

## **9-2 Basic Policy of Financial Evaluation**

### **9-2-1 Financial Analysis Methods**

This section evaluates the effects of the investment by analyzing the revenue and expenditure expected when the equipment and facilities described in Section 10-1 are introduced. If additional investment is made in the existing plant in operation, it will be difficult to distinguish between the effects of the existing plant and the additional investment. Thus, this financial analysis employed the following methods.

(1) Maintenance of existing plant - Case: WITHOUT (W/O)

A financial analysis is made based on the current operating conditions, assuming that no new investment would be made.

(2) New investment - Case: WITH (W)

The sales volume of seats depends on the quantity of cars produced by the automaker to which the seats are delivered. Therefore, an annual output of 50,000 passenger cars is assumed when making the analysis to determine the financial situation which includes the effects that the new investment is expected to have on productivity.

(3) Return on investment - Case: WITH minus WITHOUT (W-W/O)

To clarify the effect of the new investment, the revenue and expenditure of the WITH case (new investment) are compared with those of the WITHOUT case (no new investment), and the difference is regarded as the effect of the new investment.

For the above mentioned cases, the internal rates of return on investment and the internal rates of return on equity are determined by the discounted cash flow method.

The seat departments of the Bus I, Bus II, and Passenger Car Seat Divisions also produce products other than automotive seats. The analysis is conducted for the whole of the products of the seat departments including these products since it is difficult to separate the administrative expenses of these products.

### **9-2-2 Preconditions for the Financial Evaluation**

The following paragraphs describe the main premises for financial evaluation associated with the modernization plan.

## 1) Periods of modernization plan

Based on the schedule described in Section 9-1-4 item 2) Disbursement Schedule the following periods are used.

- (a) Introduction period
  - First investment: 1996 (1 year)
  - Second investment: 1997 (1 year)
- (b) Project period (operating period)
  - 1998 to 2005 (8 years)

## 2) Prices used

The prices as of February 1996 are used as standards. The following currency exchange rates are used:

- US\$1 = 106 yen (¥)
- US\$1 = 142 forints (Ft)
- US\$1 = 1.48 Deutsche marks (DM)

The fixed exchange rates shown above are used throughout the period of the project because it is difficult to predict changes in exchange rates. As agreed with IMAG, the exchange loss is assumed to be 1.5% of the material cost of the passenger car seats.

## 3) Escalation

Escalation is not applied to any of the costs or prices throughout the period of the project.

## 4) Short-term loans payable

Any shortage of funds in a business year is assumed to be financed by a short-term loan on the terms shown below.

- Interest rate: 30%/year
- Repayment method: Lump-sum payment in the next fiscal year

## 5) Taxes

The following taxes are calculated.

- Corporation tax: 40% of taxable income
- Loss or profit may be carried over for up to five years.

Tax on business activities: 4.5% of sales volume  
 Tax on education: 1.5% of sales volume  
 Import duties: Duties and fees on imported raw materials are assumed to be exempted.

## 6) Depreciation

As agreed with IMAG, depreciation is calculated in the following way.

Existing assets: Bus I and Bus II Divisions: HFT 26,743,000/year  
 Passenger Car Seat Division: HFT 25,000,000/year  
 Newly introduced equipment: Straight line method (period of depreciation: 6 years; residual value: 0%)  
 New buildings: Straight line method (period of depreciation: 20 years; residual value: 0%)  
 Interest during construction: Not subject to depreciation

## 7) Working capital

Accounts receivable: 40 days' sales volume  
 Accounts payable: 8 days' sales volume  
 Stock of finished goods  
 Bus seats: 3 days' sales volume  
 Passenger car seats: 3 days' sales volume  
 Work-in-process: 3 days' manufacturing cost  
 Stock of raw materials and spare parts  
 Bus seats: 1.5 months' material cost  
 Passenger car seats  
 CKD parts: 3 months' material cost  
 Cloth: 1 month's material cost  
 Others: 0.5 month's material cost

## 8) Appropriation of surplus

Since the method of profit appropriation for each business year is undecided, this financial analysis treats earned surpluses as unappropriated profits.

### 9-2-3 Manufacturing Costs

#### 1) Variable costs

##### (1) Material costs

The break down of the material cost is as follows. The material cost of bus seats account for 5.1% for PVC leather and 21% for urethane foam of the total material costs. The material cost of passenger car seats account for 64% for CKD parts imported from Japan and 25% for cloth imported from Austria of the total material costs.

|                         | <u>Bus Seat</u> | <u>Passenger Car Seat</u> |
|-------------------------|-----------------|---------------------------|
| Iron and steel material | 15.3            | 1.0                       |
| Aluminium               | 27.7            | -                         |
| CKD parts               | -               | 64.0                      |
| Urethane material       | 21.3            | 7.5                       |
| PVC leather             | 5.1             | 3.0                       |
| Cloth                   | -               | 24.6                      |
| Other material          | 30.6            | 0.1                       |
| <b>Total</b>            | <b>100.0%</b>   | <b>100.0%</b>             |

The present modernization plan places emphasis on cost reduction. It is assumed that the plan will result in the following cost reductions.

##### a) Cutting and sewing process

The plan will reduce losses in PVC leather and cloth surface materials in the cutting process.

##### b) Urethane foaming process

Using two heads in the foaming equipment will reduce the weight of urethane foam in passenger car seats, resulting in a reduction of the material.

The material costs in the WITH cases (in which new equipment would be introduced) are calculated as a percentage of the equipment costs in the WITHOUT cases (where new equipment would not be introduced). Based on the above, the reduction rates of material costs in the WITH cases are calculated as follows, assuming that those in WITHOUT cases are to be 100%.

|                   | <u>Bus Seat</u> |             | <u>Passenger Car Seat</u> |             |
|-------------------|-----------------|-------------|---------------------------|-------------|
|                   | <u>Without</u>  | <u>With</u> | <u>Without</u>            | <u>With</u> |
| Urethane material | 100.0%          | 100.0%      | 100.0%                    | 92.0%       |
| PVC leather       | 100.0%          | 95.0%       | 100.0%                    | 94.0%       |
| Cloth             | -               | -           | 100.0%                    | 95.0%       |

IMAG is trying to increase the local procurement rate of CKD parts currently imported from Japan. The ratio of imports is expected to fall to 43% in 1996 compared to the previous year, and as low as 25% in 1997 compared to the year 1995. The revenue is expected to increase greatly if local procurement is fully realized. However, the present financial analysis does not take into account the effect of local procurement since local procurement prices are unknown and local procurement will not affect the difference between the WITH and WITHOUT cases which are the way the return on investment is calculated.

(2) Utility costs

The equipment to be introduced will not consume a large amount of electric power. The utility costs are assumed to be as follows in both WITH and WITHOUT cases, based on the 1995 financial statement.

Bus seat divisions: 4.9% of sales volume  
Passenger Car Seat Division: 0.2% of sales volume

(3) Expense for consumables

Bus seat divisions: 2.9% of sales volume  
Passenger Car Seat Division: 3.2% of sales volume

2) Fixed costs

(1) Personnel expenses

The modernization will reduce or increase the number of direct workers for the reasons shown below.

(a) Urethane foaming process

Reduction of the waiting time due to increase of injectors.

Effect of the automatic cover control devices and degassing apparatus which intensify work.

(b) Cutting process

Bus seat division:

Man hours will be increased due to the shift from press cutters to hand-operated jigsaw.

(Hereafter, the term "bus seat division" will mean the departments associated with the production of seats for buses and railroad vehicles in the Bus I and Bus II Divisions.)

Passenger car seat division: Effect of the introduction of pattern layout copiers and automatic spreading machines.

(Hereafter, the term "passenger car seat division" will mean the departments associated with the production of passenger car seats in the Passenger Car Seat Division, Bus I Division and Bus II Division.)

(c) Sewing process

Effect of the appointment of an exclusive setup staff and the use of performance display boards

(d) Assembly process

Effect of the introduction of the flow production method, automatic machines, and belt conveyors

The reduction personnel for each process by introducing new equipment is shown below.

| [Reductions in personnel]       | [Present]  | [After improvements] | [Number of reduction] |
|---------------------------------|------------|----------------------|-----------------------|
| <b>Urethane foaming process</b> |            |                      |                       |
| Bus seat division               | 8          | 7                    | -1                    |
| Passenger car seat division     | 37         | 30                   | -7                    |
| <b>Cutting process</b>          |            |                      |                       |
| Bus seat division               | 10         | 14                   | +4                    |
| Passenger car seat division     | 13         | 9                    | -4                    |
| <b>Sewing process</b>           |            |                      |                       |
| Bus seat division               | 9          | 8                    | -1                    |
| Passenger car seat division     | 56         | 45                   | -11                   |
| <b>Assembly process</b>         |            |                      |                       |
| Bus seat division               | 15         | 12                   | -3                    |
| Passenger car seat division     | 42         | 30                   | -12                   |
| <b>Total</b>                    | <b>190</b> | <b>155</b>           | <b>-35</b>            |

The number of employees after the introduction of new equipment are assumed as follows.

|                             | [Direct workers] | [Indirect workers] | [Executives] | [Total number] |
|-----------------------------|------------------|--------------------|--------------|----------------|
| Bus seat division           | 220              | 27                 | 40           | 288            |
| Passenger car seat division | 90               | 7                  | 18           | 149            |

(2) Office expenses

The office expenses of the divisions are included in the calculation.

(3) Maintenance costs

As described in Section 8-4-5 "Modernization of Financial Management," currently the maintenance costs of the bus seat division constitute approximately 3% of the total cost, which needs to be reviewed. This situation may be improved by the replacement of the old facilities in the third stage plan. Therefore, the present analysis does not review the maintenance costs, and the current maintenance costs are used in both the WITH and WITHOUT cases.

## 9-2-4 Sales Planning

### 1) Bus seat division

(1) Unit prices

The following table shows the sales volume of the main types of sales. Their prices vary with the specification of the buses. Thus, the average unit prices of bus seats in 1995 are used.

|                             | 1994                    | 1995                    |
|-----------------------------|-------------------------|-------------------------|
| Delux bus seat              | 236                     | 226                     |
| City passenger seat         | 542                     | 641                     |
| Type 400                    | 449                     | 353                     |
| Other Type                  | 294                     | 104                     |
| Total Volume (Sales Amount) | 1,521 (HFT 764,376,000) | 1,324 (HFT 834,311,000) |

(2) Output and sales volume

It is difficult to predict the long-term output and sales volume of exported IKARUS buses, which make up 80% of the sales volume of IKARUS, since they are traded, as a rule, on the basis of competitive bidding. However, IKARUS plans that the number of units sold will range between 1,300 (the current figure) and 1,500 in the future. A sensitivity analysis is made using an annual sales of 1,400 buses as the base case and taking into account the annual sales increased by 5% and decreased by 5%.

## 2) Passenger car seat division

### (1) Unit prices

The following table shows the makeup of the sales of the passenger car seat division. This financial analysis uses the average of fiscal 1995 as the unit price of a passenger car seat. The price of the door trim is included in the price of the seat.

|           | 1994         |                      |                    | 1995         |                      |                    |
|-----------|--------------|----------------------|--------------------|--------------|----------------------|--------------------|
|           | Volume (set) | Unit Price (HFT/set) | Amount (1,000 HFT) | Volume (set) | Unit Price (HFT/set) | Amount (1,000 HFT) |
| Seat      | 19,489       | 49,329               | 961,364            | 36,627       | 56,277               | 2,061,273          |
| Door trim | 19,489       | 7,368                | 143,601            | 36,627       | 12,848               | 470,582            |

### (2) Output and sales volume

Currently 5 types, and 16 models of passenger cars are produced. The following table shows the production plan of passenger cars by model in the first half of fiscal 1996.

| Month               |              | 96/1         | 96/2         | 96/3         | 96/4         | 96/5         | 96/6         | 1-6           |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| FOR DOMESTIC MARKET |              |              |              |              |              |              |              |               |
| 5 D (1.0)           | GA           | 24           | 96           | 96           | 144          | 96           | 96           | 552           |
|                     | GA/AT        |              |              | 48           |              | 48           |              |               |
|                     | GL           | 192          | 144          | 144          | 96           | 192          | 144          | 912           |
| 5 D (1.3)           | GL           |              | 96           | 96           | 192          | 1441         | 192          | 720           |
|                     | GLX-C        | 144          |              | 70           | 135          | 96           | 96           | 541           |
|                     | ROUGE RED    | 69           | 336          | 314          |              |              |              | 719           |
|                     | FOREST GREEN |              |              |              |              | 327          | 288          | 615           |
| 4 D (1.3)           | GLX          | 48           | 144          | 144          | 144          |              |              | 432           |
|                     | GLX-C        | 240          |              | 40           | 24           | 120          | 140          | 564           |
|                     | EXCEED       |              | 144          | 144          | 144          |              |              | 432           |
|                     | FOREST GREEN |              |              |              |              | 96           | 96           | 192           |
| 4 D (1.6)           | GLX-C        | 48           |              |              |              | 48           | 48           | 144           |
|                     | EXCEED       |              | 48           | 48           | 48           |              |              | 144           |
|                     | AT           | 1            |              |              | 48           | 48           |              | 97            |
| 3 D (1.3)           | GLS          | 48           | 48           | 72           | 48           | 48           | 48           | 312           |
|                     | VAN          |              | 48           | 72           | 48           | 48           | 48           | 264           |
| <b>SUBTOTAL</b>     |              | <b>814</b>   | <b>1,104</b> | <b>1,288</b> | <b>1,066</b> | <b>1,451</b> | <b>1,388</b> | <b>7,111</b>  |
| FOR EXPORT          |              |              |              |              |              |              |              |               |
| EU                  |              | 3,126        | 2,547        | 1,974        | 2,016        | 1,920        | 2,000        | 13,583        |
| OEM                 |              | 693          | 720          | 768          | 1,248        | 1,008        | 864          | 5,301         |
| OTHERS              |              | 187          | 144          | 270          | 185          | 136          | 48           | 970           |
| <b>SUBTOTAL</b>     |              | <b>4,006</b> | <b>3,411</b> | <b>3,012</b> | <b>3,449</b> | <b>3,064</b> | <b>2,912</b> | <b>19,854</b> |
| <b>GROND TOTAL</b>  |              | <b>4,820</b> | <b>4,515</b> | <b>4,300</b> | <b>4,515</b> | <b>4,515</b> | <b>4,300</b> | <b>26,965</b> |

Long-term production plans by car type are not prepared because the production of the type of car is based on the sales made by the dealers. Regarding the sales volume of passenger



car seats, the sales is calculated using the average unit price of fiscal 1995, assuming that the total output will be 50,000 sets a year starting from fiscal 1996 based on the production plan of Magyar Suzuki.

