COMMISSION REGULATION (EEC) No 165/90

of 23 January 1990

imposing a provisional anti-dumping duty on imports of certain types of electronic microcircuits known as DRAMs (dynamic random access memories) originating in Japan, accepting undertakings offered by certain exporters in connection with the anti-dumping proceeding concerning imports of these products and terminating the investigation in their respect

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 2423/88 of 11 July 1988 on protection against dumped or subsidized imports from countries not members of the European Economic Community (1), and in particular Articles 10 and 11 thereof,

After consultations within the Advisory Committee as provided for by the above Regulation,

Whereas :

A. PROCEDURE

(1) In February 1987, the Commission received a complaint lodged by the European Electronic Component Manufacturers' Association (EECA) allegedly on behalf of practically all actual or potential Community producers of DRAMs. The complaint contained evidence of dumping of DRAMs originating in Japan and of substantial injury in various forms within the meaning of Article 4 (1) of Regulation (EEC) No 2423/88 resulting therefrom. This evidence was considered sufficient to justify the initiation of a proceeding.

(2) The Commission accordingly announced, by a notice published in the *Official Journal of the European Communities* (2), the initiation of an anti-dumping proceeding concerning imports into the Community of certain types of electronic microcircuits known as DRAMs (dynamic random access memories) falling at the time of initiation within subheading ex 85.21 D of the Common Customs Tariff and corresponding to NIMEXE codes ex 85.21-47, ex 85.21-69 and ex 85.21-71, originating in Japan and commenced an investigation. As from 1 January 1989, DRAMs fall within CN codes ex 8542 11 10, ex 8542 11 30 and ex 8542 11 71.

(3) The Commission officially so advised the exporters and importers known to be concerned, the representatives of the exporting country and the complainants and gave the parties directly concerned the opportunity to make known their views in writing and to request a hearing.

(4) All known Japanese exporters, their related imports in the European Community and all complainant Community companies made their views known in writing. Two additional Japanese exporters made themselves known to the Commission within the time limits laid down and also submitted their views in writing.

(5) There further Japanese exporters made themselves known at a late stage in the proceeding and submitted information.

(6) Submissions were also made by a number of end-users and the European Association of Manufacturers of Business Machines and Data Processing Equipment (Eurobit) representing certain end-users.

(7) No submissions were made by independent importers.

(8) The majority of Japanese exporters and their related importers in the Community, all complainant companies and a number of Community end-users requested and were granted hearings.

(9) The Commission sought and verified all information it deemed to be necessary for the purposes of a preliminary determination and carried out investigations at the premises of the following :

(a) *Community complainant companies :*

- Motorola (UK) Ltd, United Kingdom (Motorola),
- Siemens AG, Germany (Siemens),
- SGS Microelettronica SpA, Italy (SGS),
- Thomson Semiconducteurs, France (Thomson) ;

(b) *Japanese producers/exporters :*

- Fujitsu Limited, Tokyo and Kawasaki (Fujitsu),
- Hitachi Ltd, Tokyo and Musashi (Hitachi),
- Mitsubishi Electric Corporation, Tokyo and Itami City, Osaka (Mitsubishi),

(1) OJ No L 209, 2. 8. 1988, p. 1.
(2) OJ No C 181, 9. 7. 1987, p. 3.

— NEC Corporation, Tokyo (NEC),
— NMB Semiconductor Ltd, Tateyama and companies within the group, Minebea Co. Ltd and NMB (Japan) Corporation, Tokyo (NMB),
— Miyazaki Oki Electric Co. Ltd, Miyazaki (Oki),
— Texas Instruments (Japan) Ltd, Tokyo (Texas),
— Toshiba Corporation, Tokyo (Toshiba);

(c) *Importers in the Community related to Japanese importers:*

— Fujitsu Microelectronik GmbH, Germany,
— Fujitsu Microelectronic Ireland Ltd, Ireland,
— Hitachi Electronic Components (Europe) GmbH, Germany,
— Hitachi Electronic Components (UK) Ltd, United Kingdom,
— Hitachi Semiconductor (Europe) GmbH, Germany,
— Mitsubishi Electric (Europe) GmbH, Germany,
— Mitsubishi Electric (UK) Ltd, United Kingdom,
— Oki Electric Europe GmbH, Germany,
— NMB (UK) Ltd, United Kingdom,
— Imc Magnetics GmbH, Germany,
— NEC Electronics (Germany) GmbH, Germany,
— NEC Semiconductors (UK) Ltd, United Kingdom,
— NEC Ireland Ltd, Ireland,
— Toshiba (UK) Ltd, United Kingdom,
— Toshiba (Europe) IE GmbH, Germany,
— Texas Instruments Deutschland GmbH, Germany,
— Texas Instruments Italia SpA, Italy,
— Texas Instruments France SA, France;

(d) *End users:*

International Computers Ltd, United Kingdom.

(10) Furthermore, the Commission undertook a second series of on-the-spot investigations for the purpose of obtaining and verifying current Japanese costs of production and marketing data. In addition to those Japanese producers/exporters listed above, verifications were undertaken at the premises of those Japanese exporters which made themselves known as interested parties at a late stage of the proceeding, i.e.,

— Matsushita Electronics Corporation (Matsushita),
— Sanyo Electric Co. Ltd (Sanyo),
— Sharp Corporation (Sharp).

(11) The Commission requested and received further detailed written submissions from the complainant Community companies, the exporters and their related importers and from Eurobit on behalf of certain Community end-users.

(12) Submissions prepared by management consultancy firms were submitted by certain Japanese exporters in respect of studies undertaken with regard to the issued of injury and Community interest and the economic impact on the Community of anti-dumping duties on Japanese DRAMs.

(13) These submissions were checked and analysed to the extent considered necessary.

(14) The investigation of dumping covered the period from April 1986 to March 1987 inclusive. The examination of injury covered the years 1983 to 1987 as far as trends in volume, market shares and other economic factors are concerned and the year 1 April 1986 to 31 March 1987 for the detailed examination of price data.

(14a) On account of the complexity of the DRAM industry combined with the internationalization of manufacturing processes, this investigation has exceeded the normal time period.

B. PRODUCTS UNDER INVESTIGATION, LIKE PRODUCTS AND COMMUNITY INDUSTRY

(a) Products under investigation

(15) The products under investigation are certain types of micro-circuits known as dynamic random access memories (DRAMs) (1) whether assembled, in processed wafer or die form, manufactured using variations of metal oxide semiconductor (MOS) process technology including complementary MOS types (CMOS) and N-channel types (NMOS) of all densities irrespective of access speed, configuration, package or frame. Finished DRAMs fall within CN code ex 8542 11 71; wafers fall within CN code ex 8542 11 10; dice fall within CN code ex 8542 11 30 (chips).

(16) The Commission also requested information in respect of DRAMs assembled in third countries from processed wafers and dice produced in Japan

(1) A DRAM is a monolithic integrated memory circuit containing thousands of memory storage cells (bits) each of which contains a transistor and capacitor. A stored program can be created in the DRAM by charging selected capacitors. The storage cells in a DRAM are arranged in a rectangular array of columns and rows, which allows each cell to be accessed independently (random access). The electrical charge stored on the cells must be regenerated after being accessed, and periodically because of leakage. The required regeneration of the charge on the capacitors makes the device 'dynamic'. DRAMs vary, *inter alia*, in the speed at which the storage cells can be accessed (access time) and in the amount of information that can be stored (density) expressed as multiples of 1 024 capacitors, kilobits or K.

for subsequent importation into the Community EC. The information gathered revealed that the quantities of such products imported into the Community at the time were relatively small. The Commission decided, therefore, for the purpose of its preliminary findings, not to investigate the assembly operations of such imports.

(b) **Like product determination**

(17) In order to reach a determination in respect of like products in this proceeding, the Commission examined whether:

(i) processed wafers and dice are like finished DRAMs;

(ii) different densities and processes of DRAMs constitute different like products;

(iii) further processed DRAMs such as 'stack' DRAMs, 'piggy-back' DRAMs or 'modules' which incorporate two or more DRAM units are like finished DRAMs.

ad (i) Processed wafers and dice:

(18) Several exporters argue that processed wafers and dice resulting therefrom are not like products to finished DRAMs. Although they believe that different types of DRAMs are best viewed as a family of distinct but interrelated products, they argue that a processed die without its casing and electrical connections is of no value since the casing and electrical connections are essential if the die is to be functional.

(19) Complainants argue that processed wafers and dice are like products to finished DRAMs since they are merely unpackaged DRAMs which embody the essential identity of the product. They further argue that failure to include unfinished forms of DRAMs within the scope of any anti-dumping measures would create a major loophole since Japanese companies could simply ship the wafers and dice to the Community assemble them there and then sell the finished DRAM on the open market.

The Commission notes that:

(20) — once a wafer is processed or diffused the dice contained therein have all the essential electronic properties which distinguish DRAMs from other products,

— there is virtually no seperate merchant market for DRAM wafers and dice,

— the processed dice are dedicated to a single use as the memory storage unit in a finished DRAM. In fact, certain Japanese producers exported large quantities of processed dice generally on pre-cut wafers to related companies in the Community for testing and assembly before entering the finished product into the commerce of the Community through the related companies' sales network.

(21) On the basis of the foregoing, the Commission has provisionally determined that processed DRAM wafers and dice are like products to finished DRAMs.

ad (ii) Different densities and processes of DRAMs:

(22) Most Japanese exporters argue that different densities and processes of DRAMs are to be regarded as separate like products and that these different types of DRAM are best viewed as a family of distinct but interrelated products. In view of this it was further argued that anti-dumping duties which might be imposed need to be separately assessed for each different type of DRAM and that differentiating between different densities and technologies is necessary if appropriate consideration is to be given to injury and Community interest questions. The consequence of this position, it was maintained, is that any 4 megabit or higher density DRAMs which are allegedly not included in the complaint and were not produced during the period under investigation and therefore not investigated would be outside the scope of any anti-dumping duties which might be imposed.

