

GENERAL AGREEMENT ON TARIFFS AND TRADE

RESTRICTED

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Multilateral Trade Negotiations

Group "Sector Approach"

AVAILABILITY OF STATISTICS FOR SECTORAL STUDIES

Note by the Secretariat

1. A proposal calling for studies of sectors covering electrical machinery, electronics and chemicals was put forward at the last meeting of the Group on 1-3 July 1975. The Group agreed to revert to the issue at its next meeting in which it wished to examine, in particular, the existing statistical documentation on production and trade in the sectors. The present note reviews the statistical information currently collected and published by national authorities, the United Nations and the OECD.
2. The availability of statistics required for sectoral studies was described in broad terms in the secretariat note of 3 February 1975 (MTN/3C/1). A detailed survey of the data available with respect to industrial production in the countries participating in the Tariff Study, based on replies to a questionnaire, was published in 1972 in connexion with the Feasibility Study (Spec(72)32 and Add.1). Finally, the problems involved in the compilation of time series of production and consumption statistics, concorded to the tariff and trade data, were illustrated in document (Spec(72)130) by collating production and apparent consumption statistics for a number of SITC sub-groups selected from different sectors of industrial activity and covering a wide range of industrial products including chemicals, electrical machinery and electronics.

3. The following general conclusions were reached in these papers with respect to developed countries:

- (i) Tariff measures can, in general, be related to trade flows for all items of national customs tariffs; some non-tariff measures can also be so correlated; a large proportion of those non-tariff barriers which have been recorded by the secretariat are of general application and cannot be directly related to particular products or sectors (L/3496, para.12), but have to be cited for the sector as a whole.
- (ii) Detailed production data can only be obtained for selected products which may be representative for some - but not for all - industry sectors, since production statistics are not yet compiled in the same detail as the customs and foreign trade data. In countries collecting detailed output

statistics, certain information cannot be disclosed because of secrecy provisions protecting such information in cases where a limited number of enterprises are involved in the production process or are not fully reported when production is dispersed among small establishments exempt from statistical reporting; reporting of intermediate products is often incomplete if the production process is highly integrated.

- (iii) Aggregated production data (input/output tables, production indices etc.) are compiled in most developed countries, and the tariff-trade information can be aggregated and averaged into corresponding categories. However, these categories are not always internationally comparable and the aggregated trade data and tariff averages appear to be less useful for negotiation purposes.
- (iv) Statistics on gross and net output, investment, stocks and employment by major industry groups (3-digits of the ISIC) are compiled in most countries and published annually by the United Nations (The Growth of World Industry, latest issue relating to 1962-71).

4. Statistics compiled in the other countries participating in the negotiations, particularly in the less-developed countries, are still less comprehensive, and problems of concordance between tariff/trade and production statistics occur even more frequently.

5. Since collection of production and consumption statistics comparable with the tariff and trade data is usually the most important task, and since trade data pose no problems, the examination of the documentation available for sectoral studies of chemicals, electrical engineering and electronic products has been focused on output data. In this field, the OECD and the UN/ECE launched a major effort to compile for their member countries production (or shipment) statistics comparable with trade data.

6. The OECD and the UN/ECE compilations¹ are based on the SITC² and cover 100 individual items representing the most significant products of the engineering industries, including electric and other power-generating machinery (such as steam boilers and nuclear reactors), telecommunication apparatus and electronic components. In the field of chemicals, over thirty basic organic and inorganic

¹The engineering industries in OECD member countries, Vol.I and II, OECD 1973, The Chemical Industries, OECD, latest issue 1972/73. Annual Review of the Chemical Industry, UN/ECE, latest issue 1973/74 (document ECE/CHEM/8). The Growth of World Industry, UN, latest issue 1971.