### 9-3 Results of the Financial Analysis

The results of the financial analysis based on the above preconditions are shown in Tables 9-3-2A to 9-3-2D (case: WITHOUT), Tables 9-3-3A to 9-3-3D (case: WITH), and Tables 9-3-4A to 9-3-4D (case: WITH minus WITHOUT).

- A: Production cost statement
- B: Income statement
- C: Cash flow statement
- D: Balance sheet

#### 9-3-1 Internal Rates of Return

Using the difference between the WITH case (new investment) and WITHOUT case (no investment) as the return on the investment (case: WITH-WITHOUT), the internal rates of return on investment (IRROI) and the internal rates of return on equity (IRROE) are determined by the discounted cash flow (DCF) method. Table 9-3-1 shows the internal rates of return.

**Table 9-3-1 Internal rates of return.**

|                  | CASE: With | CASE: With-Without |
|------------------|------------|--------------------|
| IRROI before Tax | 110.5%     | 13.6%              |
| IRROI after Tax  | 59.5%      | 2.1%               |
| IRROE before Tax | 39.4%      | 19.6%              |
| IRROE after Tax  | 25.0%      | 13.0%              |

Generally, the criteria for judging the internal rates of return on investment are determined, taking into account the risks and overall beneficial effects of an investment. Deposit interest rates may be a rule of thumb. The IRROE after tax in the WITH case was 25%. Although this is lower than the deposit interest rate in Hungary, the investment is judged to be worthwhile in view of the necessity of modernization. The IRROE after tax in the W-W/O case is 13.9%.

Table 9-3-2A Production Cost Statement (WITHOUT)

| CASE: WITHOUT (W/O)<br>YEAR | UNIT: HFT Thousands |           |           |           |           |           |           |           |           |           |
|-----------------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                             | 1996                | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      |
| PROJECT YEAR                | -2                  | -1        | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         |
| Sales Volume                |                     |           |           |           |           |           |           |           |           |           |
| Bus Seat (Set)              | 1,400               | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     |
| Passenger Car Seat (Set)    | 50,000              | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    |
| Variable Operating costs    |                     |           |           |           |           |           |           |           |           |           |
| Raw Material                | 3,180,711           | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 | 3,180,711 |
| Utilities                   | 50,140              | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    |
| Indirect material costs     | 136,184             | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   |
| Total                       | 3,367,036           | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 |
| Fixed Ope-costs             |                     |           |           |           |           |           |           |           |           |           |
| Labour costs                |                     |           |           |           |           |           |           |           |           |           |
| Wages & personal expenses   | 234,080             | 234,080   | 234,080   | 234,080   | 234,080   | 234,080   | 234,080   | 234,080   | 234,080   | 234,080   |
| Social insurance            | 96,340              | 96,340    | 96,340    | 96,340    | 96,340    | 96,340    | 96,340    | 96,340    | 96,340    | 96,340    |
| Office expenses             | 62,297              | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    |
| Maintenance Costs           | 30,902              | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    |
| Miscellaneous               | 92,930              | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    |
| Total                       | 516,549             | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   |
| Deprecation & Amortization  | 51,743              | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    |
| Total Production Cost       | 3,935,328           | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 | 3,935,328 |

Table 9-3-2B Income Statement (WITHOUT)

| CASE: WITHOUT (W/O)                    | (UNIT: HFT Thousands) |           |           |           |           |           |           |           |           |           |
|--|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 1996                  | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      |
| Net Revenue                            |                       |           |           |           |           |           |           |           |           |           |
| Bus Division                           | 882,202               | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   |
| Passenger Seat Division                | 3,456,269             | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 |
| Total Revenue                          | 4,338,471             | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 |
| Costs & Expenses                       |                       |           |           |           |           |           |           |           |           |           |
| Variable operation costs               | 3,367,036             | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 |
| Fixed operation costs                  | 516,549               | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   |
| Depreciation & Amortization            | 51,743                | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    |
| Selling & general expenses             | 165,000               | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   |
| Tax on Business Activities & Education | 52,932                | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    |
| Total Costs & Expenses                 | 4,153,260             | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 | 4,153,260 |
| Financial Loss due to Exchange Rate    | 41,941                | 41,941    | 41,941    | 41,941    | 41,941    | 41,941    | 41,941    | 41,941    | 41,941    | 41,941    |
| Interest Payment                       | 0                     | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Long term loan                         | 105,000               | 164,825   | 155,769   | 143,995   | 128,690   | 108,794   | 84,641    | 58,564    | 27,795    | 0         |
| Short term loan                        | 146,941               | 206,766   | 197,710   | 185,937   | 170,631   | 150,735   | 126,582   | 100,506   | 69,736    | 41,941    |
| Total                                  | 38,269                | -21,556   | -12,499   | -726      | 14,579    | 34,476    | 58,629    | 84,705    | 115,475   | 143,269   |
| Net Income B/Tax                       | 38,269                | 0         | 0         | 0         | 0         | 14,274    | 58,629    | 84,705    | 115,475   | 143,269   |
| Taxable Income                         | 15,308                | 0         | 0         | 0         | 0         | 5,710     | 23,451    | 33,882    | 46,190    | 57,308    |
| Corporate Tax                          | 22,962                | -21,556   | -12,499   | -726      | 14,579    | 28,766    | 35,177    | 50,823    | 69,285    | 85,962    |
| Net Income A/Tax                       |                       |           |           |           |           |           |           |           |           |           |

Table 9-3-2C Cash Flow Statement (WITHOUT)

| CASE: WITHOUT (W/O)          | (UNIT: HFT Thousands) |         |         |         |         |         |         |         |         |         |
|------------------------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                              | 1996                  | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| <b>SOURCES OF FUNDS</b>      |                       |         |         |         |         |         |         |         |         |         |
| Profit after Tax             | 22,962                | -21,556 | -12,499 | -726    | 14,579  | 28,766  | 35,177  | 50,823  | 69,285  | 85,962  |
| Depreciation & Amortization  | 51,743                | 51,743  | 51,743  | 51,743  | 51,743  | 51,743  | 51,743  | 51,743  | 51,743  | 51,743  |
| Equity                       | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Long-term Loan               | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Short-term Loan              | 549,417               | 519,229 | 479,985 | 428,967 | 362,645 | 282,135 | 195,215 | 92,649  | 0       | 0       |
| Total Sources of Funds       | 624,121               | 549,417 | 519,229 | 479,985 | 428,967 | 362,645 | 282,135 | 195,215 | 121,028 | 137,705 |
| <b>APPLICATION OF FUNDS</b>  |                       |         |         |         |         |         |         |         |         |         |
| Plant Investment             | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Interest During Construction | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Working Capital Change       | 274,121               | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Repayment on L-T Loan        | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Repayment on S-T Loan        | 350,000               | 549,417 | 519,229 | 479,985 | 428,967 | 362,645 | 282,135 | 195,215 | 92,649  | 0       |
| Total Application of Funds   | 624,121               | 549,417 | 519,229 | 479,985 | 428,967 | 362,645 | 282,135 | 195,215 | 92,649  | 0       |
| Cash Surplus                 | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 28,380  | 137,705 |
| Accumulated Cash             | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 28,380  | 166,084 |

Table 9-3-2D Balance Sheet (WITHOUT)

| CASE: WITHOUT (W/O)<br>YEAR   | (UNIT: HFT Thousands) |         |         |         |         |         |          |          |          |          |
|-------------------------------|-----------------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
|                               | 1996                  | 1997    | 1998    | 1999    | 2000    | 2001    | 2002     | 2003     | 2004     | 2005     |
| <b>Current Assets</b>         |                       |         |         |         |         |         |          |          |          |          |
| Cash on Hand & Bank Depo.     | 0                     | 0       | 0       | 0       | 0       | 0       | 0        | 0        | 28,380   | 166,084  |
| Account Receivable            | 162,051               | 162,051 | 162,051 | 162,051 | 162,051 | 162,051 | 162,051  | 162,051  | 162,051  | 162,051  |
| Inventories                   |                       |         |         |         |         |         |          |          |          |          |
| Raw Materials                 | 125,213               | 125,213 | 125,213 | 125,213 | 125,213 | 125,213 | 125,213  | 125,213  | 125,213  | 125,213  |
| Semi-products                 | 7,115                 | 7,115   | 7,115   | 7,115   | 7,115   | 7,115   | 7,115    | 7,115    | 7,115    | 7,115    |
| Products                      | 12,154                | 12,154  | 12,154  | 12,154  | 12,154  | 12,154  | 12,154   | 12,154   | 12,154   | 12,154   |
| Total Current Assets          | 306,532               | 306,532 | 306,532 | 306,532 | 306,532 | 306,532 | 306,532  | 306,532  | 334,911  | 472,616  |
| <b>Fixed Assets</b>           |                       |         |         |         |         |         |          |          |          |          |
| Existing Assets               | 558,748               | 558,748 | 558,748 | 558,748 | 558,748 | 558,748 | 558,748  | 558,748  | 558,748  | 558,748  |
| New Equipment                 | 0                     | 0       | 0       | 0       | 0       | 0       | 0        | 0        | 0        | 0        |
| Less Accumulated Depreciation | 51,743                | 103,487 | 155,230 | 206,973 | 258,717 | 310,460 | 362,203  | 413,947  | 465,690  | 517,433  |
| Total Fixed Assets            | 507,004               | 455,261 | 403,518 | 351,774 | 300,031 | 248,288 | 196,544  | 144,801  | 93,058   | 41,314   |
| <b>Total Assets</b>           | 813,536               | 761,792 | 710,049 | 658,306 | 606,562 | 554,819 | 503,076  | 451,332  | 427,969  | 513,930  |
| <b>Current Liabilities</b>    |                       |         |         |         |         |         |          |          |          |          |
| Short-term Loan               | 199,417               | 169,229 | 129,985 | 78,967  | 12,645  | -67,865 | -154,785 | -257,351 | -350,000 | -350,000 |
| Account Payable               | 32,410                | 32,410  | 32,410  | 32,410  | 32,410  | 32,410  | 32,410   | 32,410   | 32,410   | 32,410   |
| Total Current Liabilities     | 231,827               | 201,639 | 162,395 | 111,378 | 45,055  | -35,454 | -122,375 | -224,941 | -317,590 | -317,590 |
| <b>Long-term Liabilities</b>  |                       |         |         |         |         |         |          |          |          |          |
| Long-term Loan                |                       |         |         |         |         |         |          |          |          |          |
| Other Long-term Liabilities   |                       |         |         |         |         |         |          |          |          |          |
| <b>Shareholder's Equity</b>   |                       |         |         |         |         |         |          |          |          |          |
| Property                      | 558,748               | 558,748 | 558,748 | 558,748 | 558,748 | 558,748 | 558,748  | 558,748  | 558,748  | 558,748  |
| Retained Earnings             | 22,962                | 1,406   | -11,093 | -11,819 | 2,760   | 31,526  | 66,703   | 117,526  | 186,811  | 272,773  |
| <b>Total Liabilities</b>      | 813,536               | 761,792 | 710,049 | 658,306 | 606,562 | 554,819 | 503,076  | 451,332  | 427,969  | 513,930  |

Table 9-3-3A Production Cost Statement (WITH)

| PRODUCTION COST STATEMENT   | CASE: WITH (W) |           |           |           |           |           |           |           |           |           | (UNIT: HFT Thousands) |           |           |
|-----------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------|-----------|-----------|
|                             | 1996           | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2003                  | 2004      | 2005      |
| YEAR                        | 2              | -1        | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         |                       |           |           |
| PROJECT YEAR                |                |           |           |           |           |           |           |           |           |           |                       |           |           |
| Sales Volume                |                |           |           |           |           |           |           |           |           |           |                       |           |           |
| Bus Seat (Set)              | 1,400          | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400     | 1,400                 | 1,400     | 1,400     |
| Passenger Car Seat (Set)    | 50,000         | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000    | 50,000                | 50,000    | 50,000    |
| Variable Operating costs    |                |           |           |           |           |           |           |           |           |           |                       |           |           |
| Raw Material                | 3,180,711      | 3,180,711 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517 | 3,112,517             | 3,112,517 | 3,112,517 |
| Utilities                   | 50,140         | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140    | 50,140                | 50,140    | 50,140    |
| Indirect material costs     | 136,184        | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184   | 136,184               | 136,184   | 136,184   |
| Total                       | 3,367,036      | 3,367,036 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842             | 3,298,842 | 3,298,842 |
| Fixed Ope-costs             |                |           |           |           |           |           |           |           |           |           |                       |           |           |
| Labour costs                |                |           |           |           |           |           |           |           |           |           |                       |           |           |
| Wages & personal expenses   | 234,080        | 234,080   | 215,596   | 215,596   | 215,596   | 215,596   | 215,596   | 215,596   | 215,596   | 215,596   | 215,596               | 215,596   | 215,596   |
| Social insurance            | 96,340         | 96,340    | 88,707    | 88,707    | 88,707    | 88,707    | 88,707    | 88,707    | 88,707    | 88,707    | 88,707                | 88,707    | 88,707    |
| Office expenses             | 62,297         | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297    | 62,297                | 62,297    | 62,297    |
| Maintenance Costs           | 30,902         | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902    | 30,902                | 30,902    | 30,902    |
| Miscellaneous               | 92,930         | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930    | 92,930                | 92,930    | 92,930    |
| Total                       | 516,549        | 516,549   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432               | 490,432   | 490,432   |
| Depreciation & Amortization | 51,743         | 55,259    | 95,916    | 95,916    | 95,916    | 95,916    | 95,916    | 92,400    | 95,916    | 51,743    | 92,400                | 51,743    | 51,743    |
| Total Production Cost       | 3,935,328      | 3,938,844 | 3,885,189 | 3,885,189 | 3,885,189 | 3,885,189 | 3,885,189 | 3,881,674 | 3,881,017 | 3,841,017 | 3,881,674             | 3,841,017 | 3,841,017 |