(23) Eurobit, representing the user industry, also argues that new generation DRAMs such as the 4 megabit and above cannot be regarded as like products to current DRAMs due to:

— the different design environment and manufacturing technology,

— new plants and the necessity of new equipment for manufacturing,

— new architecture and different application.

(24) The complainants argue that the differing densities and process technologies do not result in the formation of a different like product. They maintain that the distinctions drawn by certain exporters would yield an analysis of numerous, artificial industries, splintering a widely recognized product and production category. They further argued that to define different products on the basis of density or the improvement or relatively minor variations of the production process would elevate minor differences in characteristics and uses above major identities when none of these distinctions warrants the creation of a separate like product.

The Commission notes that:

(25) — through the effects of a continuous learning process and refinements in technology, smaller, more dense, complex and higher-performance memory circuits have been possible. In fact, since the introduction of the 1K (kilobit) DRAM in 1970, successive generation DRAMs representing a quadrupling of memory capacity over the previous generation are being introduced approximately every three to four years. The investigation has revealed that in 1983, the 64K DRAM was the most sold generation in the Community which had almost completely displaced the 16K DRAM while the 256K DRAM was first being introduced. In 1987, however, the 256K DRAM was the most sold generation almost displacing the 64K DRAM with the 1 megabit generation gradually being introduced;

(26) — in addition, DRAMs of different densities and processes all fall within the same general category of products which perform the same basic function regardless of the size of memory. Although design and process technology have changed over the successive generations of density, the essential characteristic of a DRAM, its memory function, has remained the same. Furthermore its essential physical characteristics have also remained the same;

(27) — although different densities of DRAMs are not necessarily interchangeable from a practical point of view, end-use products (computers, etc.) are redesigned or conceived to accommodate higher density DRAMs in order to save space on circuit boards and manufacturing costs. In view of this generational shift in both DRAM capacity and end-use designs, the pricing of successive generations of DRAMs is closely linked. In this respect, it has been alleged by several parties involved in the proceeding that the introduction of a larger capacity DRAM will start to depress prices of the smaller size DRAM as soon as the larger capacity DRAM is priced at a certain level in relation to the smaller size DRAM;

— furthermore, the Commission's investigation has revealed that it is incorrect to maintain, at least for the 4 megabit density, that new plants and new equipment for manufacturing will be necessary. The 4 megabit density is, at this stage, generally being manufactured on existing 1 megabit production lines with minor equiment modifications.

(28) Taking the foregoing into consideration, the Commission is of the view that the similarities of DRAMs of different densities and processes outweigh their differences in memory capacity, design and process technology. In conclusion, the Commission provisionally determines that DRAMs of different densities and processes are like products.

ad (iii) Further processed DRAMs such as 'stack' DRAMs, 'piggy-back' DRAMs or DRAM 'modules':

(29) Several exporters argue that 'stack' DRAMs, 'piggy-back' DRAMs or DRAM 'modules' are not like products to DRAMs on the grounds that these further processed forms have technical characteristics and functions which are not found in DRAMs. Certain exporters argue in addition that these further processed forms are classified for customs purposes under customs headings different to those concerning the products under investigation.

(30) The complainants argue that special forms of DRAMs such as modules and stacks which are basically multiple DRAMs sold in one pack should be treated as like products.

(31) The Commission notes through its investigation that:

— several Japanese companies exported sub-assemblies containing two or more DRAM devices to the Community during the period under investigation,

— the sub-assemblies in question were, depending on the importing Member State, classified for customs purposes at the time within various heading Nos of the Common Customs Tariff, in particular 84.55, 85.21, 85.28 and 85.48, and currently under CN codes 8473, 8542, 8548,

— on examination of the technical specification sheets for such sub-assemblies, it becomes apparent that most of these sub-assemblies are very little more than a grouping of standard DRAMs into one package, the function of which is to provide large quantities of memory capacity, whereas others are hybrid sub-assemblies incorporating, for example, application specific integrated circuits.

(32) On the basis of the foregoing, the Commission provisionally determines that multi-chip combinational forms of DRAMs are to be regarded as like products.

Future densities of DRAMs

(33) The Commission has also considered whether future densities of DRAMs e.g. 16 megabit should be regarded as like products. The Commission notes that during the period under investigation there were no imports of densities above 1 megabit,

although certain complainant companies and Japanese exporters were already carrying out research into such products.

It is also noted that the notice initiating this proceeding refers to all densities of DRAMs.

On the basis of the information available with respect to current density and future density DRAMs, in particular with regard to technical specifications and application, and for the purpose of this preliminary determination, the Commission concludes that all densities of DRAMs including future densities are one like product.

(34) *Products intended for military applications*

One exporter argued that DRAMs intended for military applications should not be regarded as the same like product as commercial DRAMs and in consequence should not be covered by the proceeding.

The Commission notes that, notwithstanding any differences in customs treatment, DRAMs for military applications are standard DRAMs which undergo severe testing and that such products are used equally for civil applications which require high performance and reliability (satellites etc.).

In conclusion, the Commission provisonally determines that DRAMs for military applications and DRAMs for commercial applications are one like product.

(35) *Video RAMs*

One exporter argued that video RAMs (VRAMs) have technical specifications different to DRAMs and should therefore be excluded from the scope of the like product definition.

The Commission notes that certain DRAMs may be used for certain video applications whereas VRAMs are technically different products.

The Commission therefore determines that VRAMs proper are not to be regarded as like products whereas DRAMs used for video applications are like products.

(c) Community industry

(36) In relation to the determination of the like product, the Commission in accordance with Article 4 (5) of Regulation 2423/88 had to define for the purposes of the injury determination which companies constitute the Community industry. To this end, the Commission analysed :

(i) the manufacturing processes involved in DRAM production ;

(ii) DRAM-related activities of those Community companies which made themselves known during the proceeding.

(37) ad (i) :

With regard to the manufacturing processes involved in DRAM production, the Commission notes that production can roughly be divided into two major phases :

— wafer diffusion and sorting (also referred to as front-end operations) : where dice are produced on the silicon wafer and each die on the wafer is tested in order to mark defects. Wafer diffusion is technologically the most demanding production step which involves considerable investment both in basic research and in developing the highly sophisticated manufacturing technology. Once the wafer is processed, all essential characteristics of the finished product are already contained on the die found thereon,

— assembly and final testing : where the dice contained on the wafer are cut, wire bonded, incapsulated into plastic or other packages and finally tested before shipment. This production step, also referred to as 'back-end' operations, is technologically less demanding and requires relatively modest capital investment in research and development. However, as a ratio of total cost of production, assembly costs are generally significant, and may even exceed in some cases wafer diffusion costs.

(38) ad (ii) :

With regard to DRAM activities of those Community companies which made themselves known during the proceeding, the Commission notes that, setting aside the four complainant companies (currently three following the merger of SGS and Thomson), five companies related to Japanese exporters imported during the period under investigation wafers and dice which were then assembled by them into DRAMs in the Community.

(39) Wafer diffusion is from a technological and capital investment point of view more significant than the assembly and testing operations, but assembly and testing operations can account for a significant part of cost of manufacture.

(40) However the Commission has not to determine definitively whether companies performing assembly or testing operations only belong to the Community DRAM industry.

(41) Even if companies performing assembly or testing operations only were part of the Community DRAM industry, the Commission has considered

whether, pursuant to Article 4 (5), first indent of Regulation (EEC) No 2423/88, those companies related to Japanese exporters which themselves import the products under investigation should be excluded from the definition of Community industry. In this respect, the Commission has taken into consideration the fact that those companies, which import and assemble in the Community wafers and dice originating in Japan, sell the finished product through the same corporate sales channels as direct imports of DRAMs originating from the same Japanese exporter and that the pricing of finished DRAMs whether assembled in the Community or exported directly from Japan is controlled by the same Japanese parent company. Furthermore any dumping by the Japanese exporter influences the condition of the related assembling company since it benefits directly or indirectly from the unfair practice. Under these circumstances, the Commission decides provisionally that those companies which import wafers and dice for assembly in the Community from related Japanese exporters would be excluded from the Community producers representing the Community industry.

Arguments concerning the definition of Community industry

(42) Several Japanese exporters argue that they cannot accept that the complainants represent practically all actual or potential Community producers of DRAMs as the notice of initiation of the anti-dumping proceeding states. They submitted that, on the one hand, International Business Machines (IBM) should be taken into account as an actual Community producer since they understand that IBM fabricates and assembles DRAMs at its plant near Stuttgart while, on the other hand, since the technology for manufacturing DRAM wafers and dice can be purchased from numerous sources, any large-scale European electronic components manufacturer is a potential Community producer of DRAMs. In this regard, they note specifically that Philips which has a joint venture with Siemens to develop, they allege, 1 and 4 megabit DRAMs and SRAMs (static random access memory), is not a complainant. They also argue that, since assembly and testing accounts for a significant part of the production costs of a DRAM, those companies performing assembly operations in the Community should be included in the definition of Community industry. They support this point by submitting that, since under the legislation applicable at that time assembly operations were sufficient to confer Community origin on the products assembled in the Community it would be more appropriate to define Community industry in terms of products which had their origin within the Community.

(43) In response to these arguments, the Commission points out that following the publication of the notice of initiation, no parties came forward, other than the four complainant companies and some assembling companies related to Japanese exporters, claiming that they were actual or potential producers of DRAMs and that in consequence Community industry should be interpreted so as to include them. In this respect, the Commission is of the view that companies that may be technically capable of producing DRAMs are not to be regarded as potential producers unless they have committed themselves in some way to future DRAM production. With regard to IBM, the Commission is aware that this company has DRAM production facilities in the Community but that it produces exclusively for captive use and therefore does not sell DRAMs on the merchant market. With regard to Philips, the Commission is aware of the fact that the joint venture referred to concerns process and design technology for 1 megabit and 4 megabit microcircuits with a view to SRAM, not DRAM production by Philips.

As for the Japanese-related companies which import waters and dice for assembly in the Community the Commission refers to points 39, 40 and 41 above.

(44) In conclusion, the Commission interprets for the purposes of its preliminary findings the term 'Community industry' as referring to the complainant companies represented by the EECA i.e., Motorola, SGS-Thomson and Siemens.