²Standard International Trade Classification Revised 1, United Nations.

chemicals are covered, and about forty products of the chemical industry, such as fertilizers, plastic materials, synthetic fibres, dyestuffs, soaps and detergents, pharmaceuticals, photo and cinema supplies, etc. So far, the data have been published for the period 1963-69 for engineering products and up to 1973 with respect to chemicals. The series on engineering products are expected to be updated to 1972 before the end of this year. The products covered in these series are listed in the Annex. Countries reporting shipments (or production) of these goods and the units (quantity or value) in which these data are reported by the OECD or the UN/ECE are also shown. The secretariat has also examined national statistical sources, and where additional information on products included in the OECD and UN/ECE surveys is available, it has been included in the Annex.

For the European Communities, publications by the Community's Statistical Office have also been consulted. Since statistics are not always available for the Communities of Nine, data published by the Community (as well as OECD and UN/ECE) with respect to individual member countries are listed at the end of the Annex. For industrial countries as a group, the OECD and the UN/ECE shipment (or production) and foreign trade data represent in general the best of internationally comparable compilations. It could only be improved upon through further and substantial involvement of national authorities.

7. As may be seen from the Annex, even for these industries a number of technical problems arise. For instance:

- (i) All countries do not report every product covered by the enquiry even in cases where production is important; this is particularly frequent for electrical engineering and chemicals in the EEC countries where certain production is concentrated in one or two enterprises. For this reason, comprehensive figures for the EEC combined could not be systematically obtained.
- (ii) For engineering products the data on shipments are in value (current US dollars), quantity statistics being available in a few cases only. For chemicals, on the other hand, quantities are reported most frequently and shipment values are exceptional; the absence of either quantity or value data is a serious limitation since the values available so far are in most cases at pre-1971 exchange rates and cannot reasonably be related to more recent trade values. Also the quantity units in which output is reported are not always satisfactory (the units adopted in production and in trade statistics are not always the same and important production in other countries would also be missed in a number of cases. The quantities reported are not meaningful if the product category is heterogeneous).

- (iii) The production or shipment data are in general less detailed than national customs tariffs.
- (iv) Despite the care taken by the OECD statisticians, the correspondence between the statistics on the principal factors of production (based on ISIC) and on shipment or output (SITC based) is imperfect.

8. As indicated in document Spec(72)32, more detailed and comprehensive production statistics related to foreign trade classification are available for the United States and the Nordic countries. The data for the United States are reported in the 5 to 7-digit detail of the US Standard Industrial Classification and can be correlated with the customs tariff¹, those for the Nordic countries are generally published in the same detail as national customs tariff and for some countries also at the 4 or 5-digit level of the SITC². The series are generally reported in value; quantity data are available for a large number of chemical, but only for a few engineering goods; comparable data are published for recent years, generally up to 1971 or 1972. Comparability of longer-term series would in some cases be affected by changes in classifications. Production statistics for the nine members of the European Community³ are at present available for only a few products of the industries examined. The Community's and national statistical services are working out programmes for collection of comprehensive production (or shipment) statistics by industries; those on electrical engineering, electronics and chemicals could, however, not be expected in the near future.

9. For countries not covered by the OECD surveys, internationally comparable production statistics are available in the United Nations publications.⁴ The data are reported in quantities and cover a less extensive list of commodities,

¹US Commodity Exports and Imports as related to Output, US Department of Commerce, latest issue 1970-71.

²Industrial Statistics, Official Statistics of Finland, latest issue 1972. Industrial Statistics, Central Bureau of Statistics of Norway, latest issue 1972. Manufacturing, Official Statistics of Sweden, latest issue 1973.

³Industrial Statistics, Statistical Office for the European Communities, latest issue third quarter 1974.

⁴The Growth of World Industry, United Nations, latest issues 1964-1973.

the product definitions are based on the ISIC¹ which, in turn, is more or less directly correlated with the SITC. The data on output of the products on the OECD list which are available in the UN publication for other important producing countries has also been summarized in the Annex and the information completed, to the extent possible, by national sources available in the GATT library. The UN series extends over the last decade (to 1973) but data for individual countries are not always available for the whole period.

¹ International Standard Industrial Classification of all Economic Activities, United Nations.