Table 9-3-3B Income Statement (WITH)

| CASE: WITH (W)<br>YEAR                 | (UNIT: HFT Thousands) |           |           |           |           |           |           |           |           |           |
|--|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | 1996                  | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      |
| Net Revenue                            |                       |           |           |           |           |           |           |           |           |           |
| Bus Division                           | 882,202               | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   | 882,202   |
| Passenger Seat Division                | 3,456,269             | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 | 3,456,269 |
| Total Revenue                          | 4,338,471             | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 |
| Costs & Expenses                       |                       |           |           |           |           |           |           |           |           |           |
| Variable operation costs               | 3,367,036             | 3,367,036 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 |
| Fixed operation costs                  | 516,549               | 516,549   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   |
| Depreciation & Amortization            | 51,743                | 55,259    | 95,916    | 95,916    | 95,916    | 95,916    | 95,916    | 92,400    | 51,743    | 51,743    |
| Selling & general expenses             | 165,000               | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   |
| Tax on Business Activities & Education | 52,932                | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    | 52,932    |
| Total Costs & Expenses                 | 4,153,260             | 4,156,776 | 4,103,121 | 4,103,121 | 4,103,121 | 4,103,121 | 4,103,121 | 4,099,606 | 4,058,949 | 4,058,949 |
| Financial Loss due to Exchange Rate    | 41,941                | 41,941    | 40,948    | 40,948    | 40,948    | 40,948    | 40,948    | 40,948    | 40,948    | 40,948    |
| Interest Payment                       | 2,475                 | 29,361    | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |
| Interest during Construction           | 0                     | 4,949     | 62,187    | 62,187    | 61,197    | 60,207    | 47,770    | 35,332    | 22,895    | 11,447    |
| Long term loan                         | 105,000               | 164,528   | 156,867   | 132,505   | 103,817   | 67,216    | 32,265    | 0         | 0         | 0         |
| Short term loan                        | 149,416               | 240,780   | 260,002   | 235,639   | 205,962   | 168,371   | 120,983   | 76,280    | 63,843    | 52,395    |
| Total                                  | 35,795                | -59,085   | -24,653   | -290      | 29,388    | 66,979    | 114,366   | 162,585   | 215,679   | 227,126   |
| Net Income B/Tax                       | 35,795                | 0         | 0         | 0         | 0         | 12,338    | 114,366   | 162,585   | 215,679   | 227,126   |
| Taxable Income                         | 14,318                | 0         | 0         | 0         | 0         | 4,935     | 45,746    | 65,034    | 86,271    | 90,850    |
| Corporate Tax                          | 21,477                | -59,085   | -24,653   | -290      | 29,388    | 62,043    | 68,620    | 97,551    | 129,407   | 136,276   |
| Net Income A/Tax                       |                       |           |           |           |           |           |           |           |           |           |



Table 9-3-3C Cash Flow Statement (WITH)

|                             | (UNIT: HFT Thousands) |         |         |         |         |         |         |         |         |         |
|-----------------------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                             | 1996                  | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| CASE: WITH (W)              | 115.3%                |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROE B/TAX      | 60.9%                 |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROI A/TAX      | 41.9%                 |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROE B/TAX      | 26.4%                 |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROE A/TAX      |                       |         |         |         |         |         |         |         |         |         |
| YEAR                        | 1996                  | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| <b>SOURCES OF FUNDS</b>     |                       |         |         |         |         |         |         |         |         |         |
| Profit after Tax            | 21,477                | -59,085 | -24,653 | -290    | 29,388  | 62,043  | 68,620  | 97,551  | 129,407 | 136,276 |
| Depreciation & Amortization | 51,743                | 55,259  | 95,916  | 95,916  | 95,916  | 95,916  | 95,916  | 92,400  | 51,743  | 51,743  |
| Equity                      | 7,071                 | 82,510  | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Long-term Loan              | 16,498                | 190,791 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Short-term Loan             | 548,427               | 522,891 | 441,682 | 346,056 | 224,053 | 107,552 | 0       | 0       | 0       | 0       |
| Total Sources of Funds      | 645,215               | 792,366 | 512,945 | 441,682 | 349,356 | 265,510 | 164,535 | 189,951 | 181,150 | 188,019 |
| <b>APPLICATION OF FUNDS</b> |                       |         |         |         |         |         |         |         |         |         |
| Plant Investment            | 21,094                | 243,940 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Working Capital Increase    | 274,121               | 0       | -9,947  | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Repayment on L-T Loan       | 0                     | 0       | 0       | 0       | 3,300   | 41,458  | 41,458  | 41,458  | 41,458  | 38,158  |
| Repayment on S-T Loan       | 350,000               | 548,427 | 522,891 | 441,682 | 346,056 | 224,053 | 107,552 | 0       | 0       | 0       |
| Total Application of Funds  | 645,215               | 792,366 | 512,945 | 441,682 | 349,356 | 265,510 | 149,009 | 41,458  | 41,458  | 38,158  |
| Cash Surplus                | 0                     | 0       | 0       | 0       | 0       | 0       | 15,526  | 148,493 | 139,693 | 149,861 |
| Accumulated Cash Surplus    | 0                     | 0       | 0       | 0       | 0       | 0       | 15,526  | 164,019 | 303,712 | 453,572 |
| CASHFLOW FOR ROE B/TAX      | 7,247                 | -82,510 | 0       | 0       | 0       | 4,935   | 61,272  | 213,527 | 225,964 | 240,711 |
| CASHFLOW FOR ROE A/TAX      | -7,071                | -82,510 | 0       | 0       | 0       | 0       | 15,526  | 148,493 | 139,693 | 149,861 |

Table 9-3-3D Balance Sheet (WITH)

(UNIT: HFT Thousands)

| CASE: WITH (W)<br>YEAR        | 1996    | 1997      | 1998    | 1999    | 2000     | 2001     | 2002     | 2003     | 2004     | 2005     |
|-------------------------------|---------|-----------|---------|---------|----------|----------|----------|----------|----------|----------|
| <b>Current Assets</b>         |         |           |         |         |          |          |          |          |          |          |
| Cash on Hand & Bank Depo.     | 0       | 0         | 0       | 0       | 0        | 0        | 15,526   | 164,019  | 303,712  | 453,572  |
| Account Receivable            | 162,051 | 162,051   | 162,051 | 162,051 | 162,051  | 162,051  | 162,051  | 162,051  | 162,051  | 162,051  |
| Inventories                   |         |           |         |         |          |          |          |          |          |          |
| Raw Materials                 | 125,213 | 125,213   | 115,266 | 115,266 | 115,266  | 115,266  | 115,266  | 115,266  | 115,266  | 115,266  |
| Semi-products                 | 7,115   | 7,115     | 7,115   | 7,115   | 7,115    | 7,115    | 7,115    | 7,115    | 7,115    | 7,115    |
| Products                      | 12,154  | 12,154    | 12,154  | 12,154  | 12,154   | 12,154   | 12,154   | 12,154   | 12,154   | 12,154   |
| Total Current Assets          | 306,532 | 306,532   | 296,585 | 296,585 | 296,585  | 296,585  | 312,111  | 460,604  | 600,296  | 750,157  |
| <b>Fixed Assets</b>           |         |           |         |         |          |          |          |          |          |          |
| Existing Assets               | 558,748 | 558,748   | 558,748 | 558,748 | 558,748  | 558,748  | 558,748  | 558,748  | 558,748  | 558,748  |
| New Equipment                 | 21,094  | 265,034   | 265,034 | 265,034 | 265,034  | 265,034  | 265,034  | 265,034  | 265,034  | 265,034  |
| Less Accumulated Depreciation | 51,743  | 107,002   | 202,918 | 298,834 | 394,749  | 490,665  | 586,580  | 678,980  | 730,724  | 782,467  |
| Total Fixed Assets            | 528,098 | 716,779   | 620,863 | 524,948 | 429,032  | 333,116  | 237,201  | 144,801  | 93,058   | 41,314   |
| <b>Total Assets</b>           | 834,630 | 1,023,311 | 917,448 | 821,532 | 725,617  | 629,701  | 549,311  | 605,404  | 693,354  | 791,471  |
| <b>Current Liabilities</b>    |         |           |         |         |          |          |          |          |          |          |
| Short-term Loan               | 198,427 | 172,891   | 91,682  | -3,944  | -125,947 | -242,448 | -350,000 | -350,000 | -350,000 | -350,000 |
| Account Payable               | 32,410  | 32,410    | 32,410  | 32,410  | 32,410   | 32,410   | 32,410   | 32,410   | 32,410   | 32,410   |
| Total Current Liabilities     | 230,837 | 205,302   | 124,092 | 28,466  | -93,537  | -210,038 | -317,590 | -317,590 | -317,590 | -317,590 |
| <b>Long-term Liabilities</b>  |         |           |         |         |          |          |          |          |          |          |
| Long-term Loan                | 16,498  | 207,289   | 207,289 | 207,289 | 203,989  | 162,532  | 121,074  | 79,616   | 38,158   | 0        |
| Other Long-term Liabilities   | 16,498  | 207,289   | 207,289 | 207,289 | 203,989  | 162,532  | 121,074  | 79,616   | 38,158   | 0        |
| <b>Shareholder's Equity</b>   |         |           |         |         |          |          |          |          |          |          |
| Property                      | 565,818 | 648,328   | 648,328 | 648,328 | 648,328  | 648,328  | 648,328  | 648,328  | 648,328  | 648,328  |
| Retained Earnings             | 21,477  | -37,608   | -62,261 | -62,551 | -33,163  | 28,880   | 97,499   | 195,050  | 324,457  | 460,733  |
| <b>Total Liabilities</b>      | 834,630 | 1,023,311 | 917,448 | 821,532 | 725,617  | 629,701  | 549,311  | 605,404  | 693,354  | 791,471  |

Table 9-3-4A Production Cost Statement (W-W/O)

| PRODUCTION COST STATEMENT  | CASE: WITH-WITHOUT (W-W/O) |        |         |         |         |         |         |         |         |         | (UNIT: HFI Thousands) |         |         |         |
|----------------------------|----------------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------------|---------|---------|---------|
|                            | YEAR                       | 1996   | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005                  | 2003    | 2004    | 2005    |
| PROJECT YEAR               | -2                         | -1     | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 6                     | 7       | 8       |         |
| Sales Volume               |                            |        |         |         |         |         |         |         |         |         |                       |         |         |         |
| Bus Seat (Set)             | 1,400                      | 1,400  | 1,400   | 1,400   | 1,400   | 1,400   | 1,400   | 1,400   | 1,400   | 1,400   | 1,400                 | 1,400   | 1,400   | 1,400   |
| Passenger Car Seat (Set)   | 50,000                     | 50,000 | 50,000  | 50,000  | 50,000  | 50,000  | 50,000  | 50,000  | 50,000  | 50,000  | 50,000                | 50,000  | 50,000  | 50,000  |
| Variable Operating costs   |                            |        |         |         |         |         |         |         |         |         |                       |         |         |         |
| Raw Material               | 0                          | 0      | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194               | -68,194 | -68,194 | -68,194 |
| Utilities                  | 0                          | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0                     | 0       | 0       | 0       |
| Indirect material costs    | 0                          | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0                     | 0       | 0       | 0       |
| Total                      | 0                          | 0      | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194               | -68,194 | -68,194 | -68,194 |
| Fixed Ope-costs            |                            |        |         |         |         |         |         |         |         |         |                       |         |         |         |
| Labour costs               |                            |        |         |         |         |         |         |         |         |         |                       |         |         |         |
| Wages & personal expenses  | 0                          | 0      | -18,484 | -18,484 | -18,484 | -18,484 | -18,484 | -18,484 | -18,484 | -18,484 | -18,484               | -18,484 | -18,484 | -18,484 |
| Social insurance           | 0                          | 0      | -7,633  | -7,633  | -7,633  | -7,633  | -7,633  | -7,633  | -7,633  | -7,633  | -7,633                | -7,633  | -7,633  | -7,633  |
| Office expenses            | 0                          | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0                     | 0       | 0       | 0       |
| Maintenance Costs          | 0                          | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0                     | 0       | 0       | 0       |
| Miscellaneous              | 0                          | 0      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0                     | 0       | 0       | 0       |
| Total                      | 0                          | 0      | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117               | -26,117 | -26,117 | -26,117 |
| Deprecation & Amortization | 0                          | 3,516  | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 44,172                | 44,172  | 44,172  | 44,172  |
| Total Production Cost      | 0                          | 3,516  | -50,139 | -50,139 | -50,139 | -50,139 | -50,139 | -50,139 | -50,139 | -50,139 | -50,139               | -50,139 | -50,139 | -94,311 |