C. NORMAL VALUE

(45) With a view to determining normal values for the DRAM devices exported to and sold in the Community, prices and costs on the Japanese market of those exporters cooperating in the proceeding were analysed. This analysis revealed that prices for the 256K and 1 megabit densities were declining over the period under investigation while for the 64K density, which is a product at the end of its life cycle, prices were stable or slightly increasing. With regard to costs, information on a quarterly basis revealed that, in general, costs for the 256K and 1 megabit densities declined over the period but that for some quarters costs were higher than in the preceding quarters due, *inter alia*, to a lower production volume. Costs for the 64K were increasing slightly as production volumes were being reduced.

(46) On the basis of this information, it was decided as a first step that, for each exporter and each DRAM device suitable for comparison with a DRAM device sold for export to the European Community, it was reasonable to base normal value either on a weighted average of the domestic prices or, where appropriate, on constructed value.

For each exporter, prices were, therefore, compared with the weighted average costs of production. This revealed that, for most exporters and for many device types, costs of production were, not only for substantial quantities but also on a weighted average basis, higher than domestic prices. The sales pertaining to these DRAM devices were therefore, pursuant to Article 2 (4) of Regulation (EEC) No 2423/88, considered as not having been made in the ordinary course of trade. For those device types sold at a loss, normal value was constructed. For the profitable DRAM devices sold on the domestic market, the domestic prices were used as the basis for the normal value determination where the sales volume involved exceeded 5 % of the sales volume in the European Community Where the sales volume on the Japanese market was 5 % or below, normal value was also constructed. In adopting this approach the Commission has considered, in accordance with past practice, that a sales volume not exceeding the 5 % threshold is insufficient to permit a proper comparison.

(47) For exports of DRAM dice on pre-cut wafer, already cut DRAM dice or untested DRAM devices, normal values were also constructed since these products were not sold on the Japanese market.

(48) Constructed values were determined by adding cost of production and a reasonable margin of profit. The cost of production was computed on the basis of all costs both fixed and variable, incurred in Japan, of materials and manufacture to which was added a reasonable amount for selling, administrative and other general expenses and profit.

(49) As regards the amounts of selling, administrative and other general expenses to be included in such constructed values, these were calculated on the basis of the expenses actually incurred by the exporter concerned; the amounts of profit to be included in such constructed values, were calculated on the basis of profits realized by the exporter concerned on its profitable sales of DRAMs on the domestic market during the period under investigation. For one exporter which had considerable domestic sales but not sales of profitable device types, the amount for profit to be incorporated in its constructed values was based on the weighted average profit of all other exporters.

(50) Cost of production was established by examining the economic entity of the exporter with regard to its activities on the Japanese market. They were computed on the basis of the full costs of the parent/manufacturing company and the full costs of any sales subsidiaries or related companies performing the function of a sales department for the parent company. In this case, transactions between the parent/manufacturing company and its sales company were disregarded and transactions by the sales company to independent customers were taken into consideration for normal value purposes.

(51) Some companies were genuinely not in a position to give all sales data relating to transactions made through certain sales companies at the level of the first independent customer. Most companies involved, however, sold through several other sales channels and it was possible to base normal value on the vast majority of sales transactions to independent customers. For the remaining companies it was possible to analyse, to a certain extent, the prices and costs involved by sales channel and type of customer. Although, the Commission is not entirely satisfied that the prices and costs involved are comparable to those involved in transactions between parties which have no such link, it has concluded for the purpose of its preliminary findings that it is not unreasonable to base its normal value determination of these companies on all sales transactions of the related sales companies.

(52) Where costs had to be allocated to several products in order to compute costs relating to DRAMs, the accounting practice of the exporter was generally accepted as being reasonable. However, following investigations at the exporters' premises, initial responses to the Commission's questionnaire were, in practically all cases, either revised or complemented by additional information. In addition, modifications were made for certain exporters in respect of the following:

(53) *Research and development expenses (R&D)*

All R&D expenses incurred in the period of investigation which related in any way to DRAM products, be it current or future products, have been appropriately allocated to the DRAM cost of production incurred during the period of investiga-

tion. One exporter excluded some expenses for the one megabit project which were reincorporated into the costs of production by the Commission ;

For some exporters, certain R&D expenses declared have been amended following a more precise allocation for the expense in question.

In one particular case, the allocation made by the exporter resulted in MOS products other than DRAMs incurring R&D expenses approximately three times greater than DRAMs. On the basis of an analysis undertaken by the Commission with reference to R&D expenses incurred by other parties involved in the proceeding, and taking into consideration the importance of DRAM products as a technology driver for other MOS products, it has been decided, for the purpose of the preliminary findings, to allocate the R&D expenses declared in total for MOS products to DRAMs on the basis of a turnover allocation.

One exporter refused to give information on several R&D expense items appearing from documents submitted. In this case it has been provisionally assumed that these R&D expenses benefit all semiconductors equally and therefore have been allocated on the basis of semiconductor turnover.

(54) *Expenses due to low capacity utilization*

One exporter incurred considerable costs resulting from the 'mothballing' of a factory which had been producing DRAMs. The costs were accounted for by the exporter as non-operating expenses.

The Commission considers that, irrespective of the method of accounting of these costs by the exporters, in the framework of an anti-dumping proceeding, a portion should be attributed to the costs of producing DRAMs. When undertaking a costing exercise, it is reasonable to impute costs relating to non-utilized machinery to the product for which the machinery is intended. The fact that, in this exporter's case, the non-utilization relates to a complete factory should not lead to a different approach. The Commission is therefore of the view that the costs could be attributed solely to DRAMs. However, in view of the fact that a DRAM production facility may be used from a practical point of view and with minor modifications to the equipment for other MOS products of which DRAMs are one, and the exporter has subsequently used the factory for the production of other MOS products, the Commission has concluded for the purpose of the preliminary findings that the costs incurred for the non-utilization of this facility should be allocated to all MOS products.

Arguments concerning the normal value determination

(55) Some exporters argue that the normal value should be determined on the basis of the prices actually paid or payable on the domestic market on the grounds that, although sales of some devices may have been made at a loss, all costs would have been recovered, albeit over a period longer than the investigation period and therefore the prices should be regarded as being in the ordinary course of trade.

(56) The Commission cannot accept this argument. It considers that, since the investigation period covers a whole year, DRAM devices sold at prices which did not permit recovery of all costs reasonably allocated within this period can reasonably be regarded as not having been made in the ordinary course of trade pursuant to Article 2 (4) (b) of Regulation (EEC) No 2423/88.

(57) Another exporter argues that there is a need to take account of the specific and unusual situation of the DRAM industry in which products become rapidly outdated and costs of production decline sharply over a short period.

It further argues that prices have been changing both during and since the investigation period and accordingly, if a single normal value were determined for the one-year investigation period and compared with export prices transaction by transaction over the same period, the results obtained would bear no relation to the market situation during that period and now. This exporter therefore proposed that, in accordance with the requirement in Article 2 (9) of Member States 2423/88 that normal value and export price be determined as nearly as possible at the same time, the comparisons between normal value and export price be made on a quarterly basis. This proposal would therefore require the establishment of quarterly normal values.

(58) The Commission, following analysis of the specific and unusual situation of the DRAM industry, took the view in the early stages of the proceeding that normal values should indeed be established on a quarterly basis in order to reach a more precise dumping calculation. For this reason, the Commission requested in its questionnaires the submission of data on a quarterly basis. When, on analysis of this data, it became apparent that normal value for

most DRAM devices would have to be constructed on the basis of costs of production, the Commission had to take into consideration when examining all exporters' submissions, the volatility of costs, the absence of cost data for some devices and some quarters due to non-production and the difficulties in relating actual costs to individual sales transactions. For these reasons, the Commission concluded that it would be more reasonable to determine normal values on an annual basis. In so doing, the Commission considers that the results obtained reflect the market situation during the period under investigation. It is evident that they do not reflect the market situation after the investigation period, since the data on which the results were obtained were pertinent to the investigation period only.

Reasonable profit

(59) Several exporters argue that the margin of profit calculated by the Commission by reference to those DRAM devices which yielded a profit over the period under investigation is unreasonable.

One exporter argues that the level of profit margin calculated by the Commission does not seem reasonable in light of the depressed state of demand at the time and the fact that it had been calculated on the basis of an extremely small number of sales which consisted primarily of one megabit DRAMs during the time they were first introduced.

It further argues that the Commission should adopt the average profit margin of all producers as a maximum level of profit in order to correct the distortion of profit margins caused by the difference of each producer's stages of one megabit DRAM introduction to the market.

Another exporter argues that the Commission's calculation based on a weighted average of all profitable device types sold on the domestic market excluded device types sold at a loss, and that a fair and representative 'reasonable profit' should be calculated on sales both at a profit and at a loss.

It further argues that it is misleading to view any given generation of memory in isolation or at a snapshot point in time and that it would give a more realistic picture if profitability were evaluated over complete life cycles of products as well as for DRAMs generally.

(60) When constructing normal values, the Commission has to determine a reasonable margin of profit to add to cost of production. Article 2 (3) (b) (ii) of Regulation (EEC) No 2423/88 provides the basis for reaching a reasonable profit i.e. 'by reference to ... the profit realized by the producer or exporter on the profitable sales of like products on the domestic market.'

The Commission has determined the profitable sales as described in point 49. Where, following this approach, sales have been determined profitable over the said period, individual sales may have been made at a loss provided that sufficient sales at a profit led to an overall profit being realized for the period.

For the purpose of the preliminary findings, this approach is considered reasonable by the Commission and the results obtained are not viewed as being unreliable. The fact that they differ from exporter to exporter reflects the particular competitive position and pricing policy of each exporter. However, in view of the arguments made, the particularities of the DRAM industry, and the fact that all exporters claimed that a lower profit margin should be used and even suggested allegedly more reasonable margins which varied considerably between them, interested parties were invited to undertake a study, based on sound economic and accounting principles, with a view to producing an indication of a reasonable profit for this particularly capital-intensive industry. Only one interested party submitted a serious study on this matter which showed a level of profit considered necessary for this industry on a long term basis. In the light of this study, the results obtained by the Commission on the basis of the methodology used to determine, for its preliminary findings, a reasonable profit margin for the purposes of constructing normal values do not appear to be unreasonable.

