIONAL DE LA INDUSTRIA DEL HIERRO Y DEL ACERO Amores 338 Col. del Valle Del. Benito Juárez 03199 México, D.F. 543-44-43 NATIONAL CHAMBER OF THE MEXICAN METALIC INDUSTRY OF GUADALAJARA.

REGIONAL CHAMBER OF THE TRANSFORMATION INDUSTRY IN THE STATE OF JALISCO.

NATIONAL CHAMBER OF THE TRANSFORMATION INDUSTRY.

REGIONAL CHAMBER OF THE TRANSFORMATION INDUSTRY IN THE STATE OF NUEVO LEON

ASSOCIATION OF INDUSTRIALISTS OF THE STATE OF MORELOS.

IRON AND STEEL CHAMBER

UPSTUL COMMERCIAL,

CAMARA MACIONAL DE LA TENUSTRIA METALICA DE GUADALAJARA 16 de Septiembre 730-1784/1789 Col. Centro 44100 Guadalajara, Jal-(81-86) 15-6227

CAMARA REGIGNAL DE LA INDUSTRIA DE TRANSPORMACION DEL EDO. JALISCO Ave. Washington 1920 44100 Gradalajare, Jal. (91-16)11-7109

CAMARA MACTONAL DE LA INDUSTRIA DE TRANSFORMACION AVE. San Antonio 256 Col. Ampliación Napoles Del. Benico Juarez 02849 Mexico, D.F. Tel. 563-36-08

CAMARA DE LA IMPUSTRIA DE TRANSFORMACION DE NUEVO LEON OCAMPO PLE, 180-s piso COL. Centro 85000 Monterrey, N.L.

ASOCIACION DE INDUSTRIALES
DEL ESTADO DE MORRIDS, A.C. (AIDEDM)
RIO Daleas 102
COL. Vista Bermosa
***C190 Cuerdava. Nor.
(*1-731)2-04-33

CAMARA MACTONAL DE LA INDUSTRIA DEL MISERO Y DEL ACERO ABOYES 303 COL. del Valle Del Denito Juares 03199 Moxico, D.F.

HATICHAL CHAMBER OF THE MEXICAN METALLC INDUSERY OF GUADALAGE

BROIDGAL CHAMBER OF THE TRANSFORMATION INDUSTRY IN THE STATE OF JALISCO

NATIONAL CHAMBER OF THE TRANSFORMATION INDUSTRY.

REGIDNAL CHAMBER OF THE TRANSFORMATION INDUSTRY IN THE STATE OF HUBYO LEGAL

> ASSOCIATION OF IMPUSTRIADISTS OF THE STAIL OF MORELOS.

TRUM AND STEEL CHAMSER

ASOCIACION DE INDUSTRIALES
DEL ESTADO DE MEXICO,A.C.
Ave. Parque de Chapultepec 105
Col. del Parque
53390 Naucalpan, Mex.
Tel. 576-21-11
Telex 1772308

ASOCIACION INDUSTRIAL VALLEJO, A.C. 35 No. 865
Col. Industrial Vallejo
Del. Azcapotzalco
02300 México, D.F.
Tel. 567-85-55

INDUSTRIALISTS ASSOCIATION
OF THE STATE OF MEXICO
(Adjoining the Federal
District-Mexico City)

ASSOCIATION OF THE Norte INDUSTRIAL AREA OF VALLEJO (Situated as part of Mexico City proper)

MENT COM ASSOCIATION OF

ASSCIACION DE INDUSTRIALES
DOI ESTADO DE MEXICO, A.C.
Ave. Perque de Chapultepec 105
Col. del Parque
Elso Haucelpen-New.
Pel. 976-81-31

LOCCACTOR INDUSTRIAL VALUESO,A.C. 25 No. 855 201. Yednescrist Valleyo 201. Yednescrist Valleyo 201. Azcapozasico 20120 Hexico, D.K.

THUSTRIALISTS ASSOCIATION OF THE STATE OF MEXICO (ACTOING the Federal District Mexico City)

ASSOCIATION OF THE Hoste INTUSTRIAL AREA OF TABLESO (Situated as past of Mexica City proper)

USEFUL COMMERCIAL, INDUSTRIAL AND TRADE ASSOCIATIONS.

ASOCIACION NACIONAL DE IMPORTADORES MEXICAN IMPORTERS AND Y EXPORTADORES DE LA REP. MEXICANA, EXPORTERS ASSOCIATION A.C. Monterrey 130 Col. Roma Del. Cuauhtémoc 06700 México, D.F. Tel 564-86-18 Tel. 1772443 (AIERME)

ASOCIACION DE INDUSTRIALES DEL ESTADO DE OAXACA, A.C. Ave. Independencia 803-206 Col. Centro 58000 Oaxaca, Oax. (91-951) 6-45-71

ASOCIACION MEXICANA DE DISTRIBUIDORES DE MAQUINARIA, A.C. Tenayuca 107 Col. Vértiz Narvarte Del. Benito Juárez 03600 México, D.F. Tel 575-10-11 Telex 1772913 (AMDMME)

CAMARA NACIONAL DE MANUFACTURAS ELECTRICAS (CANAME) Thiers 84 Esq. Lafayette Col. Anzures Del. Miguel Hidalgo 11590 México, D.F. Tel 250-50-82

CAMARA NACIONAL DE LA INDUSTRIA ELECTRONICA Y DE COMUNICACIONES ELECTRICAS (CANIECE) Guanajuato No. 65 Col. Roma Del. Cuauhtémoc 06700 México, D.F. Tel. 574-74-11 Telex 1773527 (CNIEME)

ASOCIACION DE INDUSTRIALES DEL ESTADO DE VERACRUZ, A.C. Lucio 22-201 Col. Centro 91000 Jalapa, Ver. Tel. (91-281) 7-64-85

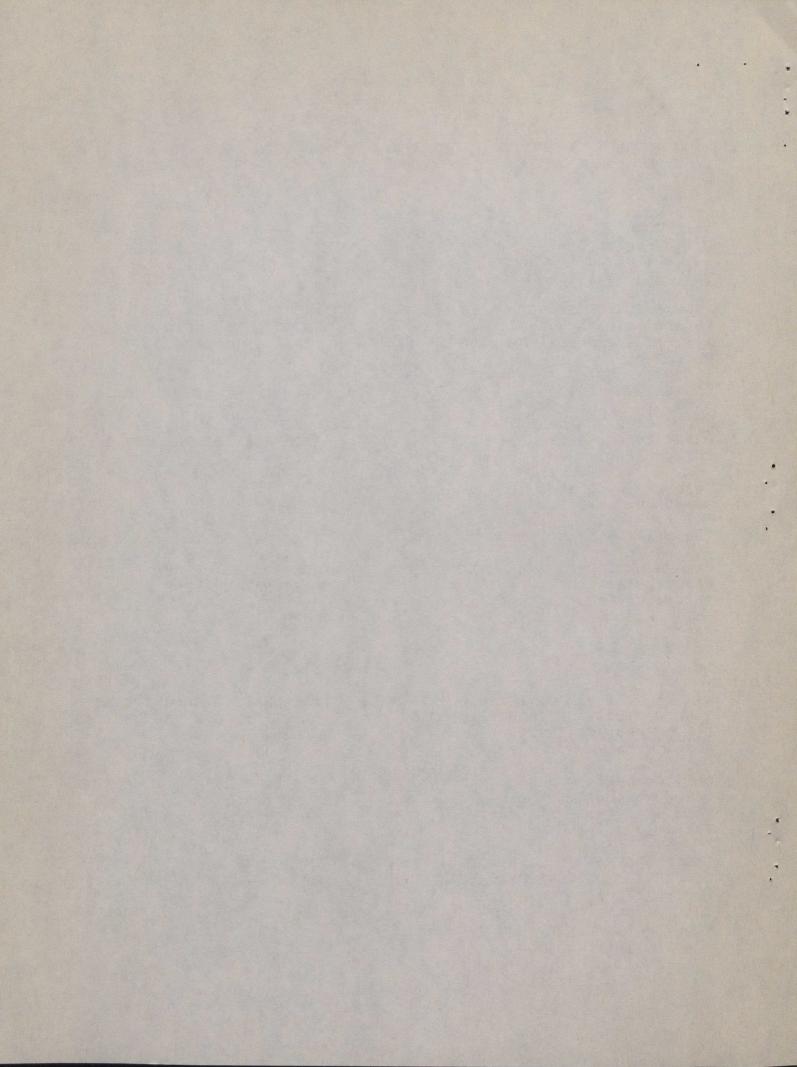
INDUSTRIALISTS ASSOCIACION OF THE STATE OF OAXACA.

MEXICAN ASSOCIATION OF MACHINERY DISTRIBUTORS.

ELECTRICAL MANUFACTURERS NATIONAL CHAMBER

NATIONAL CHAMBER OF THE ELECTRONICS AND ELECTRICAL COMMUNICATIONS.