Table 9-3-4B Income Statement (W-W/O)

| CASE: WITH-WITHOUT (W-W/O)             | (UNIT: HFT Thousands) |         |         |         |         |         |         |         |         |         |
|--|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|  | 1996                  | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| Net Revenue                            | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Bus Division                           | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Passenger Seat Division                | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Total Revenue                          | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Costs & Expenses                       |                       |         |         |         |         |         |         |         |         |         |
| Variable operation costs               | 0                     | 0       | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 | -68,194 |
| Fixed operation costs                  | 0                     | 0       | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 | -26,117 |
| Depreciation & Amortization            | 0                     | 3,516   | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 40,657  | 0       | 0       |
| Selling & general expenses             | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Tax on Business Activities & Education | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Total Costs & Expenses                 | 0                     | 3,516   | -50,139 | -50,139 | -50,139 | -50,139 | -50,139 | -53,654 | -94,311 | -94,311 |
| Financial Loss due to Exchange Rate    | 0                     | 0       | 0       | -993    | -993    | -993    | -993    | -993    | -993    | -993    |
| Interest Payment                       | 0                     | 2,475   | 29,361  | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Interest during Construction           | 0                     | 4,949   | 62,187  | 62,187  | 61,197  | 60,207  | 47,770  | 35,332  | 22,895  | 11,447  |
| Long term loan                         | 0                     | 0       | 0       | 0       | 0       | 0       | 1,908   | 658     | 0       | 0       |
| Short term loan                        | 0                     | 7,424   | 91,548  | 61,193  | 60,203  | 59,214  | 48,684  | 34,996  | 21,902  | 10,454  |
| Total                                  | 0                     | -10,940 | -41,409 | -11,055 | -10,065 | -9,075  | 1,454   | 18,658  | 72,409  | 83,857  |
| Net Income B/Tax                       | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 42,214  | 83,857  |
| Taxable Income                         | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 16,886  | 33,543  |
| Corporate Tax                          | 0                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Net Income A/Tax                       | 0                     | -10,940 | -41,409 | -11,055 | -10,065 | -9,075  | 1,454   | 18,658  | 55,523  | 50,314  |

Table 9-3-4C Cash Flow Statement (W-W/O)

|                             | UNIT: HFT Thousands |         |         |         |         |         |         |         |         |         |
|-----------------------------|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                             | 1996                | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| CASE: WITH-WITHOUT (W-W/O)  | 14.8%               |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROI B/TAX      | 3.0%                |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROI A/TAX      | 24.5%               |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROE B/TAX      | 18.4%               |         |         |         |         |         |         |         |         |         |
| CASHFLOW FOR ROE A/TAX      |                     |         |         |         |         |         |         |         |         |         |
| YEAR                        | 1996                | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| <b>SOURCES OF FUNDS</b>     |                     |         |         |         |         |         |         |         |         |         |
| Profit after Tax            | 0                   | -10,940 | -41,409 | -11,055 | -10,065 | -9,075  | 1,454   | 18,658  | 55,523  | 50,314  |
| Depreciation & Amortization | 0                   | 3,516   | 44,172  | 44,172  | 44,172  | 44,172  | 44,172  | 40,657  | 0       | 0       |
| Equity                      | 7,071               | 82,510  | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Long-term Loan              | 16,498              | 190,791 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Short-term Loan             | 0                   | 0       | 0       | 0       | 0       | 6,361   | 2,192   | 0       | 0       | 0       |
| Total Sources of Funds      | 23,569              | 265,877 | 2,763   | 33,117  | 34,107  | 41,458  | 47,818  | 59,314  | 55,523  | 50,314  |
| <b>APPLICATION OF FUNDS</b> |                     |         |         |         |         |         |         |         |         |         |
| Plant Investment            | 21,094              | 243,940 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Working Capital Increase    | 0                   | 0       | -9,947  | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Repayment on L-T Loan       | 0                   | 0       | 0       | 0       | 3,300   | 41,458  | 41,458  | 41,458  | 41,458  | 38,158  |
| Repayment on S-T Loan       | 0                   | 0       | 0       | 0       | 0       | 0       | 6,361   | 2,192   | 0       | 0       |
| Total Application of Funds  | 21,094              | 243,940 | -9,947  | 0       | 3,300   | 41,458  | 47,818  | 43,650  | 41,458  | 38,158  |
| Cash Surplus                | 2,475               | 21,937  | 12,710  | 33,117  | 30,808  | 0       | 0       | 15,665  | 14,066  | 12,156  |
| Accumulated Cash Surplus    | 2,475               | 24,412  | 37,122  | 70,239  | 101,047 | 101,047 | 101,047 | 116,711 | 130,777 | 142,933 |
| CASHFLOW FOR ROE B/TAX      | -4,596              | -60,573 | 12,710  | 33,117  | 30,808  | 0       | 0       | 15,665  | 30,951  | 45,699  |
| CASHFLOW FOR ROE A/TAX      | -4,596              | -60,573 | 12,710  | 33,117  | 30,808  | 0       | 0       | 15,665  | 14,066  | 12,156  |

Table 9-3-4D Balance Sheet (W-W/O)

| CASE: WITH-WITHOUT (W-W/O)         | UNIT: HFT Thousands |         |         |         |         |         |         |         |         |         |
|------------------------------------|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                                    | 1996                | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| <b>Current Assets</b>              |                     |         |         |         |         |         |         |         |         |         |
| Cash on Hand & Bank Depo.          | 2,475               | 24,412  | 37,122  | 70,239  | 101,047 | 101,047 | 101,047 | 116,711 | 130,777 | 142,933 |
| Account Receivable                 | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Inventories                        | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Raw Materials                      | 0                   | 0       | -9,947  | -9,947  | -9,947  | -9,947  | -9,947  | -9,947  | -9,947  | -9,947  |
| Semi-products                      | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| Products                           | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| <b>Total Current Assets</b>        | 2,475               | 24,412  | 27,175  | 60,292  | 91,100  | 91,100  | 91,100  | 106,764 | 120,830 | 132,986 |
| <b>Fixed Assets</b>                |                     |         |         |         |         |         |         |         |         |         |
| Existing Assets                    | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| New Equipment                      | 21,094              | 265,034 | 265,034 | 265,034 | 265,034 | 265,034 | 265,034 | 265,034 | 265,034 | 265,034 |
| Less Accumulated Depreciation      | 0                   | 3,516   | 47,688  | 91,860  | 136,033 | 180,205 | 224,377 | 265,034 | 265,034 | 265,034 |
| <b>Total Fixed Assets</b>          | 21,094              | 261,518 | 217,346 | 173,174 | 129,001 | 84,829  | 40,657  | -0      | -0      | -0      |
| <b>Total Assets</b>                | 23,569              | 285,930 | 244,521 | 233,466 | 220,101 | 175,929 | 131,757 | 106,764 | 120,830 | 132,986 |
| <b>Current Liabilities</b>         |                     |         |         |         |         |         |         |         |         |         |
| Short-term Loan                    | 0                   | 0       | 0       | 0       | 0       | 6,361   | 2,192   | 0       | 0       | 0       |
| Account Payable                    | 0                   | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| <b>Total Current Liabilities</b>   | 0                   | 0       | 0       | 0       | 0       | 6,361   | 2,192   | 0       | 0       | 0       |
| <b>Long-term Liabilities</b>       |                     |         |         |         |         |         |         |         |         |         |
| Long-term Loan                     | 16,498              | 207,289 | 207,289 | 207,289 | 203,989 | 162,532 | 121,074 | 79,616  | 38,158  | 0       |
| <b>Other Long-term Liabilities</b> | 16,498              | 207,289 | 207,289 | 207,289 | 203,989 | 162,532 | 121,074 | 79,616  | 38,158  | 0       |
| <b>Shareholder's Equity</b>        |                     |         |         |         |         |         |         |         |         |         |
| Property                           | 7,071               | 89,581  | 89,581  | 89,581  | 89,581  | 89,581  | 89,581  | 89,581  | 89,581  | 89,581  |
| Retained Earnings                  | 0                   | -10,940 | -52,349 | -63,404 | -73,469 | -82,544 | -81,090 | -62,432 | -6,909  | 43,405  |
| <b>Total Liabilities</b>           | 23,569              | 285,930 | 244,521 | 233,466 | 220,101 | 175,929 | 131,757 | 106,764 | 120,830 | 132,986 |

### **9-3-2 Manufacturing Costs**

A comparison of the manufacturing costs and profit in each business year is shown in Table 9-3-5. To clarify the profit and loss situation, the cost items in the income statement are used as the manufacturing costs.

The average manufacturing cost in the WITH case is 31 million forints less per year than in the WITHOUT case. Since this difference includes the interest payments on borrowed money; after 2005 when the debts are paid off, the cost will be reduced by 84 million forints annually.

### **9-3-3 Balances of Funds**

#### **1) WITHOUT case**

In the WITHOUT case, where no new investment is made, short-term borrowings are necessary until 2003. Short-term debts will reach a peak figure of 550 million forints in 1996. This shortage of funds is caused by the repayment of the 350 million forint debt incurred in 1995 and increase in the working capital. Consequently, significant improvement of the financial situation can not be expected for a long time. The cumulative surplus of the entire modernization period will amount to 170 million forints.

#### **2) WITH case**

As for the WITHOUT case, the WITH case will also incur a debt of 550 million forints in 1996. As the modernization begins to take effect in 1998, the production costs and working capital will be improved, and short-term borrowings will stop in 2001. After 2005, the final year of the modernization period, when the long-term debts are paid off, the annual profit will begin to increase. The cumulative surplus of the entire modernization period will amount to 450 million forints.

#### **3) WITH-WITHOUT case**

Short-term debts will be incurred in 2001, and 2002 which are 6 million forints and 2 million forints respectively caused by the new investment. After the long and short-term debts are discharged and the invested capital is recovered, a cumulative surplus of 140 million forints will be produced as a return on the investment. This figure is 30% of the cumulative surplus of the WITH case. This means that the investment will have a considerable effect.

Table 9-3-5 Manufacturing Costs Table

| YEAR                         | 1996      | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | AVR.      |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| (UNIT: HFT Thousands)        |           |           |           |           |           |           |           |           |           |           |           |
| CASE:W/O                     |           |           |           |           |           |           |           |           |           |           |           |
| Sales Amount                 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 |
| Production Costs             |           |           |           |           |           |           |           |           |           |           |           |
| Variable costs               | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 | 3,367,036 |
| Fixed costs                  | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   | 516,549   |
| Depreciation                 | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    | 51,743    |
| Interest                     | 105,000   | 164,825   | 155,769   | 143,995   | 128,690   | 108,794   | 84,641    | 58,564    | 27,795    | 0         | 97,807    |
| Selling and general expenses | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   |
| Other costs and expenses     | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    | 94,873    |
| Total Costs & Expenses       | 4,300,201 | 4,360,226 | 4,350,970 | 4,339,197 | 4,323,891 | 4,303,995 | 4,279,842 | 4,253,766 | 4,222,996 | 4,195,201 | 4,293,008 |
| Profit B/tax                 | 38,269    | -21,556   | -12,499   | -726      | 14,579    | 34,476    | 58,629    | 84,705    | 115,475   | 143,269   | 45,462    |
| CASE:W                       |           |           |           |           |           |           |           |           |           |           |           |
| Sales Amount                 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 | 4,338,471 |
| Production Costs             |           |           |           |           |           |           |           |           |           |           |           |
| Variable costs               | 3,367,036 | 3,367,036 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,298,842 | 3,312,480 |
| Fixed costs                  | 516,549   | 516,549   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 490,432   | 495,656   |
| Depreciation                 | 51,743    | 55,259    | 95,916    | 95,916    | 95,916    | 95,916    | 95,916    | 92,400    | 51,743    | 51,743    | 78,247    |
| Interest                     | 107,475   | 198,838   | 219,054   | 194,691   | 165,014   | 127,423   | 80,035    | 35,332    | 22,895    | 11,447    | 116,220   |
| Selling and general expenses | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   | 165,000   |
| Other costs and expenses     | 94,873    | 94,873    | 93,880    | 93,880    | 93,880    | 93,880    | 93,880    | 93,880    | 93,880    | 93,880    | 94,079    |
| Total Costs & Expenses       | 4,302,676 | 4,397,555 | 4,363,123 | 4,338,761 | 4,309,083 | 4,271,492 | 4,224,104 | 4,175,886 | 4,122,792 | 4,111,345 | 4,261,682 |
| Profit B/tax                 | 35,795    | -59,085   | -24,653   | -290      | 29,388    | 66,979    | 114,366   | 162,585   | 215,679   | 227,126   | 76,789    |



### 9-3-4 Pay-back Period

The pay-back period is as follows:

|       | CASE: With | CASE: With-Without |
|-------|------------|--------------------|
| IRROI | 1.6 years  | 3.8 years          |
| IRROE | 5.6 years  | 3.0 years          |

### 9-3-5 Major Financial Indices

#### (1) Financial indices

The major financial indices of each business year are shown in Table 9-3-6. Each of the indices is calculated by using one of the following formulas.