D. EXPORT PRICE

(61) All eight exporters which had responded to the Commission's questionnaire within the time limits laid down sold finished DRAMs to independent customers in the Community through Community-based sales subsidiaries. All eight exporters shipped finished DRAMs to the Community from Japan. Five exporters shipped, in addition, wafers, dice and unmarked and/or untested assembled DRAMs for further processing in manufacturing subsidiaries in the Community prior to sale in the finished state via the sales subsidiaries. Three exporters made direct sales of finished DRAMs to independent importers in the Community in addition to sales via their sales subsidiaries. Several exporters made sales of DRAMs, albeit representing small quantities, intended for export to the Community via non-related Japanese purchase offices of Community companies.

(62) With regard to exports by Japanese producers directly to independent importers in the EC and to independent purchasers in Japan (Japanese purchase offices) export prices were determined on the basis of the prices actually paid or payable for the product sold.

(63) In all other cases, i.e. where exports were made to subsidiary companies which imported the product into the Community, it was considered appropriate in view of the relationship between exporter and importer to construct export prices on the basis of prices at which the finished products were first resold to independent purchasers in the Community. For this calculation, it was necessary to separate :

(i) DRAMs that were exported in a finished state and sold to independent purchasers in the same state, from

(ii) DRAMs exported for further processing in the Community and subsequently sold in a finished state.

For three exporters which assembled or further processed in the Community, it was not possible to identify sales of the finished DRAMs according to whether they were exported in the same state from Japan or assembled or further processed in the Community from wafers, dice or unfinished assembled DRAMs. In this case, the sales quantities of the finished DRAMs were separated for the purpose of the preliminary findings on the basis of the ratio between the quantities of finished DRAMs and the quantities of DRAMs for assembly or further processing imported into the Community.

ad (i) :

Constructed cif Community-border export prices for finished products were reached by deducting from resale prices to independent purchasers all costs incurred by the sales subsidiary between import and resale including duties and taxes and a reasonable profit margin. In the absence of cooperation from independent importers, the profit margin was, on the basis of Commission experience, assessed at 5 % on sales turnover.

ad (ii) :

Constructed cif Community-border export prices for unfinished products were reached by deducting from resale prices to independent purchasers, as a first step, the costs and the profit margin determined for the sales subsidiary and, as a second step, all costs incurred by the manufacturing subsidiary for the assembly or further processing operations. No additional profit margin was attributed to the manufacturing subsidiary.

(64) Some export transactions relating to certain device types were neglected either because quantities involved were *de minimis* (less than 1 000 units) or because no reliable information was available to establish a normal value. It is considered that this approach has had a negligible impact on the preliminary dumping findings.

Arguments concerning the determination of export prices

(65) One exporter argues that a 'reasonable profit' margin for its importing subsidiaries in the Community is less than the 5 % used by the Commission on the grounds that normal profits for Japanese electronic producers as a whole ranged in 1987 from approximately 1 to 5 %.

(66) The Commission considers that actual profits or losses realized by an exporter's subsidiaries which perform, *inter alia,* the function of an importer in the Community cannot be taken into consideration because such profits or losses are influenced by the relationship between exporting and importing companies. Based on the Commission's experience, a 5 % profit margin is considered reasonable for an independent importer dealing in products similar to that under investigation.

(67) Another exporter argues that the methodology used by the Commission to construct export prices for wafers and dice from prices of the finished DRAMs to independent purchasers in the Community is extremely unfair. It claimed that the only result of its decision to invest in European DRAM production facilities long before any of the complainants did so has been that its dumping margin is considerably higher than it would have been if it had not manufactured within the EC.

(68) Without prejudice to the merits of this exporter's decision to invest in European production facilities, the Commission considers that the methodology adopted for the purposes of the preliminary findings to construct export prices for wafers and dice is reasonable since it involves making an allowance for all costs incurred between import and resale and for a reasonable profit in accordance with Article 2 (8) (b) of Regulation (EEC) No 2423/88.

The fact that the costs incurred by this exporter in the Community were high compared to those incurred in Japan does not invalidate the methodology used. Furthermore other exporters with assembly operations in the Community have not contested the methodology.

(69) A third exporter which through its Community-based sales subsidiaries had made large quantities of duty unpaid sales to computer manufacturers argues that these transactions should not be included in any dumping calculation on the grounds that the computer manufacturers import the products under inward processing relief arrangements for incorporation into products which are subsequently exported.

(70) The Commission points out that a product is to be considered to have been dumped it its export price to the Community is less than the normal value of the like product. The Commission has therefore incorporated these transactions into the calculations to reach its preliminary dumping findings. The question as to whether these transactions should be taken into consideration for the injury determination is dealt with under that heading of this Regulation.

E. COMPARISON

(71) For the purposes of a fair comparison between normal value and export prices the Commission took account, where appropriate, of differences affecting price comparability, such as differences in physical characteristics, import charges and indirect taxes and differences in directly-related selling costs where claims for these differences in the sales under consideration were made. All comparisons were made at ex works level.

(72) As regards physical characteristics, the Commission isolated DRAM devices on the basis of the following technical characteristics and specifications:

— by product group, i.e. assembled DRAMs, processed wafers or processed dice,

— by density,

— by process, e.g. CMOS and NMOS including shrunk die versions,

— by package material (plastic, etc.),

— by type of packaging (DIP, LCC, SOP, etc.),

— by speed grade (access time),

— by lead frame coating,

— by configuration.

The export price of a product isolated in accordance with these characteristics and specifications was, therefore, easily compared with the normal value for an identical product.

(73) As regards allowances for directly-related selling costs, adjustments were made for differences in:

— transport, insurance, handling, loading and ancillary costs,

— packing,

— payment terms,

— warranties, guarantees, technical assistance and other after sales services,

— salesmen's salaries and commissions.

(74) In view of the relatively minor adjustments claimed for comparison purposes and the complexities of the investigation in other areas the Commission has accepted the claims made by exporters without detailed verification except in those cases where it was evident from the submissions that expenses claimed for allowances were not directly-related costs. This was particularly the case for intra-company transport and insurance costs, and salaries of staff alleged to be salesmen. In one other case, claims were made for patent fees. Without prejudice to the Commission's position on whether an allowance should be granted in this particular case for patent fees the Commission has not adjusted the submission made by the exporter concerned since the adjustment in question affected equally both normal value and export price and therefore has had no impact on the dumping calculation.

Arguments concernings comparison

(75) One exporter argues that in accordance with the requirement in Article 2 (9) (a) of Regulation (EEC) No 2423/88 that normal value and export price be determined as nearly as possible at the same time, the comparisons between normal value and export price should be made on a quarterly basis.

(76) The Commission has already explained at point 58 above why it considers this method of comparison inappropriate when related to the circumstances prevailing during the periode under investigation which affect the normal value determination. The method adopted by the Commission therefore leads to a comparison of normal value and export price as near in time as reasonably possible.

F. MARGINS

(77) Normal value for each of the devices of each exporter was compared with export prices of

comparable devices on a transaction-by-transaction basis. The preliminary examination of the facts shows the existence of dumping in respect of imports of DRAMs originating in Japan from all the Japanese producers/exporters investigated, namely Fujitsu Limited, Hitachi Ltd, Mitsubishi Electric Corporation, NEC Corporation, NMB Semiconductor Ltd/Minebea Co. Ltd, Miyazaki Oki Electric Co. Ltd/Oki Electric Industry Co. Ltd, Texas Instruments (Japan) Ltd, Toshiba Corporation, the margin of dumping being equal to the amount by which the normal value as established exceeds the proce for export to the Community.

The margins of dumping varied according to exporter and for each exporter according to importing Member State, DRAM device and customer. The weighted average margins of the exporters named above when expressed as a percentage of the cif Community-border price vary between 8,5 and 206,2 %.

(78) For those exporters which neither replied to the Commission's questionnaire, nor otherwise made themselves known, dumping was determined on the basis of the facts available in accordance with the provisions of Article 7 (7) (b) of Regulation (EEC) No 2423/88.

In this connection, the Commission considered that the results of its investigation provided the most appropriate basis for determination of the margin of dumping and that it would create an opportunity for circumvention of the duty to hold that the dumping margin for these exporters was any lower than the highest dumping margin of 206,2 % determined with regard to an exporter which had cooperated in the investigation. For these reasons, it is considered appropriate to use this latter dumping margin for this group of exporters.

(79) Three exporters which had exported *de minimis* quantities during the period under investigation made themselves known as interested parties at a late stage of the proceeding. The Commission considers that, to investigate dumping for these exporters which had, for company specific reasons, deliberately decided not to cooperate within the prescribed time limit would significantly impede the investigation. The Commission therefore considers that, for its preliminary determination, it is appropriate to use the highest dumping margin for these companies.

G. INJURY

(a) Development and present state of the Community industry

(80) The Commission received and verified detailed information on the DRAM activities of the complainant companies constituting the Community industry. This information has revealed that :

(81) (i) one of these companies entered the semiconductor business by acquiring, in 1983, a modern wafer fabrication facility. It decided to commence DRAM production in 1984 by purchasing technology from a foreign company with a view to supplying an important end-user with which a sales contract for large quantities of DRAMs had been concluded. This contract provided for delivery during the period from 1985 to 1987. The company invested heavily in the Community to establish both wafer processing and assembly operations.

Following the dramatic collapse of DRAM prices throughout 1985, it became apparent that the customer could not honour its contract, given that the purchase prices provided for were greater than the market prices at that time. Due to the dramatically low prices for DRAMs on the Community and world markets (far below the company's projected costs of production) and with its prime customer renouncing the contract, the company was forced to discontinue its DRAM manufacturing plans in early 1986. The losses that it suffered as a consequence were considerable. In 1985, the company sold relatively modest quantities of 64K DRAMs from its own production facility in the Community.