INDUSTRIALISTS ASSOCIATION OF THE STATE OF VERACRUZ.



ernhard Wolf, Import

trative Manager

rical power tools,

instruments, motor

HERRAMIENTAS ELECTRICAS PORTATILES, S.A.

Tel. 591-0583

Antonio Caso 155

Col. San Rafael

Del. Cunuhtémoc

06470 México, D.F.

Humberto García Pérez, General Manager; Humberto García Ortiz, Administrative Manager; Gabriela Salazar, Sales Manager

Distributors of electric tools.

Established: 1965 Personnel: 40

APPLIED POWER (MEXICO), S.A. DE C.V.

Tel. 3-3700

Blvd. Felipe Angeles 1604 Col. Santa Julia

Fax 3-1196

42080 Pachuca, Hgo.

Apdo. Postal 362

42040 Pachuca, Hgo.

Romualdo Tellería Armendariz, President; C.P. Rolando Cabrera Ortíz, Finance Manager.

Manufacturers of hydraulic tools.

Established: 1965 Personnel: 218

BOKER, S.A. DE C.V.

Tel. 542-4560

Av. 16 de Septiembre No. 58

542-4563

Col Centro

Fax 521-1707

Del Cuauhtémoc

Apda. Postal 148

06000 México, D.F.

Klaus Boker, Director, Pedro R. Boker, Director, Claus

* Schlenker, Sales Manager.

Hand tools, household appliances, cutlery, garden equipment

Established: 1865 Personnel: 56

PROTOMEX, S.A. DE C.V.

Tel. 19-2710 Fax 19-0783

Calz Independencia Sur 1085 Sector Reforma

Apdo. Postal 1-485

44430 Guadalajara, Jal.

Claus Baumeister B., Finance Manager

Manufacturers of hand tools.

Telex: 684000

AMBA, S.A. Tel. 650-2538 650-5881

Avena 315

Col. Granjas México

Del. Iztacalco

08400 México, D.F.

Salomón Siperstein, General Manager

Manufacturers of hand tools.

Established: 1958 Personnel: 15

PRODUCTOS DE ALAMBRE SI-MAR, S.A. Mexicaltzingo 1602, Altos

Tel. 25-3009

Apdo. Postal 39-121

44100 Guadalajara, Jal.

Antonio Marchina D., General Manager

Manufacturers of wire products.

ALTA TECNOLOGIA MEXICO AMERICANA, Tel. 584-4335 S.A. DE C.V.

Guanajuato 224

Fax 535-3166

Tel 588-8055

Fax 578-2038

Tel. 571-3411

Fax 571-1181

Tel 4-5508

Fax 4-5503

Tel. 596-8966

Fax 202-0669

4-5509

Col. Roma

Del. Cuauhtémoc

06700 México, D.F.

Ing. Paul L. Murad, General Director; C.P. Higinio Cruz, Administrative Director; Ing. José Luis Obispo, Sales and

Marketing Manager

Engineering and manufacturing of industrial plating and

processing equipment.

Established: 1984 Personnel: 50 Telex: 1760716

ROBERT BOSCH, S.A. DE C.V.

Dr. Lucio 270

Col Doctores

Del Cuauhtémoc

Apdo. Postal 7-878

06720 México, D.F.

Kurt W. Sch Ürch, General Direct

Manager, Peter Eschenbach, Adn

Distributors of automobile parts, c

automotive workshop equipment, c

chain saws.

Established: 1955 Personnel: 86 T ex: 1772609

CHICAGO PNEUMATIC TOOL

DE MEXICO, S.A.

Blvd. Puerto Aéreo 169

Col. Federal

Del. V. Carranza 15700 México, D.F.

Ing. Jaime G. Cadaval T., General Manager; Ing. Mariano

Serrato R., Sales Manager

Distributors of construction and drilling equipment, air

compressors and pneumatic tools.

Est: 1:d: 1949 Personnel: 11 Telex: 1771270

VALENITE GTE DE MEXICO, S.A. DE C.V.

Avenida Peñuelas 7

Frace. Industrial San Pedrito

76040 Querétaro, Qro.

Apdo. Postal 228

76000 Querétaro, Qro.

Rodney Allen, General Director, Arnaldo Herrera, Finance

Director, Marino Guglielmi, Marketing Manager

Steel tools, tungsten carbide inserts.

Established: 1969 Personnel: 200 Telex: 121637

HYDRIL, S.A. DE C.V.

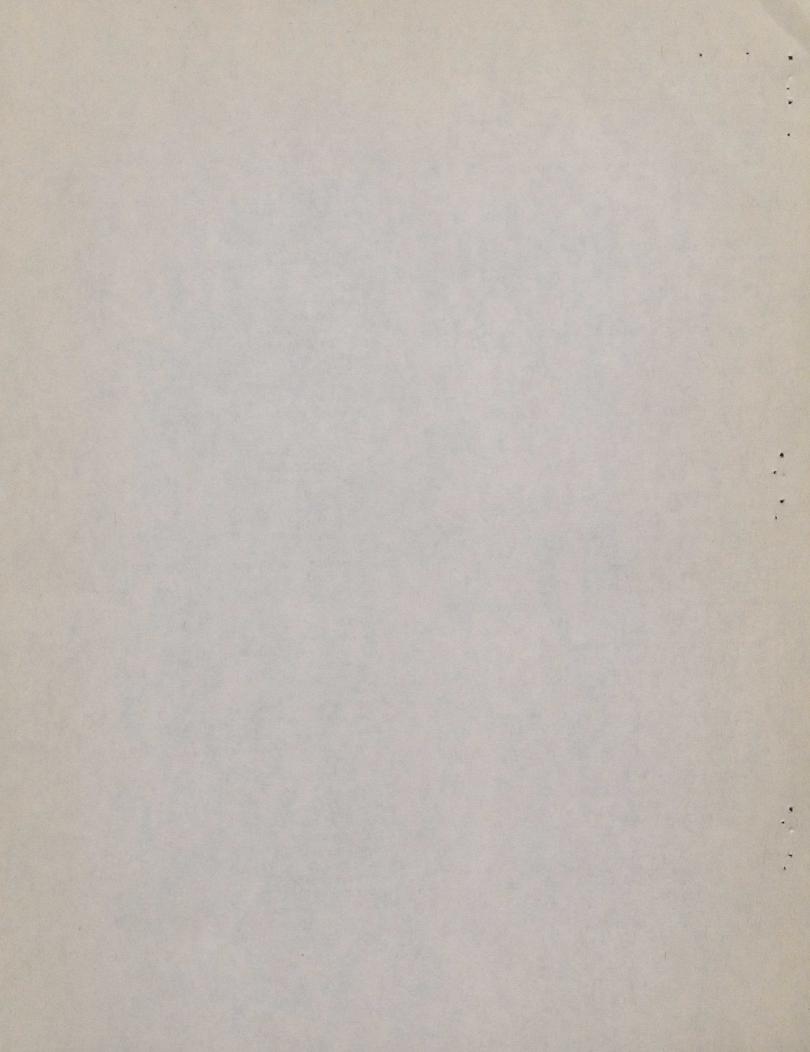
Hamburgo 213, 120. Piso Col. Juárez

Del. Cuauhtémoc 06600 México, D.F.

Ing. Pedro F. Goebel, General Director; Ing. Juan M. Ramos,

Manufacturers of drilling equipment.

Established: 1979 Personnel: 240 Telex: 1763246



FERRETERA ANAHUAC, S.A. DE C.V. Av. Valle de las Alamedas 66-B

Tel. 390-8411

Col San Francisco Chilpan

Fax 390-7539

Apdo. Postal 38 54940 Tultitlán, Méx

Víctor Zundelevich, General Director, Ing. Francisco López Mas, General Manager, Abel Morales, Purchasing Manager. · Carlos Camacho Ahumada, Administrative Manager, Lic. Eduardo Miravete, Commercial Manager Distributors of special steel, soldering irons, cement, brushes, shears, couplings, pipe cutters, grinders, steel shapes, plumbing supplies and valves. Hardware and tools. Established: 1965 Personnel: 365 Telex: 1772549

COMPA López 15, Desp. 307 y 308 Col. Centro Del. Cuauhtémoc

Tel. 521-5410 Fax 511-3965

06050 México, D.F. Apdo. Postal M-10771

06000 México, D.F. Miguel Grübel, Owner

Representatives of foreign enterprises, mainly paper and

Established: 1943 Personnel: 4 Telex: 1777262

R.H. INDUSTRIAL, S.A.