#### (a) Profit after Tax on Sales

Profit after Tax/Net Sales Revenue

#### (b) Debt Service Coverage Ratio

(Profit after Tax + D + Interest)/(Repayment + Interest)

#### (c) Profit B.E.P (Break Even Point)--Production Level

$F/(SR - V)$

#### (d) Profit B.E.P (Break Even Point)--Sales Revenue

$(V + F)/SR$

#### (e) Cash B.E.P (Break Even Point)--Production Level

$(F + \frac{(R + IWC - D)}{(1 - g)}) \times \frac{1}{SR - V}$

#### (f) Cash B.E.P (Break Even Point)--Sales Revenue

$(F + V + \frac{(R + IWC - D)}{(1 - g)}) \times \frac{1}{SR - V}$

F : Fixed Operation Cost+Adm., Selling+Depreciation+Interest

SR : Sales revenue at Each Project Year

V : Variable Operation Cost

CWC : Change of Working Capital

D : Depreciation

g : Tax Rate

Table 9-3-6 Major Financial Index

| Year                           | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004  | 2005   | Average |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|---------|
| <Case: Without>                |        |        |        |        |        |        |        |        |       |        |         |
| Profit a/ Tax on Sales Revenue | 0.5%   | -0.5%  | -0.3%  | 0.0%   | 0.3%   | 0.7%   | 0.8%   | 1.2%   | 1.6%  | 2.0%   | 0.6%    |
| Debt Service Coverage Ratio    | -0.21  | 0.27   | 0.29   | 0.31   | 0.35   | 0.40   | 0.47   | 0.63   | 1.24  | -      | 0.38    |
| Profit B.E.P.                  |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | 86.3%  | 92.5%  | 91.5%  | 90.3%  | 88.7%  | 86.7%  | 84.2%  | 81.5%  | 78.3% | 75.5%  | 85.6%   |
| Sales Revenue                  | 96.9%  | 98.3%  | 98.1%  | 97.8%  | 97.5%  | 97.0%  | 96.5%  | 95.9%  | 95.2% | 94.5%  | 96.8%   |
| Cash B.E.P.                    |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | 145.2% | 177.8% | 171.7% | 163.8% | 153.5% | 140.0% | 123.7% | 106.1% | 85.4% | 66.6%  | 133.4%  |
| Sales Revenue                  | 110.1% | 117.4% | 116.1% | 114.3% | 112.0% | 109.0% | 105.3% | 101.4% | 96.7% | 92.5%  | 107.5%  |
| <Case: With>                   |        |        |        |        |        |        |        |        |       |        |         |
| Profit a/ Tax on Sales Revenue | 0.5%   | -1.4%  | -0.6%  | 0.0%   | 0.7%   | 1.4%   | 1.6%   | 2.2%   | 3.0%  | 3.1%   | 1.1%    |
| Debt Service Coverage Ratio    | -0.20  | 0.26   | 0.40   | 0.46   | 0.56   | 0.73   | 1.07   | 2.93   | 3.17  | 4.02   | 1.34    |
| Profit B.E.P.                  |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | 86.5%  | 96.3%  | 93.3%  | 91.0%  | 88.1%  | 84.5%  | 80.0%  | 75.3%  | 70.2% | 69.1%  | 83.5%   |
| Sales Revenue                  | 97.0%  | 99.2%  | 98.4%  | 97.8%  | 97.2%  | 96.3%  | 95.2%  | 94.1%  | 92.9% | 92.6%  | 96.1%   |
| Cash B.E.P.                    |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | 145.5% | 147.1% | 133.5% | 124.3% | 112.5% | 100.8% | 85.1%  | 70.4%  | 69.2% | 67.8%  | 105.6%  |
| Sales Revenue                  | 110.2% | 110.5% | 108.0% | 105.8% | 103.0% | 100.2% | 96.4%  | 92.9%  | 92.6% | 92.3%  | 101.2%  |
| <Case: With-Without>           |        |        |        |        |        |        |        |        |       |        |         |
| Profit a/ Tax on Sales Revenue | -      | -      | 1.14   | 1.53   | 1.48   | 0.94   | 0.98   | 1.20   | 1.22  | 1.25   | 0.97    |
| Debt Service Coverage Ratio    | -      | -      | 160.7% | 117.7% | 116.2% | 114.8% | 99.3%  | 74.1%  | -4.7% | -21.5% | -       |
| Profit B.E.P.                  |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | -      | -      | -      | -      | -      | -      | -      | -      | -     | -      | -       |
| Sales Revenue                  | -      | -      | -      | -      | -      | -      | -      | -      | -     | -      | -       |
| Cash B.E.P.                    |        |        |        |        |        |        |        |        |       |        |         |
| Production Level               | -      | -      | 81.4%  | 52.9%  | 56.3%  | 110.8% | 104.7% | 78.5%  | 56.1% | 34.4%  | -       |
| Sales Revenue                  | -      | -      | -      | -      | -      | -      | -      | -      | -     | -      | -       |

(2) **WITHOUT case**

(a) **Profit after tax on sales**

The average value of profit after tax on sales is as low as 0.38.

(b) **Debt service coverage ratio**

Because short-term borrowings are necessary until 2003, the debt service coverage ratio is less than 1.0.

(c) **Break even point**

The break even point of the operations is 85.6% on average, and for financial surpluses or deficits is 96.7%. This is because material costs constitute a large percentage of the cost of seats. On the other hand, there are not enough funds: to avoid shortage of funds, production must increase by 33.4 % or more on average or sales must increase by 7.5% during the period of the project.

(3) **WITH case**

(a) **Profit after tax on sales**

The modernization will improve the financial situation. Although the average profit is 1.1%, it will improve after 2002 when the short-term debts are paid off.

(b) **Debt service coverage ratio**

The debt service coverage ratio will be less than 1.0 until 2001. This is largely because of the short-term debt incurred in 1995. The ratio will improve greatly after 2001, and the average ratio during the entire period will be 1.34.

(c) **Break even point**

The break even points are decrease year by year, which means their financial situation is sound. The cash break even point will exceed 100% until 2001. The reasons include:

- a) Repayment of and interest payments on the short-term debt incurred in 1995
- b) Increased working capital due to an increase in production

(4) **Analysis of the effect of modernization**

As described above, the modernization will clearly improve the financial situation on a long-term basis. The present financial analysis focused on the reduction of material costs and personnel expenses. To improve the financial situation in the short term, it is necessary to reduce the general administrative expenses.

### 9-3-6 Sensitivity Analysis

Sensitivity analyses are carried out to find the effects that changes in the conditions of the financial analysis will have on the profitability of the modernization in the WITH case.

- (a) Sales volume (case SV+5, case SV-5)  
Increase or decrease in sales volume by 5%
- (b) Manufacturing cost (case FC+5, case FC-5)  
Increase or decrease in fixed costs and administrative expenses by 5%
- (c) Investment cost (case IC+25, case IC-25)  
Increase or decrease in the cost of the investment in new equipment by 25%

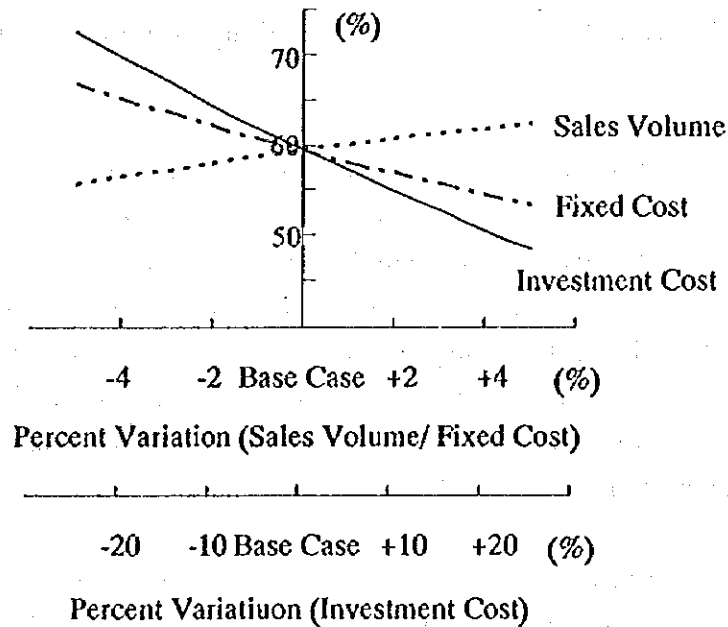
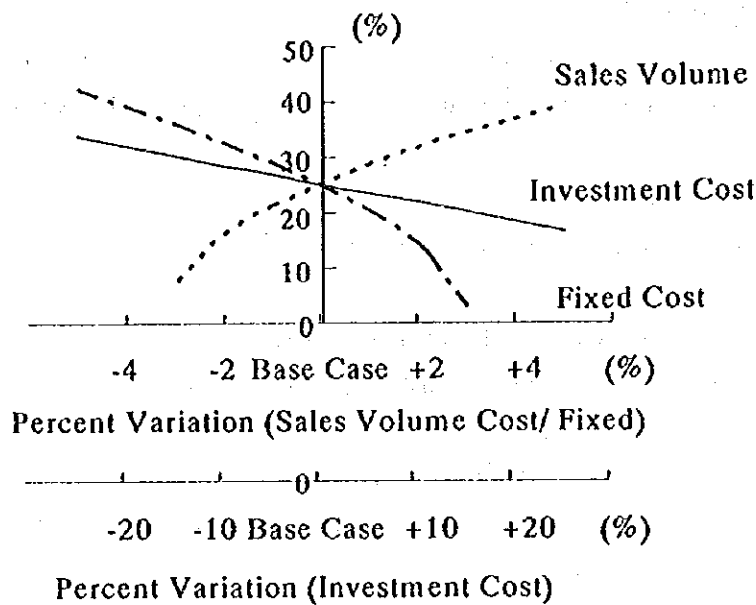


Figure 9-3-1 Summary of sensitivity analysis (IRROI)



**Figure 9-3-2 Summary of sensitivity analysis (IRROE)**

**(1) Sales volume**

Changes in the sales volume will have a great effect on the profitability of the project. If the sales volume is by 5% more than the planned value, the internal rate of return on equity (IRROI) after taxes will rise by 14 points to 40.6%. In contrast, if the sales volume is decreased by 4%, no profit can be expected during the period of the project. Since the sales of the products rely on the sales of buses and passenger cars and the company cannot increase the sales by its own efforts, the only way to improve the financial situation is to reduce the manufacturing costs and increase the local procurement of raw materials.

**(2) Manufacturing costs**

The base case focused on the reduction of the material cost which is the major part of the variable costs. A sensitivity analysis was carried out to see how the manufacturing costs are affected by the fixed costs. In the present financial analysis, the fixed costs are the largest variable factor for the internal rate of return. A 5% reduction of the fixed costs will increase the internal rate of return after taxes by 17 points. In contrast, if the fixed costs are increased by 3%, no profit can be expected during the period of the project. In view of IMAG's present situation, there is a fair possibility of reducing the fixed costs.

**(3) Investment costs**

The cost of equipment can increase due to delays in the progress of the modernization plan, major changes in economic conditions, and other unexpected events during the implementation of the plan. If there is a 25% increase in the cost of equipment the internal rate of return after taxes will be 18.3%, and if there is a 15% increase in the cost the rate will be 21.6%, which will have a no fatal effect on the profitability of the modernization plan. Also, since in the present financial analysis a 5% reserve fund is added to the total capital requirements as a contingency, it is judged that an increase in the cost of equipment will not affect the profitability seriously.

**9-3-7 Overall Evaluation**

- (1) The financial conditions will not improve in the short-term because of the repayment of and interest payments on debts. However, the modernization plan will improve the financial conditions on a long-term basis.
- (2) The internal rate of return on equity (IRROE) after taxes in the WITH case, which is 25.0%, indicates that the investment is sound.
- (3) The financial situation will be improved markedly if efforts are made, simultaneously with the implementation of the modernization plan, to further reduce the manufacturing costs and increase rate of procuring material locally.
- (4) The above mentioned results of the financial analysis as well as the possible contribution of the modernization plan to the improvement of product quality demonstrate that the plan deserves to be implemented.

## **Chapter 10**

# **Conclusion and Recommendations**

## **Chapter 10 Conclusions and Recommendations**

### **10-1 Conclusions**

The seat production divisions of IMAG have transformed themselves to a great extent from the bus seat production system to the passenger car seat production system. The annual production of 36,000 sets of a passenger car seats in 1995 is planned to be increased to 50,000 sets per year in 1996. It is judged that IMAG has the potential ability to cope with the planned production increase. By implementing the modernization plan recommended by this study, it is expected that IMAG's financial position will be improved very much as a result of increasing production efficiency and profitability.

#### **1) Inventory Reduction**

The reduction of the inventory is the most urgent and highest priority issue for the management of IMAG. To achieve this goal, it is necessary to take the following measures.

- (1) To reduce the amount of the inventory by strengthening the receiving operation and by improving the inventory control
- (2) To reduce the amount of the main raw materials such as textiles, leather and urethane by improving the production yields which can be achieved by introducing the new machinery and equipment proposed in the study
- (3) To reduce the amount of the in-process inventory by improving the productivity of the unit operations

#### **2) Cost Reductions**

By implementing the modernization plan proposed in the study, it is possible to achieve a reduction in the material costs and the labour costs. The reduction of costs is the fate and eternal issue of any enterprise. It is anticipated that the market oriented economy will become more and more influential and the competition surrounding the company will become severer year by year, therefore it is absolutely essential that the whole company must make efforts to reduce the production cost of the products even after the modernization plan proposed by the study has been implemented.

#### **3) Improvement of Productivity and Reduction of the Rejection Rate**

The quality of seats made by IMAG meets the specification standard of the automobile manufacturers and IMAG has high technical capability. Therefore, the issues to be tackled by them are the improvement of productivity and the reduction in the rate of rejected products. In



order to achieve the goals, it is necessary to promote the quality control programme on a total company basis through the QC circle movement, in addition to the improvements based on the analysis of each unit operation proposed in the study.

#### **4) Promotion and Development of Human Resources**

To promote and develop the human resources to cope with the ever changing company environment is an important issue for the company. In order to achieve this goal, it is necessary to build a promotion development system by introducing a promotion qualification system, in addition to the usual employee administration to build up the strength of the company.

#### **5) Company Management**

In order to operate the company successfully, it is necessary to formulate the company strategy which becomes the basis of the company's operations. For this purpose, information from inside and outside of the company should be collected and accumulated and based on the information, marketing methods and financial analysis methods should be introduced and the overall company management plan should be formulated.