This company has been producing other MOS semiconductors since the acquisition of its wafer fabrication facility and has been endeavouring to re-enter DRAM production by means of a technology transfer agreement with an established DRAM producer.

(82) (ii) Another company produced and marketed relatively small quantities of DRAMs in the 1970s which it discontinued in 1981. In 1984 to 1986 it carried out research on various 256K DRAMs. In 1984 and 1985 this company considered setting up a DRAM production facility in the Community together with an important partner ; this project was not pursued because of the very low prices for DRAMs on the Community and world markets. This company is also a confirmed semiconductor producer and has significant production facilities in the Community, which could theoretically be used for DRAM production, requiring however, important capital investment.

(83) (iii) A third company is the subsidiary of a foreign corporation, the latter having already been (prior to the investigation period) a confirmed DRAM producer. In 1981, it decided to add DRAM production to its Community operations and adopted in 1981 an investment plan to this end, providing for significant capital investment over several years. Construction of the facility in the Community started in 1982 and the installation of equipment was finished in early 1985. The group to which this company belongs, having suffered massive financial losses in its DRAM business worldwide during 1985 decided to discontinue the planned ramping up of the facility and instead in September 1985 decided on its mothballing. The company discontinued worldwide DRAM production in early 1985 pending the outcome of anti-dumping actions taken against Japanese imports. The Community facility remained closed from the end of 1985 to mid 1986 and from June 1986 the facility was partially converted to produce microprocessors. The decision to discontinue DRAM production resulted in huge financial losses. The company in the meantime, being fully aware of the importance of mass DRAM production, continuously assessed and revised DRAM production plans in the light of DRAM market price developments and in March 1987 adopted an important investment programme for upgrading the facility with a view to re-entering DRAM manufacture. The programme envisaged commercial production of one megabit DRAMs which has now been realized. The company's DRAM production at its Community facility was delayed by two-and-a-half years due to excessively low dumping prices for DRAMs on the Community and world markets at the time.

(84) (iv) The fourth company operated prior to, during and after the investigation period, a DRAM production facility (both wafer processing and assembly operations) at premises outside the Community. These activities were significantly curtailed during 1986 and 1987 due to low market prices.

In early 1984 the same company adopted a project, which provided for mass production of one megabit and four megabit DRAMs — both wafer processing and assembly operations — in a new facility in the Community. This project contained a detailed investment plan, providing for important investments in production facilities and in research and development. It further contained a strict timing schedule, aiming for mass production of one megabit DRAMs to start in January 1987 and four megabit DRAMs to start in January 1989 with projections on production quantities and on costs of production. In 1985 this company entered into a technology transfer agreement with a major DRAM producer concerning primarily one megabit DRAMs. For early 1986 and throughout 1987, this company had to take various decisions to reduce its original investment plans for the DRAM producton due to the dramatic collapse in DRAM prices compared to those contained in its projections. In February 1986, it was decided to reduce planned capacity significantly. In its mid 1986 plan, the company decided not to build the second DRAM facility in the Community for the same reasons as above.

In September/November 1986, because of continuing extremely low DRAM prices, the expenditure of previously allocated investment was blocked. Primarily due to these decisions the final start of mass production was delayed considerably. Mass production of one megabit DRAMs finally started in late 1987/early 1988.

In the meantime this company has developed a four megabit DRAM, engineering samples have been available for some time and mass production is scheduled to commence in the second half of 1989.

(b) Status of the Community industry

(85) In the light of these facts, the first issue which arises with regard to the injury determination is whether the Community industry, as represented by the complainant companies, was, during the period up to the end of that covered by the investiglation, an established industry or an infant or nascent industry in the process of establishment.

(86) The complainants argue that the facts of this case are such that the Commission could reasonably determine injury under any of the three criteria contained in the anti-dumping legislation — material injury or threat of material injury to an established Community industry or the material retardation of the establishment of such an industry. Exporters argue that no established Community DRAM industry existed prior to or during the period under investigation and, in consequence, injury would have to be examined from the aspect of material retardation.

(87) When examining this issue, the Commission considers that, on the one hand, it could be reasonably argued that an industry which has the necessary production facilities, equipment and technological know-how and which has produced DRAMs albeit not on a commercial basis, should be regarded as being established. Under these conditions, the existence of material injury or threat of injury should be examined. On the other hand, if commercial production is to be a condition *sine qua non* for determining establishment, the Commission would have to consider whether the complainant companies constituted a nascent industry. In that case, the existence of injury through material retardation should be examined.

(88) In view of the particular circumstances of this case, it appeared appropriate to the Commission to examine whether the evidence available could lead to a determination of material injury or injury in the form of material retardation.

Injury factors

(a) Volume and market shares of imports of DRAMs of Japanese origin

(89) No precise figures concerning total imports and total consumption were available. However, on the basis of information obtained from parties involved in the proceeding and from a number of other sources the Commission was able to assess with suficient precision consumption in the Community. This revealed that DRAM consumption increased considerably from 1983 (30,5 million units), to 1987 (90,4 million units) peaking in 1986 (24 million units). In the same period, Japanese sales in the Community increased from 7,5 million units in 1983 to 63,7 million units in 1987, peaking at 105,5 million units in 1986. This development represents an increase of market share held by Japanese producers from 24,6 % in 1983 to 70,5 % in 1987 peaking at 85,1 % in 1986. It should be noted that these figures are based on DRAM units and the Commission cnsiders that, since demand is for memory capacity, a more precise method would be to calculate the number of bits of memory according to the memory density of individual units. The information available however, did not permit this calculation over the whole period concerned. The information does suggest that the consumption in 1987 when expressed in memory bits was higher than that shown on a unit basis and that the market share of the Japanese producers was also higher. Imports of DRAMs of Japanese origin could be measured in memory bits and, on this basis, showed a significant increase from 1984 to 1986 i.e.:

— 1984: 4,8 million megabits,

— 1985: 11,7 million megabits,

— 1986: 30,3 million megabits.

(90) It came to light during the investigation that a possible grey market existed for DRAM products in view of the fact that DRAM prices for certain devices were alleged to be somewhat lower in Japan than in the Community. It has not been possible to quantify such sales but, on the information available, it is believed that the quantities involved were relatively small. In any case, whatever the quantities may have been, their inclusion in the calculations would lead to an increase in the market share held by Japanese products.

(b) Prices

(91) The Commission's analysis of DRAM prices revealed that on the Community and world markets prices decreased significantly prior to and during the period under investigation. Only at the end of this period did prices stabilize or, for some devices, slightly increase. Further analysis revealed that this acute price decline was greater than could be expected from economies of scale and the learning-curve effect well known to this industry. In fact, prices of Japanese DRAMs were generally at levels below costs of production. These levels were also considerably lower than the projections of the Community industry which had been based onreasonable estimates of price developments in a fair market situation.

(c) Other relevant economic factors

(92) With regard to the general conditions of the Community industry already explained at points 80 to 84 above, the Commission found more specifically that planned production of the complainant companies would have represented a significant share of the total Community market in 1986 and would have exceeded Community demand in memory capacity in 1987. However, because of the low level of prices prevailing, available production capacity was never utilized for commercial production and planned increases in production capacity were curtailed. As a result, sales were practically non-existent and planned market shares never even partially attained.

This particular situation resulted in a negative impact on the financial situation of the Community industry. Important capital investments prior to and during the year ending 31 March 1987 produced no sales turnover, and hence no return on investment and a negative cash flow. Financial losses were consequently significant.

In addition, staff that had been hired and trained specifically for lthe envisaged DRAM production had to be laid off, retrained or transferred to other activities.

(d) Conclusion

(93) (i) *Material injury*

On the assumption that the Community DRAM industry was an established industry, the facts referred to above show that following the significant increase of Japanese DRAM imports and sales combined with rapidly declining prices the Community industry was not in a position to use installed production capacity. This resulted in important financial losses, lack or delay of return on investment and the necessity to retrain or lay off staff. This injury is considered as being material.

(ii) *Material retardation*

On the assumption that the Community DRAM industry was not yet an established industry the facts referred to above show the following:

— three complainant companies had made detialed plans on investment, production, costs, marketing and strict timing schedules with a view to commercial DRAM production in the Community. In order to implement these plans huge amounts of funds were available. All three companies had acquired the most advanced technological know-how necessary for DRAM production, very costly new facilities were built and state-of-the art machinery was acquired and installed. Already prior to the investigation period several hundred million ecus have been spent preparing for DRAM production.

In the light of this situation it can be said that these three complainant companies have made very serious commitments to start DRAM production in the Community which is *ex post*, confirmed by the fact that two companies now successfully produce 1 megabit DRAMs in the EC and further underlined by the continuous pursuit of serious projects to produce DRAMs in the Community by at least one further complainant company. The viability of these efforts is as well evidenced by the fact that all complainant companies habe been confirmed semiconductor producers, and indeed two of them have been confirmed DRAM producers, but with facilities situated outside the Community;

— The decisions taken by two of the companies subsequent to the very low prices on the DRAM market delayed the start of mass producton for one company for about one year and for another one for a significantly longer period. The third company which had temporarily abandoned its DRAM project due to the very low prices on the DRAM market has not commenced commercial mass production of DRAMs despite its continuous efforts;

— at least the three complainant companies referred to above have suffered heavy financial losses from delay/temporary abandonment of their important DRAM production projects and have either had no return on investment at all or a smaller return on investment at a later time. Furthermore two complainant companies had to lay off or retrain staff due to the temporary abandonment of DRAM production. Therefore, it is considered that the establishment of a Community DRAM industry has been materially retarded.

Argument concerning injury

(94) Several exporters argue that the commitment of some of the complainant companies to future DRAM production within the Community is doubtful since all their production facilities are outside the Community despite the fact that the Euopean semiconductor industry can benefit from very high levels of tariff protection.

(95) The investigation undertaken by the Commission clearly revealed the serious commitment to DRAM production in the Community of the companies referred to. Furthermore, current commercial production by two of these companies is evidence of the seriousness of those commitments.