Tel. 53-8040

Tel. 79-1442

Tel. 45-7870

45-7970

Av. de la Juventud 114 Fracc. Industrial Nogalar 66480 San Nicolás de los G, N.L. Ing. Homero Garza Calderón, General Manager Metal machining industry. Established: 1975 Personnel: 400 Telex: 382018

FERRETERIA Y MAQUINADOS, S.A. Av. Ruiz Cortines 314 Oriente Col. Hércules 67120 Guadalupe, N.L. Horacio González, General Director Distributors of hardware, lathe service, special industrial Established: 1974 Personnel: 19

COMERCIAL TROPICAL, S.A. DE C.V. Tel. 576-1144 Jardín 37 53000 Naucalpan, Méx. Charles T. Wilson Jr., President; C.P. Enrique Alvarez,

General Manager; Ing. Gustavo López, Sales Manager Distributors of rubber, chemicals, rubber industry raw materials and machinery.

Established: 1942 Personnel: 40 Telex: 172255

DISTRIBUIDORA DE ABRASIVOS MONTERREY, S.A. DE C.V. 5 de Mayo No. 1435 Poniente 64000 Monterrey, N.L. Jaime R. Cantú Pérez, Manager Distributors of tools and abrasives. Established: 1987 Personnel: 7

FAE PRODUCTOS, S.A. Calle Juárez 228 Col. La Huasteca Apdo. Postal 107 66350 Santa Catarina, N.L. Lic. Federico Elizondo, President Metal-machining industry. Established: 1978 Personnel: 40

Tel. 88-2620 88-1554 Fax 88-1607

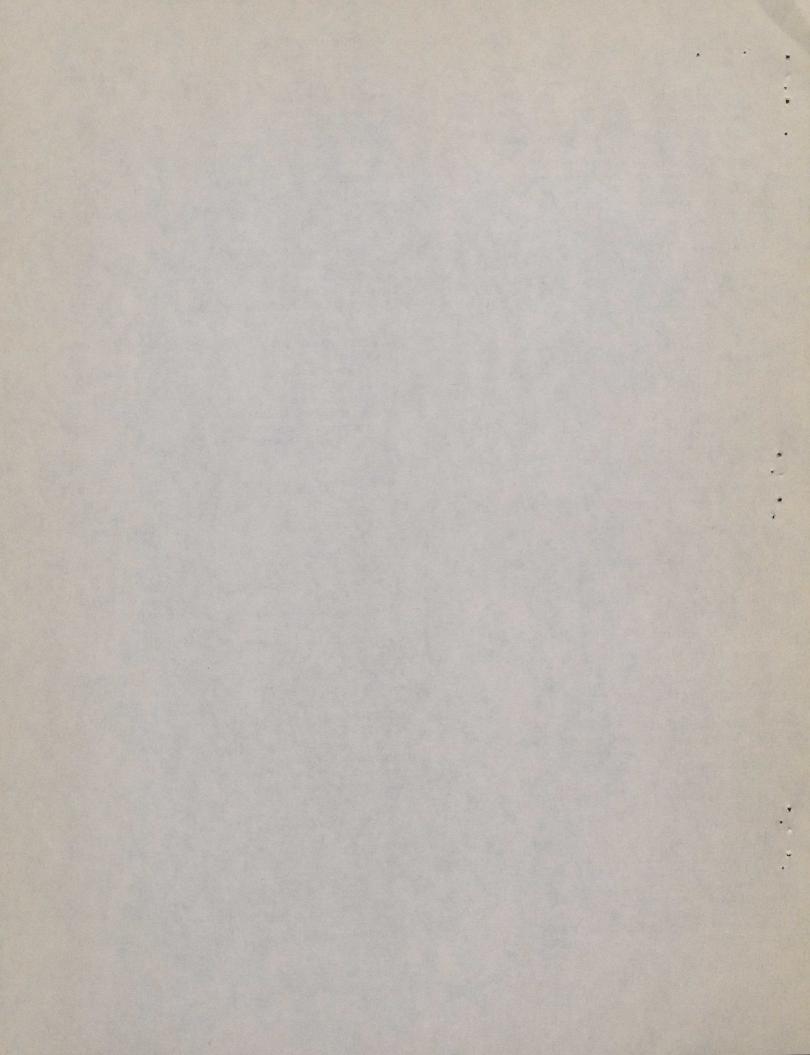
HERRAMIENTAS INTERAMERICANAS, Tel. 392-6566 S.A. DE C.V. Av. Tenayuca Tlalnepantla 23 Fax 392-6832 Apdo. Postal 16315 54150 Tlainepantla, Méx. Timothy Tauer, General Director; Juan I. Romo, Finance & Marketing Director; Javier Aranda, Materials Director Equipment and tools for extracting oil and gas, oil well completion equipment. Established: 1968 Personnel: 142 Telex: 172261

FABRICACION DE MAQUINARIA PESADA. Tel. 1-0104 S.A. DE C.V. Av. Constitución 444 Pte. Fax 1-0160 64000 Monterrey, N.L. Ing. Federico Talancón G., Managing Director; Kristian A. Gregersen, Operations Manager Manufacturers of heavy equipment. Established: 1981 Personnel: 210

HERRAMIENTAS Y TRICONOS, Tel. 250-0170 S.A. DE C.V. Bahía de Montejo 74 255-5656 Col. Verónica Anzures Fax 5-0198 Del. M. Hidalgo 11300 México, D.F. Timothy M. Tauer, General Director; Humberto Villalobos, Manufacturing Director; Juan Ignacio Romo, Finance & Marketing Director Manufacturers of oil well drill bits, rock drilling bits, drilling pipe handling equipment. Established: 1981 Personnel: 117 Telex: 174477

FABRICACIONES Y REPRESENTACIONES Tel. 36-3587 INDUSTRIALES, S.A. 36-3560 Blvd. Díaz Ordaz Km. 339.5 66350 Santa Catarina, N.L. Apdo. Postal 32 Ing. Eduardo Garza T., General Director; Ing. Rodolfo Lankenau, Sales Director Open die forgings and seamless rolled rings. Established: 1971 Personnel: 180

GOMEZ HERMANOS SUCRS., S.A. Matamoros 4 Tel 526-5800 Col Peralvillo Del Cuauhtémoc 06220 México, D.F. Sandalio Miranda Gómez, President; Jesús Miranda Gómez, Vice President; Ramón Miranda Alonso, General Director General hardware. Established: 1912 Personnel: 90



VALVULAS, EQUIPOS Y CONTROLES, S.A.

Tel 566-6900

Tel. 25-6339

26-2190

Tel. 35-5617

Manuel María Contreras 47

Col San Rafael

. Del Cuauhtémoc

Apdo. Postal 42-019

06470 México, D.F.

Ing. Enoc Arozqueta R., President; C.P. María Eugenia Pérez Administrative Manager, Eugenio G. Ochoa B., Sales Manager Distributors of valves, pipes and industrial equipment. Established: 1952 Personnel: 39 Telex: 1774319

RODAJAS KOMETA, S.A. DE C.V.

Av. de los Clen Metros No. 1144

Col. Industrial Vallejo

Del. G.A. Madero

07700 México, D.F.

Felipe Bugarín Armenta, CEO; María E. Rosales M.,

Administrative Manager

Manufacturers and distributors of tools.

Established: 1976 Personnel: 25

SARPE INDUSTRIAL, S.A. DE C.V.

Av. Colón 2608

44950 Guadalajara, Jal.

Ing. Salvador Rosas Pelayo, General Manager
Industrial tools.

BLACK & DECKER, S.A. DE C.V. Av. La Paz 1417 44100 Guadalajara, Jal. Godofredo Olivares A., Division Manager Electric and hand tools.

ROSS, S.A. DE C.V.
Apdo. Postal 9-63
44940 Guadalajara, Jal.
Thomas A. Peden, General Director
Manufacturers of metal products for industry.
Telex: 682043

GRUPO EIK, S.A. DE C.V.

Treviño 409 Poniente, Desp. 408
64000 Monterrey, N.L.
Ing. Víctor M. Navarro; Lic. Mauricio del Valle; Lic. David
G. García
Import/export, representatives.
Established: 1987 Personnel: 5

, GRUPO FISA, S.A. DE C.V.

Av. Vasconcelos 710

Col. del Valle

66220 Garza García, N.L.

Apdo. Postal 2540

64000 Monterrey, N.L.

Ing. Modesto Alanís Von Der Meden, Chairman and CEO; Ing. Fernando Reyes Santos, Human Resources & Organization Vice President; C.P. Germán A. Villarreal Lozano, Planning and Finance Vice President Close tolerance steel strip, metal processing machinery, steel and plastic strapping, international trade. Established: 1965 Personnel: 420 Telex: 382369

INDUSTRIAS UNIDAS, S.A. DE C.V.

171 Oriente No. 398

Col. San Juan de Aragón Ampliación

Del. G.A. Madero

07470 México, D.F.

Ing. Alejo Peralta, President; Ing. Fernando Romero, Sales

Director; Ing. Antonio Pérez Racilla, Purchasing Director

Manufacturers of electric wire and cable, insulators, cable harnesses, aircraft parts, V-belts, zippers, copper and copper alloy products, medical and gas e quipment, foundry and measuring instruments, ball valves.

Established: 1939 Personnel: 7,000 Telex: 1774359

BALSE SUMINISTROS INDUSTRIALES,
S.A. DE C.V.