Annex

Statistics on production or shipments available in the
OECD, UN/ECE and UMSO surveys

Symbols employed:

V = Value (generally in US\$)

Q = Quantity

W = Weight (generally metric tons)

CW = Content weight of the element or active agent
(sulphur, nitrogen, phosphoric oxide etc.)

N = Number

L = Length

.. = Not available

() = The available data do not strictly comply with the
OECD or UN/ECE definitions.

Marketing and production of abiesconia available in the OECB, UN/ECE and UNFC Bureau

SITC No.	PRODUCT	COUNTRY		Belgium		Denmark		France		Germany, F.R.		Ireland		Italy		Netherlands		United Kingdom	
		Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
CHEMICALS:																			
513.2(3)	Sulphur as such	CW				CW		CW						CW		CW		CW	
ex 513.4(2)	Pyrites and other sulphides	CW				CW		CW						CW		CW		CW	
ex 513.5(3)	Natural phosphate (consumption date)							CW											
	Salt (all kinds)	CW				CW		CW											
513.3(5)	Sulphuric acid	CW				CW		CW						CW		CW		CW	
514.2(8)	Soda ash	..				CW		CW						CW		CW		CW	
515.6(2)	Caustic soda	..				CW		CW						..		..		..
515.7(1)	Chlorine	..				CW		CW						CW		CW		CW	
515.6(1)	Amonia	CW				CW		CW						CW		CW		CW	
515.2(7)	Carbon blacks	(W)				CW		CW						CW		CW		CW	
ex 515.3(5)	Phosphoric acid	CW				CW		CW						CW		CW		CW	
516.9(4)	Calcium carbide	..				CW		CW						CW		CW		CW	
ex 512.1(2)	Ethylen	..																	
ex 512.1(2)	Propylene	..																	
ex 512.1(2)	Butylene	..																	
ex 512.1(2)	Butadiene	..																	
ex 512.1(2)	Acetylene	..																	
ex 512.1(2)	Benzene	..																	
ex 512.1(2)	Toluene	..																	
ex 512.1(2)	Xylenes	..																	
ex 512.1(2)	Maphthalene	..																	
512.4(1)	Methyl alcohol	..																	
ex 512.4(2)	Octyl alcohol	..																	
ex 512.4(2)	Butyl alcohol	..																	
ex 512.4(4)	Ethyl alcohol	..																	
ex 512.4(1)	Formaldehyde	(W)																	
ex 512.4(1)	Acetyldehyde	..																	
ex 512.5(2)	Maleic anhydride	..																	
ex 512.5(2)	Phthalic anhydride	(W)																	
ex 512.3(2)	Ethylene oxide	(W)																	
ex 512.4(7)	Phenol	(W)																	
ex 531.0	Dyestuffs	W	V	(W)		W	V	W	V	..	..	W	V	W	V	(W)	V		
581.1	Condensation products	W	V	..	..	W	V	W	V	..	..	W	V	..	..	(W)	..		
581.2	Polymerization products	W	V	..	..	W	V	W	V	..	..	W	V	..	..	(W)	..		
581.3	Cellulose derivates	W	V	..	..	W	V	W	V	..	..	W	V	..	..	(W)	..		
581.9(1)	Hardened casein	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
ex 581.9(2)	Artificial resins and other plastic materials	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
581.9(9)	Phenolic and cresylic plastics	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
ex 581.1	Amino plastic	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
ex 581.2	Polyvinyl chloride	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
ex 581.2	Polystyrene	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
ex 581.2	Polyolefines	..	..	..	..	W	..	W	V	..	..	W	V	..	..	(W)	..		
231.2	Synthetic rubber	W				W		W				W							
599.2	Insecticides, fungicides, disinfectants	..	V			V		V				(V)					V		
ex 533.3(2)	Water paints	W				..		(W)				W					W		
ex 533.3(2)	Cellulose paints and varnishes	W				..		(W)				W					W		
533.3	Paste colours	W				..		(W)				W					W		
ex 533.2	Printing ink	W	V	W	V	(W)		V	V			W	V			W	V	(W)	
ex 533.3	Mastics	W	V	W	V	(W)		V	V			W	V			W	V	(W)	
554.1	All soaps	W		W		W		W				W				W		W	
ex 554.1	Toilet soaps	W		W		W		W				W				W		W	
ex 512	Synthetic detergent	W				W		W				W				W		(W)	
ex 512	Surface active finished detergent powder	W				W		W				W				W		W	
ex 512	Scouring powder	W				W		W				W				W		W	
ex 512	Liquid detergents	W				W		W				W				W		W	
581.0	Pharmaceutical products	V	..	V	..	V	..	V	..			V	..		V	V	V	(V)	
ex 553.0	Perfumes	..	..	..	..	..	..	..	..			..	..		..	{V}	{V}	{V}	
Phytosanitary products																			
	- Basic products	..	..														
	- Made up preparations	..	..														
ex 862	Photographic films and paper (sensitized)	..	..	V		V		V				V			..	..	..	(V)	
266.2(2)	Synthetic filament yarn	..	..	..	..	W		W				W			..	..	..	W	
266.2(1)	Synthetic staple	..	..	..	..	W		W				W			..	..	..	W	
266.3(2)	Artificial filament yarn	W	..	..	..	W		W				W			..	..	..	W	
266.3(1)	Artificial staple	W	..	..	..	W		W				W			..	..	..	W	
Manufactured fertilizers																			
566.1+ex561.9	Nitrogenous	W		(W)		GW		GW				GW			CW		CW		
561.2+ex561.9	Phosphatic	W		(W)		GW		GW				GW			CW		CW		
561.3+ex561.9	Potassic	W				GT									CW		CW		