(96) One exporter argues that its sales to the Community on a duty-unpaid basis should not be considered for the injury assessment as it claim that they were imported into the Community under an inward processing relief regime for incorporation in products which are subsequently exported.

No evidence at this stage has been submitted to corroborate the claim made. The Commission hs therefore decided for the purpose of its provisional determination, to include these sales in the injury assessment.

(97) Eurobit argues that prices have increased significantly since the period under investigation and injury has ceased.

It is difficult, if not impossible to appreciate facts, which have occured after the end of the period under investigation, in any event the information available to the Commission suggests that injury still persists.

H. CAUSATION OF INJURY BY THE DUMPED IMPORTS

(a) Effect of dumped imports

(98) In order to assess whether the injury suffered by the Community industry has been caused through the effects of dumping in the sense of Article 4 (1) of Regulation (EEC) No 2423/88, the Commission found that the condition of the Community industry characterized by unused production capacity and aborted or curtailed production plans coincides with the increase in volume of the low-priced DRAM imports originating in Japan.

(99) Furthermore, this finding is reinforced by the role played by the Japanese exporters in the market. In fact, on the basis of the information available, of the three trading entities exporting DRAMs to the Community in substantial quantities in 1983, Japan occupied the second position. In 1984, Japan moved to the first position and in 1985 and 1986 Japanese exporters occupied a dominant position by holding a 70 and 85 % share respectively of the Community market.

A similar development occurred on the world market generally, and the dominance of the Japanese exporters has to be seen in the light of the fact that they were generally selling at prices below their costs of production.

(b) Effect of other factors

(100) As to the possibility that injury to the Community industry might have been caused by other factors in the sense of Article 4 (1) of Regulation (EEC) No 2423/88, the Commission examined in particular, factors such as late market entry, inappropriate strategies, management, structural and technical problems. While it is correct that, at the time, the Community industry could be considered as a late entrant in DRAM production, the projects of the specific companies took this element into consideration. No evidence is available to suggest that the difficulties subsequently encountered should be attributed to late-market entry rather than the effects of the rapid increase in low-priced Japanese DRAMs. It is also correct that one of the complainant companies was experiencing technical problems. However it was established that these problems occurred well after the investigation period when the impact of the low-priced DRAM imports was already clearly evident. Furthermore, there is no evidence to suggest that these difficulties were any greater than the difficulties encountered by the Japanese producers in respect of the same generation of DRAMs.

(101) The Commission also examined whether injury may have been caused by factors such as volume and prices of imports which were not dumped, or contraction in demand. In this respect, the Commission found that the demand for DRAMs increased by more than 400 % over the period from 1983 to 1986 while imports of DRAMs from sources other than the Japanese suppliers decreased considerably both in absolute and in relative terms. In view of the dominant position of the Japanese suppliers, prices in general of DRAMs from third countries other than Japan were depressed to the same levels of the Japanese DRAMs. There are grounds for believing that these imports were therefore also dumped.

However, in view of the rapidly receding market share held by such imports the Commission has concluded that they could not have been a primary cause of the injury suffered.

(102) The Commission therefore concludes for its provisional findings that factors other than the imports of low-priced Japanese DRAMs have not contributed in any significant manner to the injury suffered by the Community industry.

(c) Arguments concerning causality

(103) Several exporters argue that the Japanese industry is continuing to lose market share to American and Korean producers as well as Siemens.

(104) The information available to the Commission shows that Japanese exporters increased their Community market share significantly during the period 1983 to 1986 while all other exporters lost market share. For the period 1987, the information available shows a decrease in market share for the Japanese exporters, although they still held more than 70 % of the Community market, with corresponding gains for other suppliers in particular South Korean suppliers.

(105) The Commission confirms its preliminary determination that the cause of the injury has been the surge in low-priced Japanese DRAM imports up to the end of 1986 which led the Japanese to obtain a

huge share of the Community market. It is correct that Japanese imports declined in 1987 from a very high level to a lower but still high level of penetration. This situation was alleged by several interested parties to result from the combined effects of the agreement reached between the United States of America and Japan in semiconductor trade and the intiation of the Community's anti-dumping proceeding.

(106) In addition, the Commission points out that the statistics submitted by certain interested parties identify suppliers by the nationality of the parent company and not according to their status with regard to the anti-dumping proceeding.

This approach has frequently led to a misinterpretation of the figures on their behalf.

(107) A number of exporters argue that as a result of the US-Japan agreement they were subject to rigorous Japanese Government measures that have discouraged price undercutting resulting in a strengthening of average market prices of DRAMs in Europe.

(108) The Commission's analysis of prices in Japan and in the Community indicates that indeed prices tended generally to rise towards the end of the period under investigation. However, in spite of this, dumping was still taking place, although to a lesser degree, when compared to the situation at the beginning of the period under investigation.

(109) Certain Japanese exporters argue that Japanese producers have neither been in a position to set market prices nor have they encouraged downward price movements but rather that normal DRAM price reductions due to learning curve and product life cycle effects have been exacerbated by the worldwide recession in the semiconductor market.

(110) The Commission cannot accept these arguments. The Community market for DRAMs has expanded considerably since 1983 and the Japanese exporters taken together have increased substantially their market share contrary to the situation of practically all other suppliers.

(111) Furthermore, one Japanese exporter argues that its pricing had been driven exclusively by the need to meet competitive pressures in the Community market and thus by prices charged by its competitors; it argued that it was not undercutting or setting price trends but was consistently in the upper range of the other Japanese prices.

(112) Taking this into consideration, together with the fact that the Japanese exporters were generally selling below cost, the Commission is of the opinion that there are strong grounds for regarding the Japanese exporters collectively as price leaders.

(113) Several exporters argue that other fundamental factors were responsible for the complainants failure to establish a viable European-based DRAM industry citing late-market entry, poor performance on non-price factors, inappropriate products strategy, management and structural changes, technical problems and concentration on their domestic market.

(114) The Commission has already dealt with the effect of other factors on the Community industry, where they are relevant, in point 100 *et seq.* The investigation has shown that the arguments raised are unfounded.

(d) Conclusion

(115) In conclusion, the volume of the dumped imports, their market penetration, the prices at which the dumped DRAMs have been offered in the Community market and the condition of the Community industry has led the Commission to determine for the purpose of its preliminary findings that the effects of dumped imports of DRAMs originating in Japan, taken in isolation, have to be considered as causing injury to the Community industry. The Commission has reached the conclusion that the facts of this case support a finding of both material injury and injury in the form of material retardation. In the first instance, the huge financial losses resulting from the non-utilization of plant and manpower have to be considered as material whether related to an established industry or an industry that exists but which is in an infant or nascent state. In the second instance, the dumped imports have clearly materially retarded the development of a Community industry, established or otherwise, by causing delays in the adoption of decisions that would have occurred in a fair market environment. The Commission therefore is of the opinion that the question of whether the Community industry was established at the time can, in these circumstances, be left open.

I. COMMUNITY INTEREST

General considerations

(116) In assessing whether it is in the interest of the Community to take measures against dumped imports of DRAMs from Japan which have been

shown to cause injury to the complainant Community industry, the Commission has taken into consideration charges in supply and demand factors on the Community market, the benefits derived from mass DRAM production, and the particular situation of the Community DRAM industry and user industries.

With regard to changes in supply and demand, the Commisson notes that Japanese suppliers held a share of the Community market in 1983 inferior to that of US and European suppliers, taken in isolation, whereas they have now reached, to a large extent through dumping practices, a dominant position not only in the Community but also worldwide. The resulting withdrawal of the majority of US DRAM producers from the market, impediments to volume production by the Community industry, in addition to technical difficulties experienced generally with one megabit DRAM production and an increase in demand have, in combination contributed, in the Commission's view, on the one hand, to the recent Dram shortages and higher prices, and on the other hand, to a dependence of the electronics user industries on Japanese suppliers.

With regard to the benefits derived from mass DRAM production, the Commission is of the view that a viable Community DRAM industry will contribute to a strong Community electronics industry overall. First, DRAM's service as a technology driver for other more complex semiconductor devices. Second, the semiconducter industry of which DRAM production is a part is a strategic industry in that semiconductors are a key component for the data processing, telecommunications and automotive industries.

Third, the use of the most advanced technology in DRAM production not only improves the competitiveness of this industry but alos that of the downstream electronics industry. Fourth, a viable Community DRAM industry will provide an alternative source of supply to the Community electronics industry thereby reducing dependence on the dominant Japanese producers of DRAMs. This latter aspect is considered essential given the fact that Japanese producers are generally vertically integrated and also manufacture the end products which compete with those produced by the Community electronics industry.

As regards the particular situation of the Community DRAM industry, the Commission notes that, of the three complainant companies that had serious commitments to large-scale DRAM production during the period under investigation, two are already engaged in commercial production although production plans have not yet been fully implemented. This state of affairs renders them particularly vulnerable to any renewed dumping practices.

Arguments concerning Community interest

(117) Most parties involved in the proceedeing submitted arguments on whether the imposition of anti-dumping duties or other measures are in the interests of the Community. Nearly all Japanese exporters argue against the imposition of duties. The arguments made by them are in most cases variations of a smaller number of core arguments which are itemized below:

— the imposition of anti-dumping duties would not be in the Community interest because they would raise the average prices of DRAM products in the Community thereby adversly affecting the competitive position of certain high tecnology industries and undermining efforts to make such industries more competitive.

— US, Korean and other non-European producers will benefit from such higher prices far more than the complainants,

— there is no indigenous production of DRAMs by the complainants; there would be lenghty delays before such facilities could be established; the industry is not equipped to produce DRAMs in volume,

— higher prices would encourage som DRAM users to consider moving parts of the operations overseas,

— the complainant's market share would not increase significantly because they are likely to be uncompetitive on costs and non-price factors;

— European initiatives such as Eureka and Esprit are examples of a more appropriate approach to a resolution of the Community industry's problems.

— anti-dumping duties imposed on wafers and dice would adversely affect employment in European plants owned by Japanese companies,

— distributors of Japanese DRAMs would lose profits and suffer a contraction in employment, some would be forced out of business,

— the cost of anti-dumping duties to DRAM consuming industries would be completely disproportionate to any benefit which might result for the complainants.