Av. Alemania 1621

44190 Guadalajara, Jal.

Ing. Pedro Manzano Sevilla, General Manager; Ing. Jorge
Vásquez del Mercado Cortes, Technical Manager
Suppliers of industrial components and machinery.

Established: 1988 Personnel: 7

TECNICOS ARGOSTAL, S.A. DE C.V.

Av. Jalisco 180

Col. Tacubaya

Del. M. Hidalgo

11870 México, D.F.

Apdo. Postal M-2511

06000 México, D.F.

Ing. Carlos García M., General Director; Ulrich Bruenger, General Manager; Saúl Guzmán, Administrative Manager Manufacturers' representatives and distributors of machine tools, inspection and measuring instruments, plastics machinery, oilfield equipment, steel and chemicals.

Established: 1960 Personnel: 110 Telex: 1774208

REPRESENTACIONES INDUSTRIALES
RODRIGUEZ, S.A.
Dr. Ignacio Morones Prieto 3150 Ote.
64800 Monterrey, N.L.
Ing. Isaac F. Rodríguez Cantú, Director; C.P. Valdemar
González Gracia, General Manager; Elías de León Martínez,
Sales Manager
Imports of bearings and industrial equipment.
Established: 1977 Personnel: 40 Telex: 382322

HERRAMIENTAS EXCLUSIVAS
Y MAQUINARIA, S.A. DE C.V.

Mariano Azuela 194

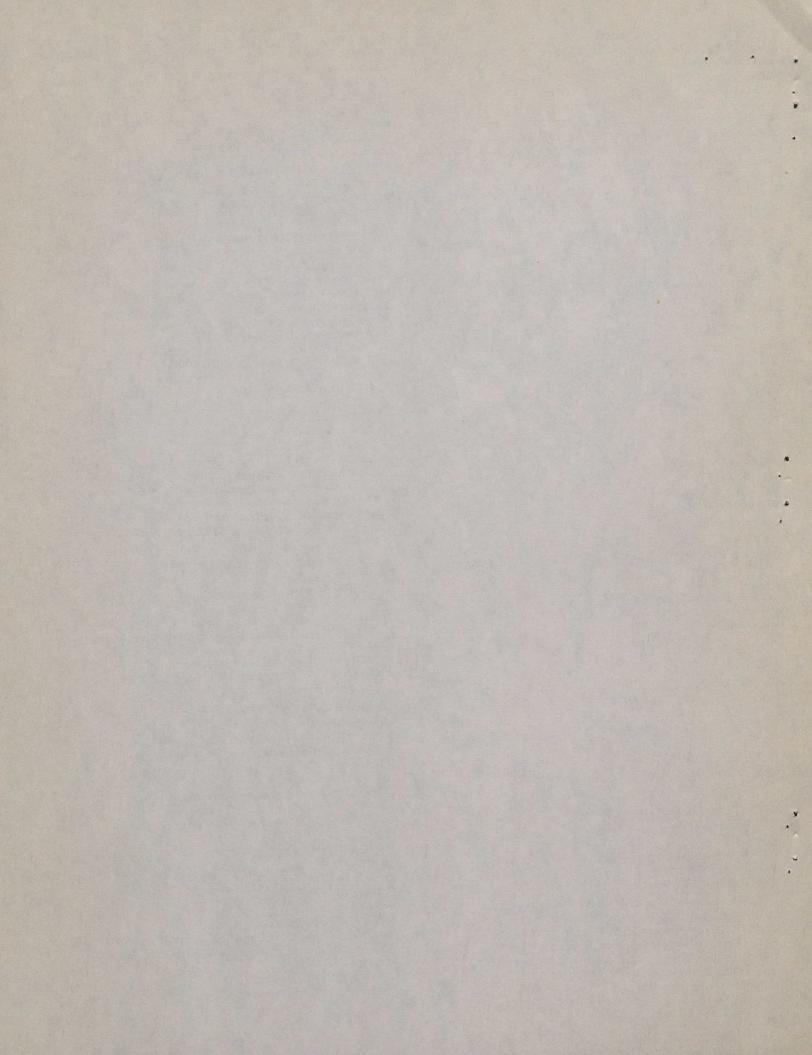
Col. Santa María la Ribera

Del. Cuauhtémoc
06400 México, D.F.

Lic. Graciela Nuño Fernández, General Manager
Tools and machinery.

Established: 1979 Personnel: 14 Telex: 1762151

HERRAMIENTAS ELECTRICAS
PORTATILES, S.A.
Antonio Caso 155
Col. San Rafael
Del. Cuauhtémoc
06470 México, D.F.
Humberto García Pérez, General Manager; Humberto García
Ortiz, Administrative Manager; Gabriela Salazar, Sales
Manager
Distributors of electric tools.
Established: 1965 Personnel: 40



GILSA INDUSTRIA LIGERA, S.A. DE C.V. Jaime Balmes 11, Torre A, 20. Piso Col Chapultepec Morales

Tel 557-2400

Fax 395-7045

Tel 587-0966

Tel. 3-1300

Fax 3-7370

Tel. 567-5700

Del M. Hidalgo 11520 México, D.F.

Ing. Francisco Ortega, Marketing Manager Purcahse and sell of industrial equipment. Established: 1981 Personnel: 52 Telex: 1763394

GIMBEL, S.A.

Calz Coltongo 158

Col Industrial Vallejo

Del Azcapotzalco

02630 México, D.F.

Apdo. Postal 1946

06000 México, D.F.

Eric Teddy Gimbel L, General Manager, Francisco Pereyra, Export Manager, Lic. Alfredo Diaz E., Sales Manager, Alberto C. Mireles, Purchasing Manager, Vicente Gómez Cruz, Public Relations Manager

Metal and woodworking machine tools, accessories for same, hand tools, hydraulic equipment.

Established: 1941 Personnel: 340 Telex: 1777315

HERRAMIENTAS CLEVELAND, S.A. DE C.V.

Prol. Av. Juárez 1602

Col. Santa Julia

42080 Pachuca, Hgo.

Apdo. Postal 314 42000, Pachuca, Ilgo.

' Eberhard Hesse G., General Manager; Víctor Manuel Zerón, Sales Manager; Genaro Olivares M., Purchasing Manager; C.P.

Alejandro Martínez Enríquez, Finance and Administrative

· Manager; Oswaldo Camargo C., Export Manager Manufacturers of cutting tools.

Established: 1969 Personnel: 300 Telex: 175516

HERMECOR, S.A. DE C.V.

Poniente 140 No. 576-G

Col. Industrial Vallejo

Del. Azcapotzalco

02300 México, D.F.

José Lasman, President; Aarón Lasman, General Manager;

Pamela Guss, Treasurer

Manufacturers of standard and special gauges, taps, mills.

Established: 1964 Personnel: 150 Telex: 1762031

HERRAMIENTAS EXCLUSIVAS Y MAQUINARIA, S.A. DE C.V.

Tel. 547-0448

Mariano Azuela 194

Fax 541-6431

Col. Santa María la Ribera

Del. Cuauhtémoc

06400 México, D.F.

Lic. Graciela Nuño Fernández, General Manager

Tools and machinery.

Established: 1979 Personnel: 14 Telex: 1762151

IMPORTADOS M. R. TOOLS, S.A. DE C.V.

Fermín Riestra 1496, Desp. 2

Tel. 12-3802 12-3774

44190 Guadalajara, Jal.

Fax 12-3823

C.P. Fernando Zaragoza Vargas, Fiscal Advisor Distributors industrial tools, hardware.

Established: 1989 Personnel: 3

IMPORTADORA AUSTRIAMEX, S.A. DE C.V.

Libertad 26 Planta Alta

44100 Guadalajara, Jal. Ing. Raúl Rodríguez Müsnter, Assistant General Director Import/export.

Established: 1987 Personnel: 4 Telex: 684079

HERRAMIENTAS DE CORTE, S.A. DE C.V.

Calle 18-E, Esq. 16-N

Ciudad Industrial

20000 Aguascalientes, Ags.

Apdo. Postal 1190

20290 Agunscalientes, Ags.

Ing. Carlos González de Cossío, General Manager; Ing. Herón Rodríguez Giácinti, Sales Manager; C.P. José A. Bautista

Sánchez, Administrative Manager Manufacturers of cutting tools.

Established: 1959 Personnel: 250 Telex: 125636

IMPULSORA MAQUIN, S.A. DE C.V.

Francisco Rojas González 9, 40. Piso

44680 Guadalajara, Jal.

Francisco Ruíz Gutiérrez, General Manager

Manufacturers industrial parts.

Established: 1987 Personnel: 8

Tel. 45-1198

Tel. 35-3974

Tel 550-1229

Fax 548-6401

550-1295

Tel. 557-2400

Fax 395-7045

Paricutín Sur 1336

JOLUCAA S.A.

Col. Nuevo Repueblo 64700 Monterrey, N.L.