SITC No	PRODUCTS	COUNTRY		United States		Canada		Japan		EEC		Austria		Finland		Norway		Portugal		Spain		Sweden		Switzerland			
		Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V		
ELECTRICAL MACHINERY AND ELECTRONICS																											
711.1.	Steam generating boilers, boiler houseplant and steam engines (including turbines)	..	..	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	
711.2.																											
711.3.																											
711.7.	Nuclear reactors	..	..	..	..	..	..	V	..	..	..	..	..	..	..	..	V	..	..	..	..	V	..	..	..
712.3.	Milking machinery, cream separators and other dairy farm equipment	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V	..	V		
ex 722.1.	Fractional horsepower motors (N)	V	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	V	..	V	(N)	V	..	..	..
ex 722.1.	Transformers (excluding such for electronic application)	..	V	..	V	..	V	..	..	..	..	..	..	..	..	..	(N)	(V)	(N)	(V)	..	V	(N)	V	..	..
ex 722.2.	Electrical apparatus for making and breaking or for protecting electrical circuits, but excluding such for telecommunication	..	V	..	V	..	V	..	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	
723.1.	Insulated wire and cable	..	V	..	V	..	V	..	V	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
724.1.	Television broadcast receivers, whether or not combined with gramophone or radio	N	V	N	V	N	V	..	..	N	V	N	V	..	(V)	N	V	N	V	N	V	..	V	..	V	
724.2.	Radio broadcast receivers, whether or not combined with gramophone	N	V	N	V	N	V	..	..	N	V	N	V	..	V	N	V	N	V	N	V	..	V	..	V	
891.1(1)	Phonographs, tape recorders and other electrical audio equipment	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	..	..	V	..	V	..	V	..	V
724.9(1)	Telephone and telegraph equipment	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
ex 729.3.	Electronic valves and tubes	..	V	..	V	..	V	V	V	..	V
ex 729.5.	Discrete semi-conductor devices, integrated circuits, transistors, diodes, etc.	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
ex 722.1.	Passive electronic components (resistors, coils, transformers, etc); audio-traducers, transducers (microphones, loudspeakers, amplifiers)	..	V	..	V	..	V	..	..	..	..	..	..	..	..	(V)	..	(V)	..	V	..	V	..	V	..	V
724.9(2).																											
ex 729.5(5).	Electro space-heating equipment etc. and air conditioners, domestic and for motor cars	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	(N)	V	(N)	V	..	V	..	V	..	V
726.	Electrical apparatus for medical purposes and radiological apparatus	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
729.1(1)	Primary batteries and cells	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
729.1(2)	Accumulators	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	(N)	V	(N)	(V)	..	V	..	V	(N)	V
ex 729.2.	Incandescent electric bulbs	..	V	N	V	..	V	..	..	..	..	..	..	..	..	N	V	..	..	N	V	..	N	V	N	V
ex 729.2.	Fluorescent tubes	..	V	N	V	..	V	..	..	..	..	..	..	..	..	N	V	..	..	N	V	..	N	V	N	V
729.4.	Automotive electrical equipment	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
729.5.	Electrical measuring and controlling instruments and apparatus	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
ex 729.9(2)	Industrial electric furnaces	..	V	..	V	..	V	..	..	..	..	..	..	..	..	V	..	V	..	V	..	V	..	V	..	V
731.2.	Railway locomotives, electric, other than self-generating	(N)	(V)	..	..	N	V	..	..	N	V	..	..	..	..	N	V	N	V	..	V	..	N	V	N	V