#### **6) Strengthening of the Financial Power of the Company**

By the introduction of the new machinery and equipment recommended in the study, the company's financial strength will be enhanced in the long term. The internal rate of return on investment is 25.3 % and by promoting the local manufacture of the imported components, it is anticipated that the company profitability will immensely improved. It is considered appropriate to invest the recommended amount for the modernization of the factory in view of the financial status of the company and the necessity of modernizing the factory.

## **10-2 Recommendations**

It is recommended to pay special attention to the following points when carrying out the modernization programme.

### **1) Early Implementation of the Plan**

The financial conditions of the company will be improved by the early implementation of the modernization plan. Therefore, it is recommended that the modernization plan should be implemented at the earliest possible time, considering the situation in which the production of passenger car seats is expected to increase.

### **2) Organization for Implementation**

It is desirable to carry out the modernization plan as a total company activity, rather than carrying out the plan as the intent of the top management of the company by using the "top-down method". For this purpose, it is recommended that a project team should be organized to manage the entire project and smaller teams should be set up for each of the improvement items to carry out the actual work and to implement the modernization plan smoothly.

### **3) Equipment to be Introduced**

- (1) The introduction of new machinery and equipment should be well coordinated with the existing machinery and equipment, and similarly the introduction of the new machinery and equipment should be examined to make sure that it will work in conjunction with any automatic machinery and equipment that may be introduced in future.
- (2) For the introduction of new machinery and equipment, it is necessary to formulate a detailed implementation schedule from the overall viewpoint, and to coordinate the improvement of the production process with that of the production control.
- (3) It is necessary to pay attention to the training and education of the operators, in view of the changes to the unit operations which will be caused by introducing the new machinery and equipment.

### **4) Secondary Benefits**

It is necessary to utilize the newly introduced machinery and equipment, not only for the intended purposes but also to study and investigate the fundamental principles of these pieces of machinery and equipment. By doing so, other technology can be derived and technologies can be sought out for application to other components and products. These efforts will form the basis of the know-how and technology exclusively belonging to IMAG.

#### **5) Improvement of the Ratio of Locally Procured Components**

The improvement in the ratio of local procurement will greatly contribute to the reduction of the cost of the raw materials and the cost required for inventory control. Therefore, in order to improve the financial strength of the company, it is necessary for IMAG to make efforts to increase local procurement, to replace the components imported from Japan.

#### **6) Efforts for Internationalization**

Two thirds of the total revenues of IMAG are from the seats and the cable harnesses for passenger cars of Magyar-Suzuki, and the company culture and the company spirit of the customer are different from those of IMAG. In line with the liberalization policy of the government of Hungary, IMAG will be exposed to the market economy and internationalization. Therefore, it is necessary to cultivate the company attitude of paying priority attention to the market and the customers and of forming the company culture of being ready to comply with the customer desires, prior to the official requirements.

# Appendix



## Appendix I. Technical Transfer

### Short Term Modification Plan and its Implementation

The items of the short term modification plan proposed during the first field survey and the actual results of its implementation which were confirmed during the second field survey are described below. These suggestions and confirmations were carried out as a part of a series of actions concerned with the Technology Transfer of On-The-Job training.

#### 1. Re-arrangement of the Raw Material Warehouse

Contents of proposal : The arrangement of raw materials in the warehouse was in a very poor condition and the inventory control could not be properly controlled in such conditions. It was proposed that provide more effective space for storage should be provided by consolidating unnecessary materials into one location.

Results : The space in the warehouse was expanded and the proposed modifications were carried out.

#### 2. Calculation of the Required Space in the Warehouse of the Passenger Car Seat Division

Contents of proposal: To improve the control of the actual material inventory and to encourage employees to become more aware of the monetary value of the raw materials, a modified layout of the warehouse for raw materials of the passenger car seat division was proposed.

Results : The space in the warehouse was expanded and the proposed modifications were carried out.

#### 3. Butt Welding Process

Contents of proposal : Slipping was taking place between the electrode of the butt welding machine and the work piece, thus preventing the proper holding pressure being created between the joint faces resulting in defective welds. As a way of avoiding the weld defects, it was proposed that a stopper should be installed on the welding pipe.

**Results** : The appropriate modification was carried out and about 10% of the weld defects were eliminated.

#### 4. Welding Process for the Seat Frame of Bus and Railway Carriage Seats

**Contents of proposal** : In the process of carbon dioxide welding of brackets onto the frames, the position of welding parts was not precisely fixed the welding operation often had to be repeated 2 or 3 times. As a remedy for this, it was proposed that an additional stopper should be installed on the jig presently being used.

**Results** : There are two jigs, one for the left and one for the right hand side and the study team's proposal was for the right hand jig only. The modification made by the factory engineers was for both the right hand jig and the left hand jig. Also, a tightening device consisting of a clamp toggle was additionally installed, thus making the modification more secure.

#### 5. Press Process

**Contents of proposal** : The pressing width was not sufficient for stamping pressings for the rear seat back frames, so that additional hammering work was not needed provide enough width. It was proposed that the mold should be modified to eliminate the additional hammering work.

**Results** : The design of the mold modification was underway but the actual modification was not complete. During the second field survey, another modification was proposed to beef it up by adding weldments on the mold.

#### 6. Comparison of Hand Cutting and Press Cutting Methods in the Press Cutting Process

**Contents of proposal** : It was proposed that a comparison of yields should be made between cutting by the press cutting method and a hand cutting method using a hand operated cutter, and to collect fundamental data for different cutting methods and accumulate them for use in future modifications.

**Results :** The material yield study was not carried out because the factory judged that both the productivity and working accuracy of the press cutting method were good. It was proposed again during the second field survey that the investigation study should be carried out to compare two methods, bearing in mind that the comparison should be made in monetary terms between the reduction in the cost of the raw textile materials and the increase in the labour man hours.

#### **7. Modification of the Spreading Method in the Press Cutting Process**

**Contents of proposal :** In the front press process for PVC leather materials, press work is carried out on 2 layers at a time and in the spreading process the PVC leather from the previous operation is folded into two. With this operation, the material close to the fold became waste after cutting. This resulted in a considerable loss of material. It was proposed to modify the spreading method from 2 layers of material to 1 layer, thus reducing the material loss.

**Results :** The modification was carried out as proposed and achieved an improvement in the material yields.

#### **8. Discussion of the Introduction of a Straight Cutter for the Textile Spreading Operation**

**Contents of proposal :** For the purpose of evaluating the introduction of a straight cutter for the spreading operation, it was proposed to solicit a quotation for a straight cutting machine of Hungarian origin.

**Results :** After evaluating the price of the cutter, it was decided to introduce a Hungarian made cutting machine and purchasing action was taken. By adopting the straight cutting machine, it is expected that the material loss on both sides of spread textiles will be greatly reduced.

#### **9. Evaluation of the Introduction of a Copying Machine for the Cutting Process**

**Contents of proposal:** It was proposed to introduce copied patterns for use in the



textile cutting process and to investigate the availability of a large size copying machine for that purpose.

**Results** : A quotation for a large size copying machine was obtained but the price was very high. It was again proposed to find if a copying machine equivalent in specification to a blue print machine was available.

#### 10. Introduction of the Flow Production Method in the Sewing Process

**Contents of proposal** : After giving guidance about method for investigation change to a flow production line for each of the sewing processes, it was proposed that an evaluation study should be started for introducing flow production methods in the sewing processes.

**Results** : Time measurements have been obtained for each process and the work sharing tables needed to evaluate the introduction of the flow production method have been completed. It is highly evaluated that the factory engineers have actually implemented the modification production method into practice and mastered the way in which the modification would be practically carried out in the shop. Actual introduction of flow production into the sewing processes is a issue to be studied in the future.

#### 11. Modification of the Urethane Foaming Process Equipment

**Contents of proposal** : Modification was proposed for the urethane foaming process equipment in which an automation device would be added to the opening and closing mechanism of molds to open them or warning buzzers should be installed to indicate completion of the operation. By providing these devices, it is possible to improve the productivity by including a time function.

**Results** : A modification was made to switch on a yellow lamp 4 to 5 minutes after the raw materials were injected into molds, by which time the foaming reaction will be completed. The yellow lamp installation will prevent the cover from being opened before the foaming reaction is finished and it is expected that the productivity will be increased.

## 12. Record of the Actual Achieved Production of Bus Seat

**Contents of proposal :** It was proposed that actual production of bus seats should be investigated and records kept.

**Results :** The production record was taken for completed bus seat products for a period of one week in January, 1996. The purpose of the investigation was to get an understanding of the time worked by each machine involved in production and make modifications to achieve the most effective unit operation. It was impossible to find out the actual working times because many work-pieces were piled up in-process waiting to be forwarded to the next process. The creation of a uniform assembly line for bus seats is a issue to be tackled in the future.

## 13. Investigation of Process Sharing in the Assembly Line of Passenger Car Seats

**Contents of proposal :** Since in-process inventory is piled up between each process, it is necessary to review how the work is shared between the processes. It was proposed that the sharing of the work of each process in the assembly line of passenger car seats should be investigated.

**Results :** The working time of each process was measured, however the modification of work sharing based upon the records of the investigation has not been done yet. It is necessary to provide further technology guidance about modification methods such as the mutual help work method.

## 14. Display of Checking Points for Important Safety Processes

**Contents of proposal :** It was proposed that items to be checked such as torque control and quality control which are important for safety should be displayed in the workshops.

**Results :** It was carried out as proposed.

## 15. Display of the Table indicating Daily Inspections of Accident Prevention Devices

**Contents of proposal :** It was proposed that the table showing the daily inspections of accident prevention devices should be displayed in the

workshops.

Results : It was carried out as proposed.

#### 16. Suggestion Scheme

The suggestion format paper was prepared during the 1st field survey, on which workers could make suggestions for modifications in the workshops and they were urged to make any suggestions however small. Regretfully, there were no suggestions at all. Continuous efforts are expected to be made concerning modifications.

## Appendix II. Production Activities of Automobile Manufacturers in Hungary

### 1) Commercial Vehicles

#### (1) Raba

The production of trucks was started by the Raba Hungarian Railway Carriage and Machine Works, the origin of the present Raba PLC.

Raba was founded in 1896 as the Raba Machine and Railway Carriage Factory and gained an international reputation as a railway carriage manufacturer. Raba supplied the rolling stock for the London subway making it the world's first manufacturer of subway carriages, and after that Raba furnished similar carriages to European countries, Egypt, Argentina and Chile. Raba had a keen interest in the manufacture of automobiles from the early days when automobiles were invented and in 1904 Raba developed and manufactured a gasoline powered four wheel drive truck completely of its own design. In 1909, Raba started the production of 1.5 ton capacity trucks with trailers.

In order to start the commercial production of cars, Raba acquired the production license for a truck called Prague from Erste Bomische-Mahriscbe Maschinen-Fabrik AG in 1913 and manufactured and sold this truck under the trade name of Raba. During 1927 and 1928, Raba purchased a license from Krupp of Germany and Austria-Fiatt of Austria for the production of Raba-Krupp 3 to 5 ton trucks and Raba-Austria-Fiatt 1.5 ton trucks. Based on this manufacturing experience, Raba developed new models named "Raba Super" and "Raba Special", which had a good reputation. And they also purchased a license from MAN (Maschinenfabrik Augusburg-Nuberg AG) for the production of the diesel driven trucks and buses and marketed them.

Raba factories were completely destroyed due to the bombardment of the second world war. As early as the 1950's, Raba obtained the license from Steyer Daimler Puch of Austria for the production of front axles and rear axles and also, using their own designs, Raba started the production of the various axles. These Raba axles were gradually used by the COMECON countries and in 1967 as a part of the COMECON overall supply program, Raba started to supply the rear axles for the new model of Hungarian IKARUS buses based on a production agreement with the old USSR. Raba also started the mass-production of general purpose axles.

In order to initiate the domestic production of high standard diesel engines in addition to producing axles. Raba concluded a 10 year agreement with the consortium of Reuault-Seri,

MAN and Ferrostaal for a license and know-how for diesel engines for commercial vehicles and from 1969 Raba manufactured 150 to 256 horse power, 6 cylinder "Raba-MAN" diesel engines. Various Raba-MAN diesel engines developed based on this production experience were used in a number of commercial cars, railway carriages, ships, construction machinery, power generators, and agricultural machines in addition to IKARUS buses. The annual axle production was 13,000 units in the beginning and in 1980 the production exceeded 30,000 units.

In the 1960's, Raba resumed the production of trucks and started the production of large heavy duty trucks after purchasing a license from MAN. In 1968, the government of Hungary decided to strengthen the production of commercial vehicles and Raba expanded its operations very rapidly. The company reached its peak in the middle of the 1980's with approximately 20,000 workers, having 11 factories, and becoming the leading enterprise in Hungary.

Due to the influence of the accelerated national economic reform in the 1980's, Hungarian industrial production started to decline from 1988 as a result of the recession in the domestic economy and the reduction of trade after the collapse of the COMECON structure. The truck production of Raba was very much affected by this economic catastrophe and production has continued to decline since 1989. Raba's truck manufacturing is very limited and their main products are now the axles for trucks and buses, engines and other automotive components. At one time Raba suffered serious financial difficulties due to the shrinkage of the markets in the East European and CIS countries. The production record of Raba products is shown below.