José Luis Cárdenas A., General Manager

Distributors of wood, plywood, adhesives and hardware.

Established: 1971 Personnel: 6

J. DEWEY & ASOCIADOS, S.A. DE C.V.

Av. Roble 300, Edif. Torrealta 1508

66260 Garza García, N.L.

Lic. Jorge Dewey, President; Ing. Humberto Castilla, Vice President; Lic. Salvador Zambrano Sada, Vice President

Trading company.

Established: 1987 Personnel: 4

PROMOTORA INTERAMERICANA DE

DESARROLLO, S.A. DE C.V.

Iglesia 2, Torre E, Desp. 305

Col Tizapán San Angel

Del A Obregón

01090 México . D.F.

Ing. José Antonio Pérez Priego, President; Lic. María

Fernanda Garza Merodio, Marketing Director, C.P. Martha

Vargas Arreortua, Accounting

Import/export of hardware.

Established: 1982 Personnel: 10

GILSA INDUSTRIA LIGERA, S.A. DE C.V.

Jaime Balmes 11, Torre A, 20. Piso

Col. Chapultepec Morales

Del M. Hidalgo

11520 México, D.F.

Ing. Francisco Ortega, Marketing Manager

Purcahse and sell of industrial equipment.

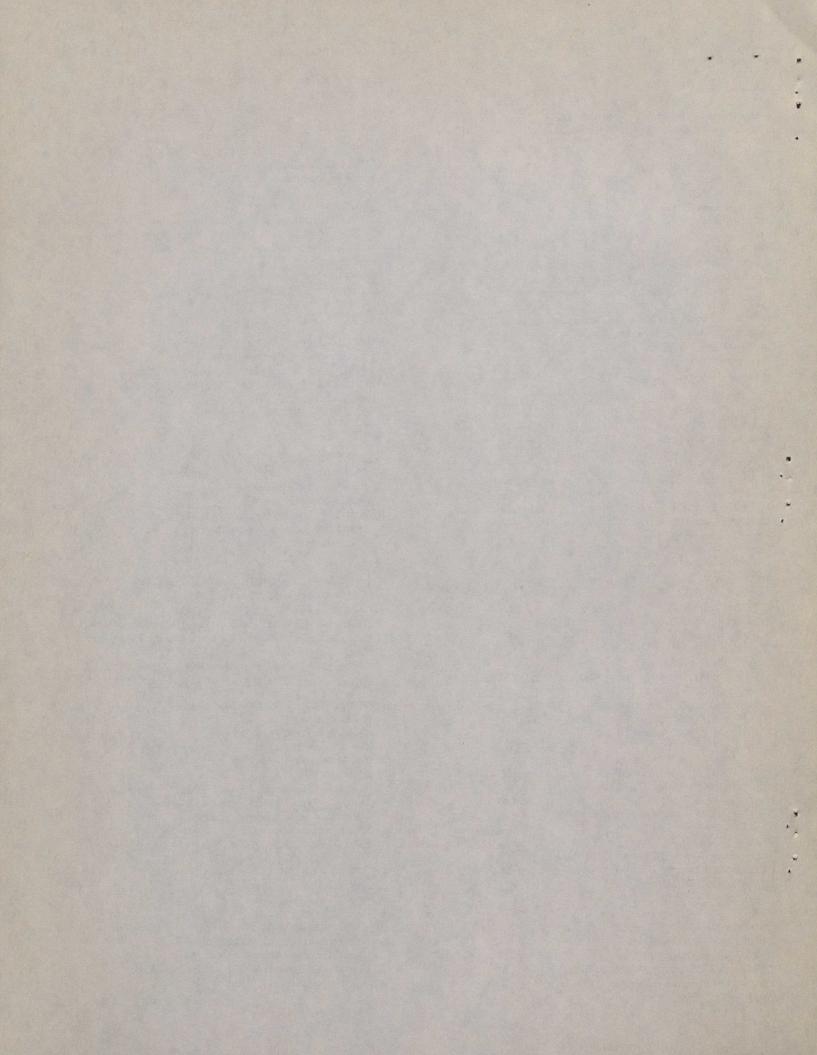
Established: 1981 Personnel: 52 Telex: 1763394

Tel. 13-9071

13-9175

Tel. 5-5646

Tel. 42-2788



HERRAMIENTAS DE CORTE, S.A. DE C.V. Calle 18-E. Esq. 16-N

Ciudad Industrial 20000 Aguascalientes, Ags.

Apdo. Postal 1190

20290 Aguascalientes, Ags.

Ing. Carlos González de Cossfo, General Manager; Ing. Herón Rodríguez Giácinti, Sales Manager; C.P. José A. Bautista Sánchez, Administrative Manager

Manufacturers of cutting tools.

Established: 1959 Personnel: 250 Telex: 125636

ORGANIZACION RAM, S.A. Metalurgia 2770-A

Tel. 35-1413

Tel. 5-5646

Apdo. Postal 92 44490 Tlaquepaque, Jal. Guillermo Pérez Basurto, Director Manufacturers of anchors, drills, fastening systems. Established: 1971 Telex: 682654

GALVANOLYTE, S.A. DE C.V.

Tel 761-5244

Antonio León y Gama 64 y 66 Col Obrera

Del Cuauhtémoc

Fax 761-8961

06800 México, D.F.

Jorge Sierra Calderón, General Manager, Godolfredo Osomio Osornio, Administrative Manager; Javier Calderón Trujillo,

Traffic Manager

Manufacturers of chemicals, equipment, pastes, wheels for

metalfinishing and polishing industry.

Established: 1964 Personnel: 55 Telex: 1762117

ITAL-MEXICANA, S.A. Av. Revolución 793

Tel. 563-5200

Col. Mixconc

Del. B. Juárez

03910 México. D.F.

Francesco Piazzesi, General Manager; Carlos Gavidia, Sales Manager; Mario Piazzesi, Production Manager; Paolo Piazzesi International Trade Director.

Metal-machining industry and concrete, adobe, crusher and ceramic equipment.

Established: 1961 Personnel: 150 Telex: 1777670

PROVEEDORES INDUSTRIALES DE

Tel 587-1948

AUTOPARTES, S.A. DE C.V. Calz Coltongo 155, Local 12 Col Trabajadores del Hierro Del Azcapotzalco

02650 México, D.F.

Ing. Fernando Cantú Ruiz, General Director, Héctor Casados González, Administrative Manager, Jesús Ortiz, Plant Manage Manufacturers of metal products.

Established: 1979 Personnel: 58

LAMINA Y PLACA DE MONTERREY, S.A. Tel. 51-2190 Prol. Félix U. Gómez 4204 Norte

Col. Valle del Nogalar

66480 San Nicolás de los G, N.L.

Apdo. Postal 1184

64000 Monterrey, N.L.

C.P. Julio Villarreal Guajardo, General Manager

Distributors of steel products.

Established: 1971 Personnel: 128

REPRESENTACIONES RUIZ GARCIA,

América 912 Norte

Apdo. Postal 1441 64000 Monterrey, N.L.

Raúl Ruiz García, General Manager

Factory representatives.

Established: 1971 Personnel: 7 Telex: 383025

RECHAZADOS Y TROQUELADOS MONTERREY, S.A. DE C.V.

Tel. 42-0522 72-6888

Tel. 74-7310

Fax 75-7662

Doctor Coss Norte 632 64000 Monterrey, N.L.

Salvador Alanís Canales, General Manager; Rogelio González

Martínez, Sales Manager Metal spinning and stamping.

Established: 1983 Personnel: 18

LAMINADOS METALICOS, S.A. División 21 No. 136

Tel. 73-7670

Tel. 5-7122

Col. Antonio I. Villarreal 64390 Monterrey, N.L.

Gustavo Fernández López, Manager Metal stampings, plastic molding, parts.

Personnel: 3

QUALMET, S.A. DE C.V. Blvd. Isidro López 5178

Apdo. Postal 82 Suc. C

25000 Saltillo, Coah.

José Berlanga de la Peña, General Director; Ing. Aurora Villaseñor Arquellas, Assistant Director; C.P. Ramón Reyes,

Comptroller Foundry of gray iron and green sand. Established: 1979 Personnel: 78

INSTALACIONES DE REFRIGERACION Y

Tel. 558-0207 CONGELACION, S.A.

Oriente 259 No. 108

Col. Agrícola Oriental

Del. Iztacalco

08500 México, D.F.

Jorge Rascón Corrigán, General Manager; Patricia Rascón Corrigán, Administrative Manager

Insulators, electric motors, starters, scales, pumps, boilers, safety and solenoid valves, refrigerating

equipment and saws.

Established: 1955 Personnel: 8 Telex: 1771662

COMERCIAL REXCO, S.A. DE C.V.

Tel. 705-5549

Paseo de la Reforma 107, 3er. Piso Col. Revolución

Fax 566-6361

Tel. 12-0257

Del. Cuauhtémoc 06030 México, D.F.