SITC No	PRODUCTS	COUNTRY		Belgium		Denmark		France		Germany		Ireland		Italy		Netherlands		United Kingdom	
		Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
711.1, 711.2, 711.3	Steam generating boilers, boiler houseplant and steam engines (including turbines)	..	V	..	..	W	V	W	..	..	..	V	..	V	(N)	V		
712.7	Nuclear reactors	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
712.3	Milking machinery, cream separators and other dairy farm equipment	..	..	..	..	..	V	..	V	..	..	..	..	..	..	..	V	
ex 722.1	Fractional horsepower motors	..	..	..	V	..	V	..	V	..	..	..	V	..	..	..	V	
ex 722.1	Transformers (excluding such for electronic application)	W	V	N	..	..	V	N	V	..	..	W	V	..	..	W	V	
ex 722.2	Electrical apparatus for making and breaking or for protecting electrical circuits, but excluding such for telecommunication	..	V	..	..	..	V	..	V	..	..	..	V	..	..	V		
723.1	Insulated wire and cable	..	V	..	V	..	V	..	V	..	..	..	V	..	..	..	V	
724.1	Television broadcast receivers, whether or not combined with gramophone or radio	N	..	N	V	N	V	N	V	N	..	N	V	..	..	N	V	
724.2	Radio broadcast receivers, whether or not combined with gramophone	N	..	N	V	N	V	N	V	N	..	N	V	..	..	N	V	
891.1(1)	Phonographs, tape recorders and other electrical audio equipment	..	..	..	V	..	V	..	V	..	..	..	V	..	..	..	..
724.9(1)	Telephone and telegraph equipment	..	..	..	V	..	V	..	V	..	..	..	V	..	..	..	V	
ex 729.3	Electronic valves and tubes	..	..	..	..	N	V	N	V	..	..	..	..	..	..	..	V	
ex 729.3	Discrete semi-conductor devices, integrated circuits, transistors, diodes, etc	..	..	..	..	..	V	..	V	..	..	..	..	..	..	..	V	
ex 722.1, ex 722.2, ex 724.9(2), ex 729.9(5)	Passive electronic components (resistors, coils, transformers etc.); audio-traducors, traducers (microphones, loudspeakers, amplifiers)	..	..	..	..	..	V	..	V	..	..	..	..	..	..	..	V	
725.0(5) ex 719.1(2)	Electro space-heating equipment etc. and air conditioners, domestic and for motor cars	..	V	..	V	..	V	..	V	..	..	..	V	..	V	..	..
726	Electrical apparatus for medical purposes and radiological apparatus	..	V	..	..	..	V	..	V	..	..	..	V	..	..	..	..
729.1(1)	Primary batteries and cells	..	..	..	V	..	V	..	V	..	..	..	V	..	..	V		
729.1(2)	Accumulators	..	..	..	..	..	V	..	V	..	..	..	V	..	V	..	V	
ex 729.2	Incandescent electric bulbs	..	..	N	V	N	V	N	V	..	..	N	..	..	N	..	N	
ex 729.2	Fluorescent tubes	..	..	..	V	..	V	..	V	..	..	N	..	..	V	..	V	
729.4	Automotive electrical equipment	..	..	..	..	..	..	..	V	..	..	..	V	..	V	..	V	
729.5	Electrical measuring and controlling instruments and apparatus	..	V	..	..	..	V	..	V	..	..	..	V	..	V	..	V	
ex 729.9(2)	Industrial electric furnaces	..	..	..	V	..	V	..	V	..	..	..	V	..	V	..	V	
731.2	Railway locomotives, electric, other than self-generating	..	..	..	..	N	V	N	V	..	..	N	..	..	N	..	N	