(118) Eurobit, representing certain users clearly stated that it condemned dumping and fully supports the need for developing a strong European industry manufacturing integrated circuits. Eurobit argues however, that no measures should be taken in this case given the protection already afforded to the Community DRAM industry by high customs tariffs and that any additional protective measures whether in the form of anti-dumping duties, undertakings or other measures would hamper the competitiveness of DRAM users further since DRAM prices have increased significantly since the period under investigation and injury has ceased. Eurobit argues in particular that:

— the European computer industry will progressively lose its competitiveness in the EC and in third country markets,

— the Community computer industry would be driven out of full-scale production in the Community and partially forced to produce and/or assemble computers in third countries,

— the Community computer industry which already made substantial investments in the Community would be forced to discontinue further investment,

— thousands of jobs would be eliminated all over Europe.

(119) EECA, representing the complainants, argues that the taking of measures is in the interest of the Community on the grounds that:

— manufacturing skills in semiconductor technology are crucial for a strong European electronics industry as a whole — including Eurobit's members — since the DRAM is a major semiconductor technology driver, and the semiconductor industry is a strategic industry,

— without viable semiconductor production, competitiveness of European producers of other electronic products will be endangered and will remain at a technological disadvantage compared to Japanese producers,

— the European electronics industry must have a local source of supply, and be enabled to cooperate with Community semiconductor producers in order to develop new, competitive electronic products. All major Japanese semiconductor producers are veritcally integrated, and compete with Eurobit's members. Not to safeguard a viable Community DRAM industry would mean to restrict Eurobit members to only one source of supply; their Japanese competitors,

— without European DRAM producers, competition would be reduced and a strong market force would disappear so that third country producers would be able to dictate the types of product to be supplied as well as their prices.

(120) The Commission has taken account of all the views advanced and the detailed study submitted by one Japanese exporter on the economic impact of anti-dumping duties on Japanese DRAMs.

(121) In the first instance, the Commission recognizes the importance of a strong Community electronics industry for Community industry generally and the strategic role played by DRAMs in this respect as a product at the leading edge of technology. Community action in the field of research and development projects such as Jessi are evidence of this recognition. Such action is taken to improve competitiveness of an industry on the general understanding that it will be able to operate in a fair market environment.

(122) Second, as to the arguments raised by exporters and users concerning the negative impact of higher prices on the Community market resulting from the imposition of anti-dumping duties, the Commission cannot accept that advantages gained in the past through unfair dumping practices can now be invoked as a justification for not taking the necessary steps to establish a fair trading situation. The Commission points out that prices have already increased considerably since the period under investigation without any measures having been taken and that importers, distributors and Japenese companies assembling in the Community have appeared to cope with such a situation without succumbing to the consequences alleged.

(123) More specifically, Eurobit argues that the European computer industry would lose its competitiveness and would be forced to produce or assemble computers in third countries. In other words, if DRAM prices were to be higher in the Community than in other markets around the world, third country computer manufacturers would gain a competitive edge forcing European computer manufacturers to produce in a market where they could benefit from lower DRAM prices.

The Commission acknowledges this argument but cannot accept the implications for this proceeding. Prices of DRAMs have been generally somewhat higher in the Community than in some other markets for many years partially due to the difference in tariffs and this has no doubt affected the

competitiveness of the data processing industry. However, the major reason for the lower prices in third countries has to be examined. In fact dumping by Japenese exporters has been established in the US market in 1985 and on the Community market in 1986 and early 1987. The implication of Eurobit's argument is therefore that dumping on the Community market should be tolerated in order to ensure the competitiveness of the Community computer industry if through dumping in third country markets DRAM prices would be lower. This would run counter to the underlying principle of ensuring fair trade.

(124) As to the argument that the cost of anti-dumping duties to the DRAM consuming industries would be completely disproportionate to any benenfit which might result for the complainants, the Commission concludes that the study undertaken in this area by a certain business consultancy firm is inconclusive since it is, on the one hand incomplete and, on the other hand, based in certain areas on information proved to be incorrect by the Commission's investigation.

(125) The Commission considers that the study is incomplete because it did not consider *inter alia*;

— the huge losses sustained by Community complainant companies and the gains made by the user industry as a result of dumping,

— the Community DRAM suppliers' position under normal market conditions and not that immediately following substantial dumping activity by exporters to the Community,

— the future development of the Community DRAM industry under normal market conditions,

— the technological benefits in other areas derived from DRAM production.

(126) As to the argument that the US, Korean and other non-European producers will benefit from higher prices of DRAMs more than the complainants as a result of a switch in demand, the Commission considers that, as far as US suppliers are concerned, this is unlikely to happen given the current situation of the US industry and share of the Community market. With regard to Korean and other third country suppliers, which according to the information available hold a limited share of the Community market, the Commission would take appropriate action should it become evident that such suppliers dump.

(127) With regard to the argument that no measures should be taken in view of the protection afforded by the tariff on imports of DRAM's the Commission points out that Eurobit's argument is tantamount to sying that, where injurious dumping is found, it should be tolerated, at least up to the level of any tariff. Such an argument cannot be accepted by the Commission, since, on the one hand, it would be contrary to the general principle that injurious dumping is actionable and, on the other, it would lead to a negation of decisions taken in the area of customs tariffs.

(127a) It is true that during the investigation period and thereafter duty suspensions existed in the Community for a number of products covered by this proceeding. The Commission considers however that the existence of duty suspensions has no impact on anti-dumping proceedings, because the objectives pursued by both sets of rules are totally different.

(128) Finally, the Commission has considered the arguments concerning the complainants with regard to their inability to supply DRAMs in volume on a competitive basis.

The preliminary findings have established that dumped DRAMs originating in Japan have severely injured the Community DRAM industry and prevented it from being established as a viable industry. Since the investigation period, further serious efforts have bean made through additional investments to produce DRAMs in volume in the Community. Time has shown that these efforts are producing results. The Commission's examination of investments, production plans and projected costs revelas that the Community industry will be in position to supply in a fair market environment a large share of the Community demand at competitive prices.

(129) In conclusion, after having considered the various arguments of all interest parties, the Commission considers that on the basis of its provisional findings Community interest calls for protection to the Community DRAM industry to ensure that it can develop in a fair market environment. However, given the particular characteristics of the DRAM industry characterized by short life-cycle products, volatile and rapidly declining costs and price development since the period under investigation, the Commission considers that in the interest of the Community, the necessary protection should be given by means of a measure which could be suitably tailored to follow the dynamics of the DRAM industry without causing unnecessary hindrance to the user industry.

J. MEASURES

Price undertakings

(130) The Commission considers that price undertakings by the Japense exporters involved would be the most appropriate measure in this case since they could incorporate the necessary conditions to provide the required flexibility. The Commission therefore informed the exporters that had cooperated in the investigation of the main findings of the preliminary determination and the exporters concerned commented on the findings. The Commission subsenquently suggested undertakings in accordance with Article 10 (3) of Regulation (EEC) No 2423/88. The following exporters, namely Fujitsu, Hitachi, Matsushita, Mitsubishi, NEC, NMB, Oki, Sanyo, Sharp, Texas and Toshiba, offered undertakings concerning their exports of DRAMs to the Community.

(131) The effect of the said undertakings will be to ensure that sales prices in the Community do not fall below a certain reference price level considered adequate to eliminate to a satisfactory extent the injury caused to the complainant companies, due consideration being given to the exporters' actual and projected costs of production. The reference price level will be determined quarterly on the basis of constructed values of certain DRAM types for each Japanese expoter. In addition, the correct operation of the undertakings can be effectively monitored.

(132) In the circumstance, the undertakings offered are considered acceptable and the investigation may, therefore be terminated in so far as these exporters are concerned.

(133) An objection to this course of action was raised in the Advisory Committee by one Member State.

Duty

(134) On the basis of the information available, the Commission believes that the exporters which have offered undertakings currently represent all Japense DRAM producers which export DRAMs to the Community. However, in order to safeguard the effectiveness of the undertakings by covering, *inter alia*, 'grey market' sales to the Community, known to exist for this product, a provisional anti-dumping duty should be imposed.

(135) One exporter argued that it would be inappropriate to impose an anti-dumping duty on wafers since wafers are also used in the production of products outside the investigation.

(136) The Commission cannot accept this argument. The dice on the wafers are regarded as a like product to DRAMs and all DRAMs are electronic components to be incorporated into downstream products that fall outside the scope of this proceeding.

(137) Given that such duty to be imposed has to be at a level equal to the highest dumping margin found for an exporter cooperating in the proceeding but should be lower if a lesser duty would be adequate to remove the injury, the Commission quantified the injury caused to the complainant companies by dumped imports in the following manner:

Japense weighted average resale prices of specific DRAM types were compared with the estimated costs of production of the same types which the complainant companies had intended to manufacture on a commercial basis. Normally, the Commission would have added a reasonable profit margin to these cost figures to take into account, *inter alia*, new research and development programmes and continuous investment required for the company to remain viable. However, since the addition of a profit margin has no impact in this case, the comparison indicated above was limited to the Community companies' estimated costs of production without the addition of a profit margin.

In all cases, the comparison of the Community companies' estimated costs with each Japenese exporter's resale price for the given product revealed that the latter was considerably lower. The difference was calculated for each type and density, weighted by the exporter's sales quantities in the Community and expressed finally as a percentage of the cif value for the same quantities used in the calculation.

The result of this operation shows that the dumping margins established for each Japanese exporter, when expressed as a percentage of cif value, are considerably lower than the percentages obtained above, i.e. the percentage required to eliminate injury.

In conclusion, the injury level established is greater than the highest dumping margin found when both are expressed as a percentage of cif import values.

(138) However, given the specific circumstances of this case, in particular the fact that all known Japanese DRAM producers exporting to the Community have offered acceptable undertakings (see point 131) aqnd as a consequence of the methodology applies in the undertakings for the reference price calculation, the Commission considers that considers that duty lower than the highest dumping margin found in the investigation is sufficient to achieve the objective of imposing a residual duty in this case. Furthermore, in view of the numerous different DRAM devices exported and the volatility of costs and prices in this industry, the provisional

duty should be in the form of an *ad valorem* duty. In the light of these considerations the rate should be 60 % of the net free-at-Community border price before duty.