Lic. Horst Lell von Ghyczy, General Director; Lic. Luis Harvey McKinsack, Director

Trading, trade finance, representations.

Established: 1984 Personnel: 7 Telex: 1771300

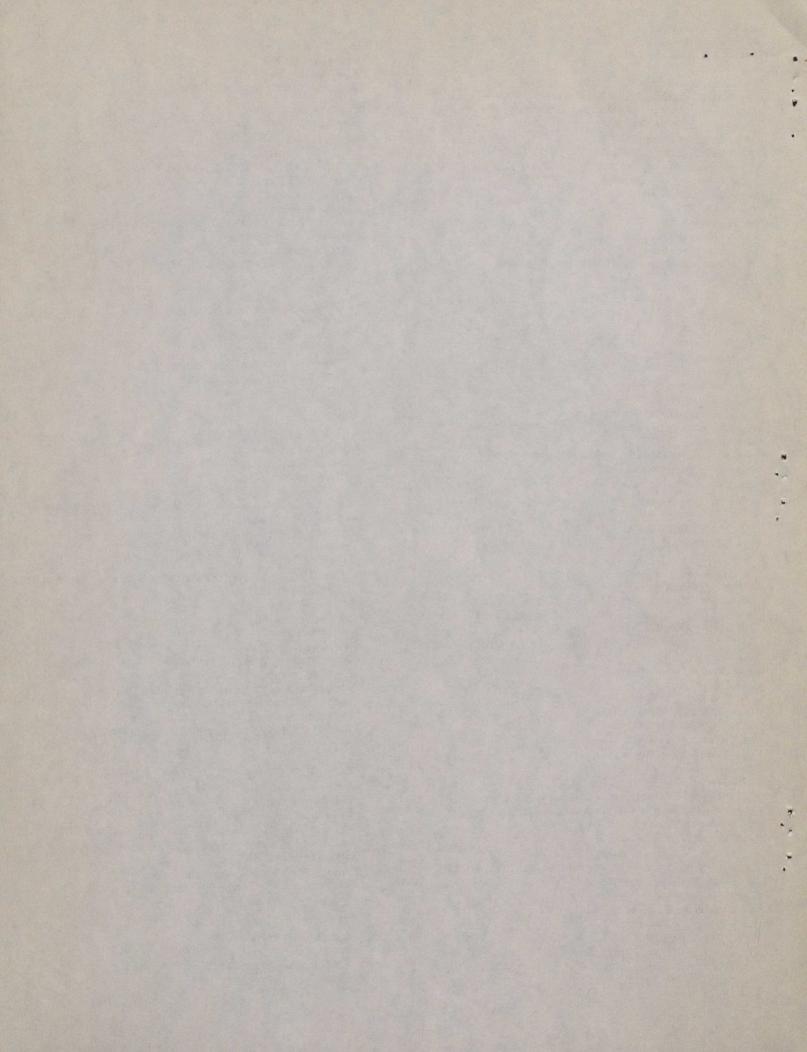
FERRETERIA CALZADA, S.A. DE C.V.

Calz. Lázaro Cárdenas 799

44940 Guadalajara, Jal.

Leopoldo Amutio de Diego, General Director

Distributors of hardware.



TECNOLOGIA DE VIBRACIONES Y
ULTRASONIDO, S.A. DE C.V.
Córdoba 42, 80. Piso, Desp. 804
Col. Roma
Del. Cuauhtémoc
06700 México, D.F.
Ing. Aarón Sáenz, General Manager; William D. Knight,
Instruments Manager
Vibration analyzers for rotary machinery, balancing
machines, portable ultrasonic measuring instruments.

Established: 1949 Personnel: 13 Telex: 1776289

HERRAMIENTAS EXCLUSIVAS
Y MAQUINARIA, S.A. DE C.V.

Mariano Azuela 194

Col. Santa María la Ribera

Del. Cuauhtémoc
06400 México, D.F.

Lic. Graciela Nuño Fernández, General Manager
Tools and machinery.

Established: 1979 Personnel: 14 Telex: 1762151

HERRAMIENTAS ELECTRICAS

PORTATILES, S.A.

Antonio Caso 155

Col. San Rafael

Del. Cuauhtémoc

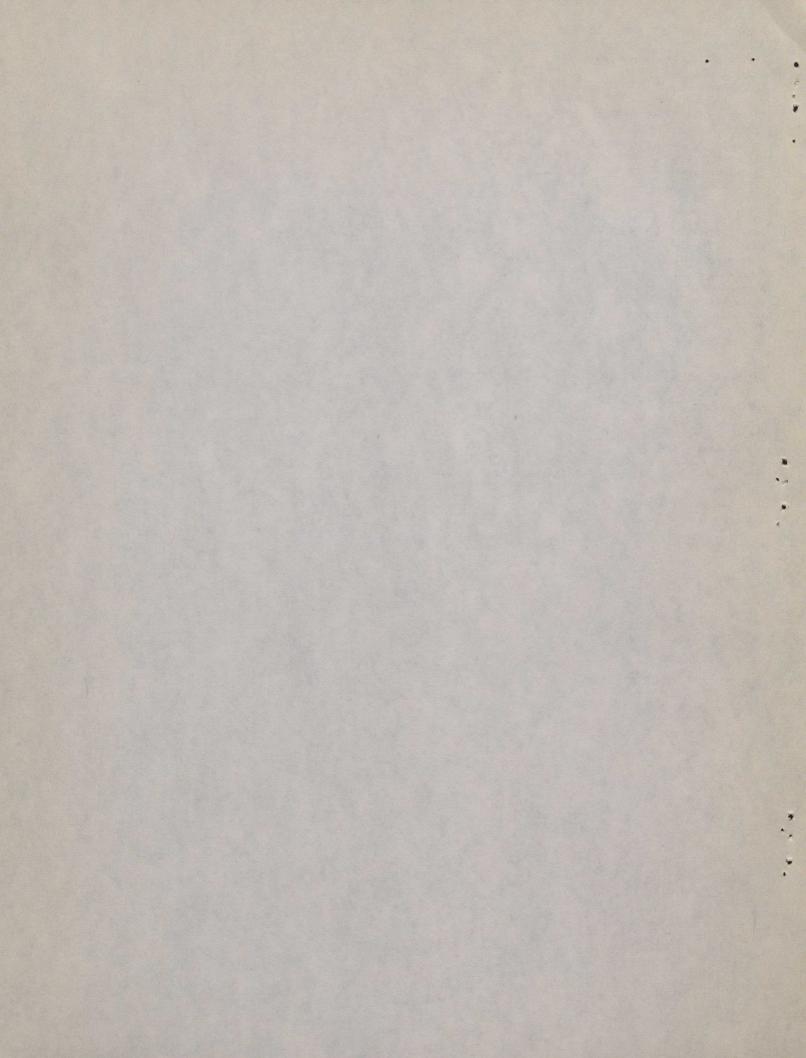
06470 México, D.F.

Humberto García Pérez, General Manager; Humberto García
Ortiz, Administrative Manager; Gabriela Salazar, Sales

Manager

Distributors of electric tools.

Established: 1965 Personnel: 40



POTENTIAL MACHINERY TOOL AGENTS / REPRESENTATIVES

MANUFACTURERA DE ESPECIALIDADES INDUSTRIALES, S.A. DE C.V. Av. Sara No. 4517 Col.Guadalupe Tepeyac 07840 México, D.F. Tels.: 537-0447 / 537-7221 / 537-9497 Fax: 759-0704 Sr. Ricardo González P.

SALES POWER DE MEXICO, S.A. DE C.V. Vía Adolfo López Mateos No. 45 Col. Lomas del Parque 53390 Naucalpan, Edo. de México Tels.: 576-1976 / 576-8689 / 576-6697 Télex: 1763292 SAPOME Fax: 358-5927 Sr. José Beltrán Ordaz

PRECI, S.A. DE C.V.
Ingenieros Militares No. 38
53390 Naucalpan, Edo. de México
Tel.: 557-7822
Télex: 1771648 MPJME
Fax: 395-1185
Ing. Paul Jacquemin/Sr. Andre Jacquemin

FERROSTAAL MEXICANA.
S.A. DE C.V.
Calz. de la Naranja No. 174
Esq. Vía Gustavo Baz y
Blvd. Avila Camacho
53370 Naucalpan, Edo. de México
Tel.: 576-5155
Télex: 01772107 FERRME
Fax: 358-4020
Ing. Norbert Thullen

ASESORAMIENTO TECNICO INDUSTRIAL, S.A. Viveros de la Colina No. 24 54080 Tlalnepantla, Edo. de México Tels.: 397-6858 / 397-4388 Fax: 398-0607 Ing. Mario Luna T.