SIRE No.	PRODUCTS	COUNTRY	Australia	New Zealand	South Africa	Czechoslovakia	Hungary	Poland	Romania	Yugoslavia	Argentina	Brazil	Mexico	Hong Kong	India	Israel	Korea	Singapore
			Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V	Q	V
ELECTRICAL MACHINERY AND ELECTRONICS																		
711.1	Steam generating boilers, boiler houses, turbines and steam engines [including turbines]		(H)	(V)			(H)	(H)	(H)	(H)	(H)				(H)	(V)		(H) (V)
711.2	Milking machinery, cream separators and other dairy farm equipment		(H)		(H)		(H)	(H)										
ex 722.1	Fractional horsepower motors		(N)		(H)													
ex 722.1	Transformers [excluding such for electronic application]		(N)	(V)	(H)			(H)										
ex 722.2	Electrical apparatus for making and breaking or for protecting electrical circuits, but excluding such for telecommunication																	
723.1	Insulated wire and cable																	
724.1	Television broadcast receivers, whether or not combined with gramophone or radio		N	V	H	V	H	N	N	N	N	N	N	V	H	H	H	V
724.2	Radio broadcast receivers, whether or not combined with gramophone, telephone and telegraph equipment		N	V	N	V	H	H	N	N	N	N	N	V	H	H	H	V
691.1(1) Phonographs, tape recorders and other electrical audio equipment		N	V	(M)	(V)	(H)		(H)							(H)	(V)		
724.5(1) Telephone and telegraph equipment		V				(H)		(H)							(H)	(V)		
729.3	Electronic valves and tubes					(H)		(H)							(H)	(V)		
ex 729.3	Diodes, semi-conductor devices, integrated circuits, transistors, diodes, etc.					(H)		(H)							(H)	(V)		
ex 722.1	Passive electronic components [resistors, coils, capacitors, transistors etc.]; audio transducers, transmitters, microphones, loudspeakers, amplifiers]														(H)	(V)		
ex 722.1	[Excl] Electro space-heating equipment etc. for motor cars														(H)	(V)		
725.0(2)	Infrared electric apparatus for medical purposes and radiological apparatus		(V)															
726	Electrical apparatus for medical purposes and radiological apparatus																	
725.1(1) Primary batteries and cells		N	V		(H)			(H)										
729.1(2) Accumulators																		
ex 729.2	Inandescent electric bulbs																	
ex 729.2	Fluorescent tubes																	
729.4	Autotransformers and cells																	
729.5	Electrical measuring and controlling instruments and apparatus		(H)	(V)											(H)	(V)		
ex 729.9(2)	Industrial electric furnaces																	
731.2	Railway locomotives, electric, other than self-generating		(H)												(S)	(V)		

Note: In addition industrial statistics for the United States and the Nordic countries report values of shipments by items of the national industrial or tariff classification.

Sources: UN/ESO, Annual review of the chemical industry, Oct., The Chemical Industry, Oct., OECD, The engineering industries in OECD member countries, Vol. I 1955-56.

OECD, Industrial Statistics, 3-4/1970.

1972/73.