**Table A-II-1 Production Record of Raba Products**

(Unit: number)

| Year | Truck | Engine | Axle    |
|------|-------|--------|---------|
| 1985 | 1,563 | 25,531 | 135,514 |
| 1986 | 1,794 | 23,956 | 114,654 |
| 1987 | 1,268 | 23,850 | 123,341 |
| 1988 | 1,370 | 22,508 | 115,000 |
| 1989 | 394   | 17,363 | 102,000 |
| 1990 | n.a.  | 7,074  | 76,600  |
| 1991 | 150   | 4,300  | 64,270  |
| 1992 | n.a.  | n.a.   | n.a.    |
| 1993 | 63    | 3,870  | 98,730  |
| 1994 | 58    | 2,138  | 167,284 |
| 1995 | 53    | 2,334  | 224,831 |

Source: Statistics Yearbook of Hungary, AIU, Raba

Since 1992, the export to EU and the USA, mainly to the USA, of axles and engines has increased gradually. The sales revenue and the market shares of recent years are shown below.

**Table A-II-2 Sales Revenue and Market Shares**

|                           | 1991   | 1992   | 1993   | 1994   | 1995 |
|---------------------------|--------|--------|--------|--------|------|
| Sales revenue Million HUF | 16,935 | 17,201 | 19,324 | 20,298 | n.a. |
| Domestic market %         | 43.7   | 41.5   | 37.8   | 41.7   | 32.0 |
| Export market %           | 56.3   | 58.5   | 62.2   | 58.3   | 68.0 |
| - East Europe market %    | 21.2   | 20.4   | 20.9   | 7.8    | 8.9  |
| - West Europe market %    | 35.1   | 38.1   | 41.3   | 50.5   | 59.1 |
| Total %                   | 100    | 100    | 100    | 100    | 100  |

Total revenue, profits of Raba from 1991 to 1994 and reduction of the number of the employees are shown in Table A-I-3.

**Table A-II-3 Revenue and Profits of Raba (1991-1994)**

| Item                  | Unit            | 1991   | 1992   | 1993   | 1994   |
|-----------------------|-----------------|--------|--------|--------|--------|
|                       | HFT             | actual | actual | actual | actual |
| Total revenue         | Million HFT     | 16,935 | 17,201 | 19,324 | 20,298 |
| Total direct costs    | Million HFT     | 10,198 | 8,495  | 10,574 | 11,219 |
| Indirect costs        | Million HFT     | 6,125  | 7,058  | 7,182  | 7,591  |
| Other cost & expense  | Million HFT     | -353   | -170   | -55    | -467   |
| Trading profit        | Million HFT     | 259    | 1,478  | 1,513  | 1,021  |
| Income(finance trans) | Million HFT     | -925   | -1,272 | -973   | -492   |
| Income(extrord,item)  | Million HFT     | -666   | 205    | 540    | 529    |
| Extraordinary item    | Million HFT     | 113    | -131   | -18    | 18     |
| Income before tax     | Million HFT     | -553   | 74     | 522    | 547    |
| Averg working staff   | persons         | 12,106 | 9,545  | 7,861  | 6,816  |
| Revenue per person    | 1000 HFT person | 1,399  | 1,802  | 2,458  | 2,978  |
| -relative index       | %               | 100    | 128.8  | 136.4  | 121.2  |

Source: Raba Annual Report 1994

Profits before tax was minus 533 million HFT in 1991, but after 1992, Raba made net profits. In 1993 and 1994, Raba generated the profits over 500 millions Forints. The profit and loss statements of 1995 was not available during the second field survey. The company executive explained to the study team that, due to the good export record to the U.S.A. of axles, the company could accomplished even better results in 1995. Once, Raba was supervised by the crisis management committee of the Ministry of Finance for restructuring of the company. Number of the employees were reduced from 12,106 persons to 6,816 persons, namely, the reduction of 5,290 persons, within 4 years period.

By backed out by the competitive technical strength and increase of technical capability and productivity by their intensive research and development efforts, Raba has overcome the crisis conditions.

It is reported that the amount of Raba's exports to the USA was nearly one quarter of all

the exports from Hungary to the USA in 1995. Raba exported to the USA 85,000 front axles, 35,000 rear axles and 130,000 I-beam units in 1995. The value of the axles exported to the USA was reported to be nearly 100 million US dollars.

Raba is especially active in the field of research and development and the number of persons involved in R & D activities is 600 out of the current total of 6,300 employees. Raba acquired the ISO 9000 certificates for the all of their factories 4 years ago and ISO inspectors are visiting these factories for inspections every 2 years.

## **(2) IKARUS**

The production of buses in Hungary started in 1895. During the second world war, the factories were severely damaged, however production was re-started in April, 1946 and in 1948 IKARUS became the state-owned enterprise and produced buses at the rate of one bus per day. In January, 1949, the present IKARUS Bus and Coach Building Works was re-established. This IKARUS became the foundation of outstanding development for bus production in Hungary among the COMECON countries. IKARUS developed various types of buses and mass production facilities were installed, thus enabling 1,000 buses to be manufactured annually.

In the 1950's, Hungary suffered many political uncertainties and in 1956 the Hungarian Political Disturbance took place which caused an economic and industrial recession. The Hungarian automobile industry was retarded until the 1960's.

In those days, the difference of the technology in the auto industry between the west European countries and Hungary was becoming apparent and the Hungarian auto industry could not comply with, not only the requirements of the export markets, but also the requirements of the domestic market. In view of the small domestic market, it was considered effective to concentrate on the production of buses in order to achieve the development of the domestic automobile industry. In those days of the COMECON organization, buses were produced in USSR, Poland and Czechoslovakia but the total production volume was not sufficient to satisfy the demands of the COMECON countries. Therefore the Hungarian proposal to manufacture buses exclusively was accepted and approved and Hungary mass-produced buses for the markets of the COMECON countries. After 1970, various models of the buses were developed and models were changed regularly. The maximum peak production was achieved in 1986 and the production in that year was 13,586 buses, 92% of which, namely, 12,517 buses were exported. The major exports were to the USSR and other eastern European countries, and 11,134 buses, 90% of the exports, were exported to these countries. Hungary exported 7,790 buses to the USSR, 500 buses to China, 309 buses to Cuba and including the exports to Vietnam and North Korea, the total exports to the socialist countries amounted to 96% of all Hungarian bus exports.

However, the bus industry was at the zenith of its prosperity, and together with the truck industry, started to decline due to the economic recession in the COMECON countries. The domestic market also reduced due to the recession and the production has declined radically since 1987.

The Trend in the Production of IKARUS Buses is shown below.

**Table A-II-4 Trend of IKARUS Bus Production**

| Year | Buses  |
|------|--------|
| 1985 | 13,396 |
| 1986 | 13,586 |
| 1987 | 12,916 |
| 1988 | 12,450 |
| 1989 | 11,476 |
| 1990 | 8,378  |
| 1991 | 4,894  |
| 1992 | 3,581  |
| 1993 | 3,069  |
| 1994 | 1,571  |

Source: IKARUS(1996-2-19)

## 2) Passenger Cars

The production of passenger cars in Hungary was started in 1902. By the 1920's, Hungary had exported some passenger cars, however the real passenger car production per se was started quite recently when GM and Suzuki began production. Table A-I-3 shows the production of passenger cars since 1992, started by foreign capital.

**Table A-II-5 Production Trend of Passenger Cars**

| Year        | (Unit: number) |           |        |
|-------------|----------------|-----------|--------|
|             | Magyar-Suzuki  | GM (Opel) | Total  |
| 1992        | 916            | 9,936     | 10,932 |
| 1993        | 12,555         | 13,000    | 26,151 |
| 1994        | 19,371         | 12,300    | 40,300 |
| 1995        | 36,051         | 12,500    | 49,033 |
| 1996 (plan) | 50,000         | 12,500    | 62,500 |

Source: MSC, GM interview data.

### (1) GM

American GM, through European GM, concluded a capital collaboration agreement with Raba and established a joint venture company in the of city of Szentgotthard near the Austrian border. The total investment to date is 219 million US dollars (21.9 billion HUF).



The production capacity for assembling passenger cars is 15,000 ASTRA units per year. At the same time, the factory manufactures the engines of 1,400 cc and 1,600 cc for the passenger cars made by GM in their various factories in Europe. The annual engine production capacity is 250,000 units and 1,400 cc 2 valve engines are produced for the OPEL Corsa and 1,600 cc 4 valve engines for the OPEL Astra.

The production record of GM/OPEL passenger cars is shown in the table A-I-3 and the production record for engines is shown in table A-I-4. The engine production has been increasing satisfactorily.

**Table A-II-6 Engine Production Record of GM (Szentgotthard)**

| Year | Engine units |
|------|--------------|
| 1992 | 20,500       |
| 1993 | 75,500       |
| 1994 | 160,000      |
| 1995 | 268,000      |

Source: GM

## (2) Magyar-Suzuki

On April 24, 1991, Suzuki of Japan established a joint venture company with Hungarian capital to build a complete car assembly factory in Esztergom, some 50 kilometers north of Budapest. The total investment to date is 141 million US dollars (14.1 billion HUF).

The share holders of the stock are as follows:

|                    |       |
|--------------------|-------|
| Suzuki             | 55.2% |
| Autokonzern        | 24.9% |
| ITOCHU Corporation | 13.6% |
| IFC                | 3.5%  |
| MBFB               | 2.8%  |
| total              | 100%  |

Suzuki supplied all the technology, Itochu contributed to marketing, IFC on financial matters, Autokonzern contributed to the procurement of financing from Hungarian financial institutions and the auto component suppliers.

The car models produced are 5 door 1,000 cc and 1,300 cc Suzuki Swift complete cars.

The objectives in establishing the company are as follows;

- (a) the production and sales of passenger cars for owner drivers in Hungary
- (b) to produce high standard, highly reliable, economical cars in Hungary to supply to the domestic market and to contribute to foreign currency earnings by exporting to European countries when the production increases and exceeds the domestic demand.
- (c) to contribute to promoting the auto components supply industry in Hungary
- (d) to introduce Japanese methods of company organization, company management system, industrial technology, production technology, production control and personnel management and to contribute to the Hungarian auto industry and improving the living standard of the Hungarian employees.

The sources of the components used in a complete Magyar-Suzuki car are as follows:

|  |      |
|--|------|
| Domestic supplied parts                | 30%  |
| Parts supplied from Europe             | 12%  |
| Parts made internally in Magyar-Suzuki | 23%  |
| Parts imported from Japan              | 35%  |
| total                                  | 100% |

The number of local companies who supply car components to Magyar-Suzuki is currently about 40.

### (3) Audi

Audi Company, a subsidiary of Volks Wagen of Germany, established a 100% owned Hungarian company in Gyor city in the spring of 1993 and made a decision to build a factory to manufacture automobile engines and automotive components. Audi invested about 300 millions DM in that year and commenced the production of engines from 1994. Audi utilized the old Raba factory building as their factory, which was suffering of the business recession at that time. In 1994, Audi Gyor factory produced the engines at the production rate of 100 units per day and started to supply these engines to Audi and VW in Germany.

The Hungary daily news papers of May 9, 1996 published the article of the future plan of Audi Company. According to the article, Audi plans to invest newly 800 million DM to do the final assembly of two kinds of the sport cars in Gyor factory from 1998. Also, Audi plans to transfer the engine production facilities for two types of V-6 and V-8 engines from the factory in Germany to Gyor factory. Audi plans to manufacture 20,000 sports cars of TT Coupe and 10,000 sports cars of Roadster per year at Gyor factory. This means that the high level technical jobs are created for 1,100 engineers and technicians in Gyor city.

The financial conditions of the VW group became seriously damaged since 1990 and in 1993, VW showed the loss as the group. This was due to the fact that the Spanish subsidiary SEAT, in which VW made a huge amount of the investment, encountered the financial crisis. The production of Audi in the VW group decreased from the peak production in 1992 and the rationalization of the management and the reduction of the costs and expenses are the major issue of the VW group of today. The production of Audi are shown as follows.

| 1989    | 1990    | 1991    | 1992    | 1993    | 1994    |
|---------|---------|---------|---------|---------|---------|
| 431,225 | 429,597 | 451,265 | 492,085 | 340,956 | 354,610 |

Under these circumstances, it is forecasted that the automobile assembly factory of labor intensive industry will be moved to Hungary where the cost of skilled labors and high grade engineers are relatively competitive.