MAQUINORTE, S.A. DE C.V. Chopo No. 6-bis Apdo. Postal 11 55340 Xalostoc, Edo. de México Tels.: 569-5477 / 569-4942 / 569-0644 Fax: 755-7611 Sr. José Manuel Porrero García

PROMOTORES TECNICOS, S.A. Quintana Roo No. 141-102 Col. Hipódromo 06100 México, D.F. Tels.: 564-0092 / 574-1060 Tèlex: 1773416 PTECME Fax: 584-3479 Sr. Roberto Bortoni

EMAC - EQUIPOS Y MAQUINAS COMPUTARIZADAS, S.A. DE C.V. Av. Prado Norte No. 547 Col. Lomas de Chapultepec Apdo. Postal 10-705 11000 México, D.F. Tels.: 520-5667 / 202-3366 / 202-3306 Fax: 202-4220 Ing. Gilson Denis Wieck TECNICOS ARGOSTAL, S.A. DE C.V. Av. Jalisco No. 180 11870 México, D.F. Tels.: 515-8580 al 90 Télex: 1774208 Fax: 515-3424 Sr. Ulrich Bruenger

SAMAT, S.A.
Torres Adalid No. 707-705
Col. Del Valle
03100 México, D.F.
Tels.: 536-7148 / 543-5378
Télex: 1771912 SAMTME
Fax: 543-1355
Ing. Raúl R. Sabido T.

SELECTROMEX, S.A. DE C.V. Manchester No. 8 Desp. 202
Esq. Paseo de la Reforma
Col. Juárez
06600 México, D.F.
Tel.: 514-4777
Fax: 525-0161
Lic. Nelson O. Cubiascañas Baños

RECOMIN, S.A. DE C.V. Circuíto Médicos No. 29-202 Ciudad Satélite 53100 Naucalpan, Edo. de México Tel.: 572-9044 / 393-5859 Télex: 1763630 RECOME Fax: 393-2083 Srita. Magdalena Espinosa

ENLACES INDUSTRIALES MEXICANOS, S.A. DE C.V. Ometusco No. 67 Col. Condesa 06100 México, D.F. Tel.: 272-4122 Télex: 1764491 BOMBME Fax: 516-6305 Sr. Rodrigo Baptista B.

CNC DE MEXICO, S.A.
Av. Río Churubusco No. 886
09410 México, D.F.
Tels.: 581-3866 / 581-8603 / 670-0091
Fax: 581-9306
Ing. Juan Manuel Kiewek

CELSO ARRIETA MUCIÑO Cerrada Salto Chico No. 9 Col. Tlaltenango 62170 Cuernavaca, Morelos Tel.: (73) 13-5099

PROINMAR INDUSTRIAL, S.A. DE C.V. Av. Venustiano Carranza No. 1060-401 78250 San Luis Potosí, S.L.P. Tel.: (481) 7-7572 Télex: 13870 CNCIME Fax: (481) 7-7997 Ing. Martin Marquez Z.

ABASTECIMIENTOS TECNICOS

VASCONCELOS 200 PTE. DESP. 404
COL. DEL VALLE
66200 GARZA GARCIA, N.L.
TEL:(9183) 38-6990/38-6323
FAX:(9183) 38-6427

MOTORIZACION Y DISEÑO DE CONTROLES, S.A. DE C.V. Homero No. 229 - 20. Piso Col. Chapultepec Morales 11520 México, D.F. Tels.: 254-8402 / 254-8404 / 531-9912 Fax: 254-8559 Ing. Thomas T. Patton Sr. Michael J. O'Leary

MAPREMEX, S.A. DE C.V.

CONVENTO DE TEPOTZOTLAN No. 11 COL. JARDINES DE SANTA MONICA 54050 TLALNEPANTLA, EDO. DE MEX. TEL: 398-4410 / 361-2623 FAX: 398-6788 CONTACTO: SR. PETER FRANK

PROVEEDORA METAL MECANICA, S.A. DE C.V.

VIA DR. GUSTAVO BAZ NO. 281-B COL. SAN NICOLAS 54030 TLANEPANTLA EDO. DE MEX. TEL: 565-94-00 FAX: 390-00-29 CONTACTO: SR. EDUARDO DAVILA GTE. DE VENTAS

ANDEX, S.A. DE C.V.

AV. RIO CONSULADO No. 517
COL. ATLAMPA
06450 MEXICO, D.F.
TEL: 541-3150 / 54
FAX: 541-4193
TELEX: 1772580
CONTACTO: ING. JORGE BELLINI
PRECI, S.A. DE C.V.

INGENIEROS MILITARES No. 38
COL. LOMAS DE SOTELO
53390 NAUCALPAN, EDO. DE MEX.
TEL: 557-7443
FAX: 3951185
TELEX: 1771648 MPJME

CONTACTO: ING. PAUL JACQUEMIN

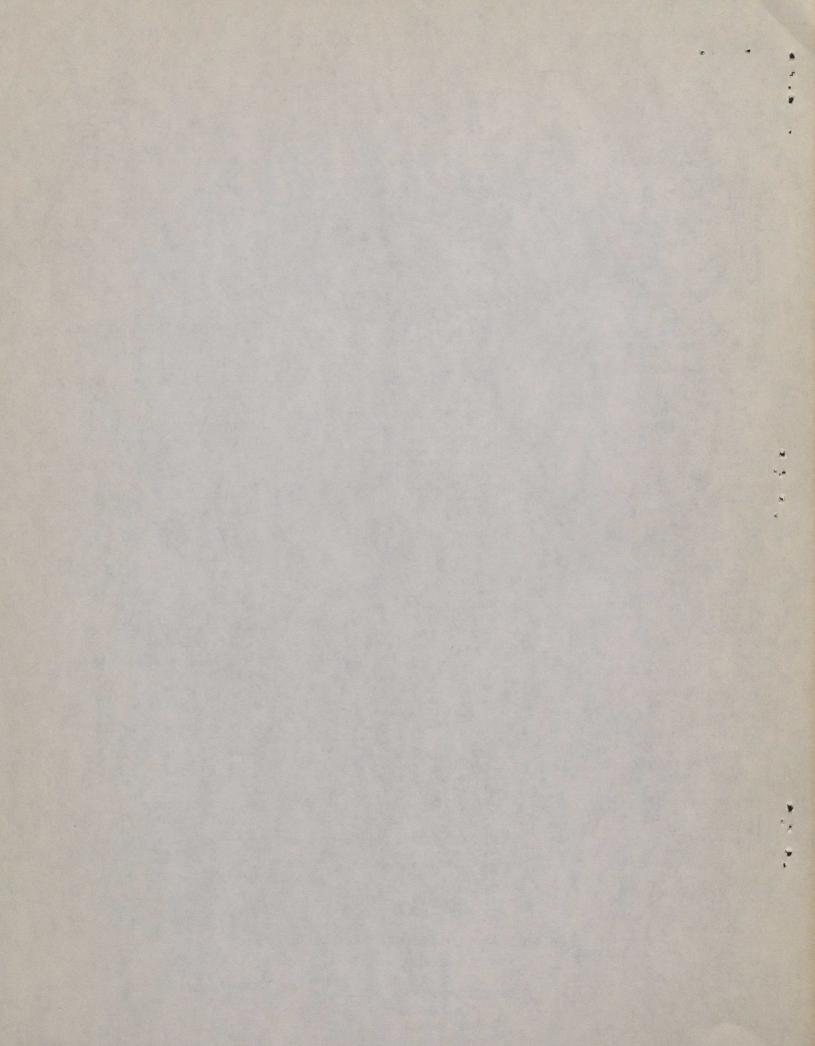
SAMAT, S.A.

TORRES ADALID No. 707-705
COL. DEL VALLE
03100 MEXICO, D.F.
TEL: 5435378 / 5367148
FAX: 5431355
CONTACTO: ING. RAUL R. SABIDO T.

EQUIPAMIENTO INDUSTRIAL, S.A.

JUAN PABLOS No. 519 NTE. INT. 1 TORREON, COAH. MEXICO TELS: 13-5390 / 13-1350 FAX: 13-0395 TELEX: 32412 CIATME

CONTACTO: MARIANO CUERDA RODRIGALVAREZ



AUTOMAT, S.A. DE C.V.

- TEZOZOMOC-No. 246
- COL SAN PEDRO XALPA
- 02729 MEXICO, D.F.
- * TEL: 561-7566 / 352-1189 / 561-7477 / 352-1088
 - FAX: 561-7477
- TELEX: 01774336 CGEMEX

CONTACTO: ING. NESTOR CALVET CASANOVAS

LEON WEILL, S.A.

AV. COYOACAN No. 1153

COL DEL VALLE

03210 MEXICO, D.F.

TEL: 559-43-11 EXT. 2410

FAX: 575-41-16

TELEX: 1760041 LWSAME / 1776374 LWSAME

CONTACTO: SR. MARCELO REYNAUD

MAQUINARIA AEROPUERTO, S.A. DE C.V.