(139) In view of the fact that the undertakings offered by the exported named at point 130 above are considered acceptable, these exporters can be excluded from the scope of application of the duty on imports of DRAMs originating in Japan.

(140) A period should be fixed within which the parties concerned may make their views known and request a hearing,

HAS ADOPTED THIS REGULATION:

Article 1

1. A provisional anti-dumping duty is hereby imposed on imports of certain types of microcircuits known as DRAMs (dynamic random access memories) falling within CN codes ex 8473 30 00, ex 8542 11 10, ex 8542 11 30, ex 8542 11 71 or ex 8548 00 00 (for Taric and additional codes see Annex II), originating in Japan.

2. For the purpose of this Regulation, DRAMs comprise all types and densities including unifished forms such as wafers and dice (mounted or unmounted) and multi-combinational forms such as 'stack DRAMS' and 'modules'.

3. The rate of the duty shall be 60 % of the net free-at-Community-frontier price before duty.

4. Products referred to in paragraph 1 shall be exempt from the duty specified in this Article, provided that:

— they are produced and exported to the Community by the following companies which have given an undertaking which is accepted pursuant to Article 2:

  — Fujitsu Limited,
  — Hitachi Ltd,
  — Matsushita Electronics Corporation,
  — Mitsubishi Electric Corporation,
  — NEC Corporation,
  — NMB Semiconductor Co. Ltd,
  — Oki Electric Industry Co. Ltd,
  — Sanyo Electric Co. Ltd,
  — Sharp Corporation,
  — Texas Instruments (Japan) Ltd, and
  — Toshiba Corporation,

  or that

— they are produced by one of the companies listed above and exported to the Community by one of its affiliated companies listed in Annex I,

  or that

— they are produced, and sold for export to the Community, by one of the companies listed in the first ident: in this case, exemption from the duty shall be conditional upon presentation to the Costums authorities of documentation from the producers confirming that it sold the products for which the exemption is sought for export to the Community; the documentation (the format of this documentation is contained in Annex III) must contain a clear description of the device type(s) sold, the total quantity per device type, the unit price per device type, the invoice number and the confirmation that these products were produced and sold for export for the Community by the said company under the undertaking referred to in Article 2 of this Regulation.

5. The provisions in force concerning customs duties shall apply.

6. The release for free circulation in the Community of the products referred to in paragraph 1, other than products imported under the conditions set out in paragraph 4, shall be subject to the provision of a security, equivalent to the amount of the provisional duty.

Article 2

The undertakings offered by Fujitsu Limited, Hitachi Ltd, Matsushita Electronics Corporation, Mitsubishi Electric Corporation, NEC Corporation, NMB Semiconductor Co. Ltd, Sharp Corporation, Texas Instruments (Japan) Ltd, and Toshiba Corporation in connection with the anti-dumping proceeding concerning imports of certain types of micro-circuits known as DRAMs falling within CN codes ex 8573 30 00, ex 8542 11 10, ex 8542 11 30, ex 8542 11 71 or ex 8548 00 00 and originating in Japan, are hereby accepted.

Article 3

The investigation in connection with the anti-dumping proceeding referred to in Article 2 is hereby terminated in respect of the companies named in that Article.

Article 4

Without prejudice to Article 7 (4) (b) and (c) of Regulation (EEC) No 2423/88, the parties concerned may make known their views and apply to be heard orally by the Commission within one month of the date of entry into force of this Regulation.

Article 5

This Regulation shall enter into force on the day following its publication in the *Official Journal of the European Communities.*

Subject to Articles 11, 12 and 13 of Regulation (EEC) No 2423/88, Article 1 of this Regulation shall apply for a period of four months, unless the Council adopts definitive measures before the expiry of that period.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 January 1990.

For the Commission
Frans ANDRIESSEN
Member of the Commission

ANNEX I

List of companies affiliated to producers named in the first indent of Article 1 (4) of the Regulation.

Companies affiliated to Fujitsu Ltd, Japan:

— Fujitsu Microelectronics Inc., USA,
— Fujitsu Microelectronics Pacific Asia Ltd, Hong Kong,
— Fujitsu Microelectronics Asia PTE Ltd, Singapore,
— Fujitsu Microelectronics (Malaysia) Sdn. Bhd., Malaysia,

Companies affiliated to Hitachi Ltd, Japan:

— Hitachi America Ltd, USA,
— Hitachi Semiconductor (America) Inc., USA,
— Hitachi (Canadian) Ltd, Canada,
— Hitachi Asia Pte, Ltd, Singapore, Malaysia, Indonesia,
— Hitachi Asia (Hong-Kong) Ltd, Hong-Kong, South Korea, China, Taiwan,
— Hitachi Semiconductor Technology (Malaysia) Snd. Bhd., Malaysia,
— Hitachi Australia Ltd, Australia,
— Nissei Sangyo Co., Ltd, Japan, Hong Kong, Taiwan, Australia,
— Nissei Sangyo America Ltd, USA,
— Nissei Sangyo (Singapore) Pte, Ltd, Singapore;

Companies affiliated to Mitsubishi Electric Corporation, Japan:

— Mitsubishi Electric America Inc., USA,
— Mitsubishi Semiconductor America Inc., USA;

Companies affiliated to NMB Semiconductor Co. Ltd:

— Mineba Co., Ltd, Japan,
— NMB Corporation, USA,
— Keiaisha NMB Co., Ltd, Japan,
— NMB Technologies Inc., USA,
— Mineba Co., Ltd, Singapore branch, Singapore,
— Mineba Co., Ltd, Seoul branch, South Korea,

Companies affiliated to Oki Electric Industry Co. Ltd:

— Oki Semiconductor Group, a division of Oki America, Inc.,
— Oki Electronics (Hong Kong) Ltd, (Singapore and Taipei branches);

Companies affiliated to Sanyo Electric Co. Ltd:

None;

Companies affiliated to Sharp Corporation:

None;

Companies affiliated to Texas Instruments (Japan) Ltd:

— Texas Instruments, Inc., USA,
— Texas Instruments Pte, Ltd, Singapore;

Companies affiliated to Toshiba Corporation:

Toshiba America Electronic Components, Inc.,

Companies affiliated to NEC Corporation:

— NEC Electronics Inc., USA,
— NEC Electronics Pte, Ltd, Singapore,
— NEC Electronics Ltd, Hong Kong,
— NEC Australia Pte, Ltd, Australia,
— NEC Semiconductors Sdn. Bhd., Malaysia,

Companies affiliated to Matsushita Electronics Corporations:

— Matsushita Electric Industrial Co., Ltd, Japan,
— Matsushita Electric Corporation of America, USA,
— Quasar Company, a division of Matsushita Electric Corporation of America, USA,
— Matsushita Services Company, a division Company of Matsushita Electric Corporation of America, USA,
— Matsushita Communication Corporation of America, USA,
— America Kotobuki Electronics Industries, Inc., USA,
— Matsushita Industrial Canada Ltd, Canada,
— Matsushita Electronic of Canada Ltd, Canada,
— Kotobuki Electronics Industries (S) Pte, Ltd, Singapore,
— Matsushita Graphic Communication Systems (S) Pte. Ltd, Singapore,
— Matsushita Television Co., (Malaysia) Sdn. Bhd., Malaysia,
— Matsushita Sales and Service Sdn. Bhd., Malaysia
— Matsushita Communication Industrial Corporation of the Philippines, The Philippines,
— Matsushita Denshi (S) Pte, Ltd, Singapore,
— Asia Matsushita Electric (S) Pte, Ltd, Singapore,
— Panasonic Industrial Company, a division company of Matsushita Electric Corporation of America, USA,
— AMAC Coproration, USA,
— Sung Tien Mou Co., Ltd, China,
— Panasonic (Australia) Pty, Ltd, Australia,
— Matsushita Electric Trading AG, Switzerland,
— Panasonic Svenska AB, Sweden,
— Panasonic Norge A/S, Norway,
— Panasonic Austria Handelsgesellschaft mbH, Austria,

ANNEX II

Taric and additional codes

CN code	Taric codes
ex 8473 30 00	8473 30 00* 15
ex 8542 11 10	8542 11 10* 20
ex 8542 11 30	8542 11 30* 40
ex 8542 11 71	8542 11 71* 54 8542 11 71* 55 8542 11 71* 59 8542 11 71* 67 8542 11 71* 71 8542 11 71* 84 8542 11 71* 85 8542 11 71* 86 8542 11 71* 94 8542 11 71* 95
ex 8548 00 00	8548 00 00* 20

Additional codes	Firms/rate
8295	Fujitsu Limited Hitachi Limited Matsushita Electronics Corporation Mitsubishi Electric Corporation NEC Corporation NMB Semiconductor Co. Ltd Oki Electric Industry Co. Ltd Sanyo Electric Co. Ltd Sharp Corporation Texas Instruments (Japan) Ltd and Toshiba Corporation *No anti-dumping duty* (1)
8296	Other : %

(1) Also included here are affiliated companies mentioned in Annex I and other companies complying with the conditions in the third indent of Article 1 (4) of this Regulation.

ANNEX III

Certification document pursuant to the third indent of Article 1 (4) of this Regulation

1 Exporter (Name and full address)	**DOCUMENTATION** **FOR IMPORT OF DRAMs** **IN THE EUROPEAN COMMUNITY**
2 Consignee (Name and full address)	**3** ISSUING COMPANY (Name and full address)
NOTE This documentation must be presented to the competent customs office in the European Community together with the entry for free circulation relating to the products	**4** Invoice number(s)

5 Description of the device type(s)	**6** Total quantity per device type	**7** Unit price per device type

8 This is to confirm that the products shown above were produced and sold for export to the European Community by the company shown in box 3 under the undertaking referred to in Regulation (EEC) No 165/90.

Place and date : .....

Signature : .....

9 For use by competent customs office in the European Community