25 NORTE No. 210

COL. MOCTEZUMA

15500 MEXICO, D.F.

TEL: 571-8940 / 784-4570

FAX: 784-8486

CONTACTO: SR. MIGUEL ANGEL VAZQUEZ GARCIA

EQUIPO Y MAQUINAS COMPUTARIZADAS, S.A. DE C.V.

... 'AV. PRADO NORTE No. 547

COL. LOMAS DE CHAPULTEPEC

11000 MEXICO, D.F.

TEL: 202-33-66 / 202-33-06 / 202-41-60

FAX: 202-4220

CONTACTO: ING. GILSON DENIS

HERRAMIENTAS EXCLUSIVAS Y MAQUINARIA, S.A. DE C.V.

MARIANO AZUELA No. 194

COL SANTA MARIA LA RIBERA

06400 MEXICO, D.F.

TEL: 547-4923 / 547-4963 / 541-0448

FAX: 541-6431

TELEX: 1762151

CONTACTO: ING. FRANCISCO RUIZ NUÑO

HERRAMIENTAS DE CORTE Y SUJECCION, S.A.

JUAN PABLOS No. 519 NTE.

TORREON, COAH. MEXICO

TELS: 135390 / 131350

FAX: 130395

TELEX: 32412 CIATME

CONTACTO: MARIANO CUERDA RODRIGALVAREZ

MACAEQUIPO, S.A. DE C.V.

GRAL SANTA ANA No. 264A

COL. MARTIN CARRERA

07070 MEXICO, D.F.

TEL: 757-79-57

FAX: 767-O6-69

TELEX: 1762721 MACAME

CONTACTO: SR. ARTURO ROCHA FLORES

MAQUINAS ACCESORIOS Y HERRAMIENTAS EN GENERAL, S. DE R.L.

CACAMATZIN No. 64

COL. ANAHUAC

11320 MEXICO. D.F.

TEL: 396-2242 / 396-1843 FAX: 396-1843

CONTACTO: SR. RAMON HERRERA GUADARRAMA

MANUFACTURERA DE ESPECIALIDADES INDUSTRIALES, S.A. DE C.V.

AV. SARA No. 4517

COL. GUADALUPE TEPEYAC

07800 MEXICO, D.F.

TEL: 517-8979

FAX: 759-0704

CONTACTO: RICARDO GONZALEZ P.

MAQUINARIA INDUSTRIAL MATA, S.A. DE C.V.

IBIZA No. 20-A

COL. POTRERO DEL LLANO

02680 MEXICO, D.F.

TEL: 355-4499 / 556-4487

FAX: 556-5327

CONTACTO: ING. JESUS MATA MORENO

MAQUINARIA INDUSTRIAL SATURNO, S.A. DE C.V.

LATONEROS No. 82

COL. TRABAJADORES DEL HIERRO

02650 MEXICO, D.F.

TEL: 587-5988

FAX: 567-5340 *

CONTACTO: SR. ANTONIO CUEVAS MEDELLIN

MAQUINARIA Y ACCESORIOS, S.A. DE C.V.

CINCINNATI No. 81 40, PISO

COL. NOCHE BUENA

03720 MEXICO, D.F.

TEL: 563-8188

FAX: 611-0003

CONTACTO: SR. ERICH LINDER STRAUS

PROMOTORES TECNICOS, S.A.

QUINTANA ROO No. 141-102

COL HIPODROMO CONDESA

06100 MEXICO, D.F.

TEL: 564-0092/574-1060

FAX: 584-3479

TELEX: 1773416 PTECME

CONTACTO: ING. ROBERTO BORTONI

ELECTRONICA Y MECANICA DE MEXICO, S.A. DE C.V.

AV. VIVEROS DE LA COLINA No. 3

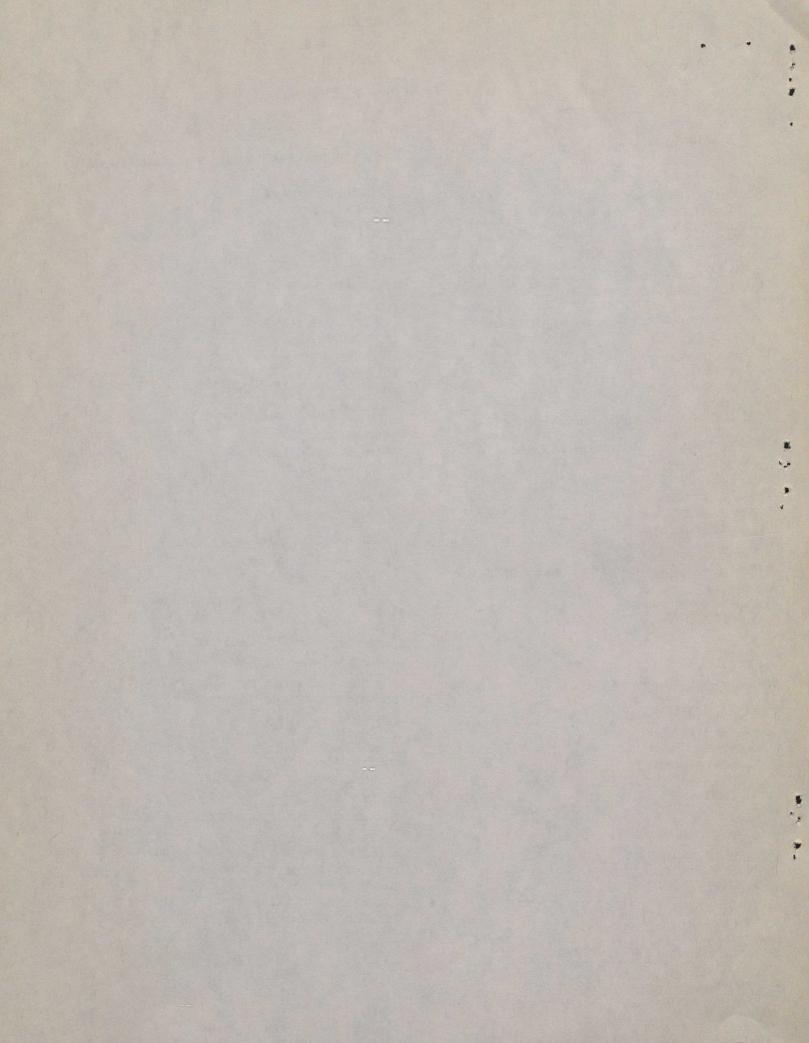
FRACC. PLAZAS DE LA COLINA

54080 TLALNEPANTLA, EDO. DE MEX.

TEL: 397-2470

FAX: 361-0365

CONTACTO: ING. SALVADOR BAÑOS ALVAREZ



SIMERIC, S.A. DE C.V.

DIAGONAL 20 DE NOVIEMBRE No. 362 COL OBRERA 06800 MEXICO, D.F. TEL: 588-8811 FAX: 761-9637

CONTACTO: C.P. FELIPE BARRAGAN ROMERO

VALBRO INDUSTRIAL, S.A. DE C.V.

AV. CIRCUNVALACION AGUSTIN YAÑEZ No. 2360 M GUADALAJARA, JAL. TEL: (9136) 30-08-39/52-22-52 TEL: (9136) 52-16-98 CONTACTO: SR. JAIME A. GUERRA CHAVEZ

PRECISION INSTRUMENTAL, S.A. DE C.V.

AV. GONZALITOS No. 563 NTE. MONTERREY, N.L. 64020 MEXICO TEL: 48-13-78 FAX: 48-96-05

CONTACTO: ING. CARLOS M. ARENAS SANCHEZ

CASARIN, S.A. DE C.V.

SAN ESTEBAN PTE. No. 3 COL. LAZARO CARDENAS 53560 NAUCALPAN, EDO. DE MEX. TEL: 358-0480 FAX: 358-0604 CONTACTO: ING. ARTURO CASARIN MORFIN

GUSS & ROCH, S.A. DE C.V.

SALOMON No. 336 COL. LIBERTAD 02050 MEXICO, D.F. TEL: 352-3790 / 352-2967 FAX. 561-5943 CONTACTO: ING. AGUSTIN GUTIERREZ RAMOS

FLENDER DE MEXICO, S.A. DE C.V.

LAGO ONEGA No. 424 COL GRANADA 11520 MEXICO, D.F. TEL: 255-59-34 / 255-59-94 FAX: 531-6939 **TELEX: 1763023 FLENME**

CONTACIO: SR. HORACIO ALVAREZ

IMPORTACIONES MASE, S.A. DE C.V.

AV. 535 No. 168 A COL. SAN JUAN DE ARAGON 07920 MEXICO, D.F. TEL: 551-1704 / 751-6066 FAX: 751-6672 CONTACTO: SR. SERGIO DEL VALLE TORRIJOS

DIFE, S.A. DE C.V.

MANUEL DOBLADO No. 205-A COL. CENTRO INDUSTRIAL 38000 CELAYA, GTO. TEL: (461) 39493 FAX: (461) 29863 CONTACTO: LIC. GUILLERMO GONZALEZ BENASSINI 3 5036 20005200 2