## Appendix III. Major Automotive Parts Manufactures in Hungary

### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | Raba Sarvar Kft  |
| Address of Head Office    | H-9600 Sarvar, Ipartelep u. 6.   |
| Land Area, sq. meters     | 139,500  |
| Building Area, Sq. meters | 30,300   |
| Establishment             | 1996   |
| Owners(%)                 | Raba Rt. 100%  |
| Capital(1000 Forint)      | 450,000  |
| President                 | Mr. Vilmps Simon   |
| Number of Employees       | 810 persons  |
| Main products             | car parts, tools, fire-place, fasteners, toothed shafts, piston-pin assembly, pedal systems  |
| Annual revenue            | 2,000 million forint( Domestic 30%,<br>Export 70%)   |
| Main domestic customers   | Raba Rt, BPW, Magyar-Suzuki  |
| Foreign customers         | DKG Germany, NAF Germany, ZAPP Germany   |
| Remarks                   | Contact: Mr. Vilmps Simon<br><ul style="list-style-type: none"> <li>• Technical capability is very high.</li> <li>• The company desires to make a technical collaboration agreement with a foreign company to diversify their products.</li> </ul> |

### Company Outline

|                           |   |
|---------------------------|---|
| Name of Company           | IKARUS Presstechnic Ltd   |
| Address of Head Office    | H-1165 Budapest Margit, u. 114  |
| Land Area, sq. meters     | 22,000  |
| Building Area, Sq. meters | 12,000  |
| Establishment             | 1963  |
| Owners(%)                 | IKARUS 100%   |
| Capital(1000 Forint)      | 534 million forints   |
| President                 | Mr. Bela Horvath  |
| Number of Employees       | 140 persons   |
| Main products             | Bus parts, Passenger car parts, mechanical parts for agricultural machines, parabola antenna, metal works for sheet of 7 mm thick or less, dish washer bath tab |
| Annual revenue            | DM 8.6 million ( Auto parts 7.1 million DM<br>Export 2.0 million DM)  |
| Main domestic customers   | Domestic customers: IKARUS Group, Rapart, Magyar-Suzuki, MMG, Agrikon, UNI-SAT,   |
| Foreign customers         | KHD of Germany, Zeuna Starker Ltd of Germany, Roth-Technik Ltd. of Germany  |
| Remarks                   | Contacts: Ms Magdalena Szepesi<br>Tel (36-1) 163- 6866<br>Fax(36-1) 163-7800<br>ISO 9002: The company has obtained the certificate from ISO in 1995.            |

### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | Kvattro Rt.  |
| Address of Head Office    | H-1148 Budapest, Fogarasi utica 10-14 ( Headquarters )<br>H-8400, AJKA Gyaru u. 35 ( production site )   |
| Land Area, sq. meters     | 60,000   |
| Building Area, Sq. meters | 26,000   |
| Establishment             | 1992   |
| Owners(%)                 | Joint stock holder: Szeles Gabor 43%<br>Kelemen Geza 27%, Laszlo Andras 27%, T. Judit 3%   |
| Capital(1000 Forint)      | 700 million forints  |
| President                 | Talyigas Judit   |
| Number of Employees       | 500 persons  |
| Main products             | <ul style="list-style-type: none"> <li>• Precision machines (potentiometer, electromechanical display for bus, other electronic products)</li> <li>• Plastic components, cold pressing, cutting</li> <li>• Surface finishing ( plastic, metal, wood )</li> </ul> |
| Annual revenue            | Total turnover 5 million DM,<br>Auto parts turnover: 1.5 million DM<br>Export amount : 1.3 million DM  |
| Main domestic customers   | Magyar-Suzuki, KAR-GAS Hungary   |
| Foreign customers         | RUF GmbH of Germany, Climate Control of UK   |
| Remarks                   | <p>Contact: Judit Talyigas<br/>Tel: (36-1) 252-3444 or (36-88) 312-577<br/>Fax: (36-88) 311-815</p> <p>Annual production of potentio-meters are 20,000,000 pieces.</p> <p>ISO 9001: The company obtained the approval of ISO 9001</p>                            |

### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | KUNPLAST Technical Plastic Processing Co.  |
| Address of Head Office    | H-6101, KISKUNFELEGYHAZA P.O. BOX 32   |
| Land Area, sq. meters     | 72,260   |
| Building Area, Sq. meters | 22,917   |
| Establishment             | 1961   |
| Owners(%)                 | Federation of KunplastMRP:62.40%, Member of MRP: 23.12%, State Property Agency: 9.98%, Local Government: 4.5%  |
| Capital(1000 Forint)      | 410,000  |
| President                 | Sandor Herczeg   |
| Number of Employees       | 520 persons  |
| Main products             | Plastic products for automotive parts ( Injection molding )  |
| Annual revenue            | 1,200 million forints ( Half is for exports)   |
| Main domestic customers   | EMIKA, SIMOVILL, Tungsram-Schreder, Majgar-Suzuki  |
| Foreign customers         | BMW, Mercedes Benz, VW, Audi, Ford, Pujuo, Nissan  |
| Remarks                   | <p>Privatization has been completed. Major stock holders are own employees. The company looking for a collaboration agreement with Japanese manufacturers. They are good in thermal plastic products.</p> <p>They are proud of a number of record to have supplied their products to many international automobile manufacturers as listed in the foreign customers.</p> |

### Company Outline

|                           |   |
|---------------------------|---|
| Name of Company           | PEMU KFT.   |
| Address of Head Office    | H-2083 SOLYMAR, Terstyanszky, u. 89.  |
| Land Area, sq. meters     | No data   |
| Building Area, Sq. meters | No data   |
| Establishment             | 1959  |
| Owners(%)                 | PEMU MRP: 64%, City Council 6.3 %, PEMU KFT 29.7%   |
| Capital(1000 Forint)      |   |
| President                 | Mr. Bernat Sarlos   |
| Number of Employees       | 1,190 persons   |
| Main products             | Plastic parts for car assembly works( bumper, sunshades, roof strips, spoilers, instrument panels, steering wheels, wheel covers, handles, arm rests etc. ), Gaskets ( silicon rubber, Teflon ), Water and gas pipes, crates, containers, sheets, Garden furniture, pumps, etc. |
| Annual revenue            | Total turnover : 36,452,000 DM<br>Auto part turnover : 831,000 DM<br>Exports : 4,150,000 DM   |
| Main domestic customers   | Magyar-Suzuki, IKARUS   |
| Foreign customers         | AMSTEL, Unilever of Holland, Blanco, BMW, Drilltec, Ferromatic-Klockner-Desma, GM,Puma, Viega of Germany, Bjorn Thorsen of Denmark, Fisher-Price Inc., General Electric, GM, Packer Plastic inc. of U.S.A.  |
| Remarks                   | PEMU Development subsidiary received Quality Control Certificate Grade 3 issued by GM of Germany in 1993.<br>Injection molding factory received ISO 9002 qualification in 1995.   |



### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | BERVA Co. Ltd.   |
| Address of Head Office    | H-EGER, P.O. BOX 2   |
| Land Area, sq. meters     | 989,000  |
| Building Area, Sq. meters | 44,700   |
| Establishment             | 1952   |
| Owners(%)                 | CCB Ltd. 55%, State Development Institute: 4.2%<br>Local Government: 2.3% CERTUS Ltd. 37.4%  |
| Capital(1000 Forint)      | 1,497,960,000  |
| President                 | Tibor Kovacs   |
| Number of Employees       | 1,260 persons  |
| Main products             | Shock absorber, Strut, Pneumatic equipment, Household equipment  |
| Annual revenue            | 1,956 million forints  |
| Main domestic customers   | IKARUS Rt., Lehel Hutog Kft, Magyar-Suzuki Corporation   |
| Foreign customers         | Leibfried GmbH Germany, FRANZ KAHL   |
| Remarks                   | <p>They have a strong desire to enter into autobicycle industry and are looking for a manufacturer who will license to them.</p> <p>They introduced the license from Showa Seisakusho of Japan for manufacture of shock absorbers.</p> |

### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | MMG Co. (MMG Aromatika Muvek Rt.)  |
| Address of Head Office    | H-1037 Budapest, Szepvolgyi ut. 41   |
| Land Area, sq. meters     | 310,200  |
| Building Area, Sq. meters | 119,000  |
| Establishment             | 1900   |
| Owners(%)                 | State Property Agency : 71.6% City Council 15.7%<br>MRP Organization : 12.4% M-Priszolg Ltd. 0.3   |
| Capital(1000 Forint)      |  |
| President                 | Tamas Borai  |
| Number of Employees       | 2,400 persons  |
| Main products             | Car instruments, Welding equipment, Cash registers,<br>Thermostats, Gas taps, Dash board assemblies,   |
| Annual revenue            | Total turnover: 70,000,000 DM,<br>Automotive components turnover: 6,000,000 DM<br>Exports : 36,000,000 DM  |
| Main domestic customers   | Magyar-Suzuki , HUNGAROLADA  |
| Foreign customers         | Suzuki-Maruti India, Autovaz Lada Russia, Zastava<br>Yugoslavia, Fiat-Poland Poland  |
| Remarks                   | Contact person: Sandor Dekany, General Manager<br>Tel: (36-1) 188-6156 Fax: (36-1) 168-7474<br>Privatization of the company has been completed. They supplied their products mainly to the energy related companies such as gas company and electricity company. Although the car parts revenue is about 10% of the total revenue, they are very aggressive to supply their products to the domestic and foreign automobile companies in India, Russia, Yugo, Poland and so on.<br>ISO 9001: They already obtained ISO 9001 certificate. |

### Company Outline

|                           |   |
|---------------------------|---|
| Name of Company           | "RAK" Arpad Rajnai antenna maker  |
| Address of Head Office    | H-7300 KOMLO Anna aknai ut. 1/b   |
| Land Area, sq. meters     | 2,750   |
| Building Area, Sq. meters | 1,000   |
| Establishment             | 1980  |
| Owners(%)                 | Arpad Rajnai : 100%   |
| Capital(1000 Forint)      |   |
| President                 | Arpad Rajnai  |
| Number of Employees       | 19 persons  |
| Main products             | Vehicle antenna, Noise suppresser, Metal and plastic car components   |
| Annual revenue            | 8 million forints   |
| Main domestic customers   | Magyar-Suzuki Corporation   |
| Foreign customers         |   |
| Remarks                   | <p>They have adopted an integral system to start from design idea to production to sales for any new products.</p> <p>They obtained a prize from Magyar-Suzuki as the good quality supplier.</p> <p>They produce 200,000 units of antenna per year.</p> |

### Company Outline

|                           |  |
|---------------------------|--|
| Name of Company           | Bakony Works Automotive Parts Mfg. Co. Ltd.  |
| Address of Head Office    | II-8201 Veszprem, PF 78  |
| Land Area, sq. meters     |  |
| Building Area, Sq. meters |  |
| Establishment             | 1938   |
| Owners(%)                 | State Property Agency : 96%, Municipal authorities: 4%   |
| Capital(1000 Forint)      | 2,000 million forints ( Paid up capital )  |
| President                 | Mr. Andras Juttner   |
| Number of Employees       | 1,400 persons  |
| Main products             | Wiper motors (1,200,000 pieces per year )<br>Wiper arms-blades (3,000,000 pieces per year)<br>Door limiter (1,600,000 pieces per year )<br>Brake key (1,500,000 pieces per year )<br>Horns, Ignition switches  |
| Annual revenue            | 2,700 million forints  |
| Main domestic customers   | Magyar-Suzuki, IKARUS, Automotive parts dealers  |
| Foreign customers         | Lada, ITT Swf, Moskvich (ALEKO )   |
| Remarks                   | <p>This company is the largest automotive parts supplier in Hungary,</p> <p>They obtained Fiat license in 1969 for wiper motor, horn and ignition switches. They also obtained Mitsuba's Technical Assistance Agreement for wiper motor to supply to Magyar-Suzuki.</p> <p>They obtained the technical cooperation of ITT SWF in 1992 for wiper arm production, door limiter production and brake key production.</p> <p>Although they started auto parts manufacturing by license, they are manufacturing most of their products by their own technology today.</p> |

## Appendix IV. Member List of Association of Hungarian Automotive Parts Manufacturers

### NATIONAL ALLIANCE OF HUNGARIAN VEHICLE PARTS MANUFACTURERS

| Members/Address  | Representative/Phone  | Manufactured Product  | Total Sales<br>MMHFT | Automobil Industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|--|---|---|----------------------|-----------------------------|-----------------|---------------------|
| 1. ABF Ltd.<br>H-2120 Dunakeszi,<br>Szentgyörgy u. 16-18.  | Phone : +36-27-342-292<br>+36-1-129-456<br>Fax : +36-1-129-0767     | Mechanical Cables (handbrake, clutch,<br>gas and operating Bowden cables),<br>plastic die-cast products by metal die-cast<br>technology.                          | 15                   | 15                          | 0.75            | 19                  |
| 2. Acelarugyar<br>H-3100 Salgotarjan<br>Borbély L. ut. 2.  | Phone : +36-32-316-466<br>Phone/Fax : +36-32-311-894                | Forged devices, cogwheels, lever arms   | 780                  | 55                          | 156             | 965                 |
| 3. AGRE Ltd. (Technical Plastics)<br>H-1213 Budapest,<br>Szentmihályi u. 165.  | Phone : +36-1-276-1053<br>+36-1-276-1958                            | Porsche (thermostat cover, water pump<br>cover, tube-holder, clutch lifter, petrol<br>tank casing), Opel sun shield parts,<br>Mercedes cable pass through sleeves | 85                   | 15                          | 8               | 65                  |
| 4. AGRO-MOBIIL Industrial and Trading<br>Co.<br>H-8931 Kelenföldvár, Kossuth L. u. 32.                                     | Phone/Fax : +36-92-364-263  | Manufacturing of passenger cars,<br>trucks and agricultural vehicles  | 10                   | 10                          | 0               | 29                  |
| 5. Aluminum Casting and Mechanical<br>Engineering Ltd.<br>H-1139 Budapest,<br>Frangepán u. 30-32.                          | Phone : +36-1-149-6965<br>Fax : +36-1-140-9158                      | Manufacturing of aluminum castings,<br>compressors, machine groups with<br>compressor, pumps, power generators  | 250                  | 0.5                         | 0               | 25                  |
| 6. ARMAFILT Industrial and Trading Ltd.<br>H-1135 Budapest,<br>Reitter Ferenc u. 37.                                       | Phone : +36-1-129-0085<br>Fax : +36-1-149-8553                      | Manufacturing and distribution of oil<br>filters, air filters and petrol filters  | 835                  | 720                         | 433             | 400                 |
| 7. August Gyógyi entrepreneur<br>Dombóvár, Rakocsi u. 77.  | Phone : +36-74-366-650<br>+36-60-338-895                            | Manufacturing and sale of Tow-hooks   | 8.5                  | 6                           | 0               | 15                  |
| 8. Auto Industrial Research and<br>Development Ltd. (AUTOKUT)  | Phone : +36-1-1854-977  | Examination, classification and<br>development of vehicle and vehicle parts<br>manufacturing devices, tribology   | 210                  | 147                         | 147             | 130                 |
| 9. Autótribológiai Research<br>and Development Ltd.  | Phone : +36-1-206-6137  | Tribology, examination of abrasion<br>lubrication   | 16.2                 | 10                          | 4               | 9                   |
| 10. AUTRON Manufacturing, Servicing<br>& Trading Ltd.<br>H-1037 Budapest,<br>Labort u. 1-3.<br>H-1300 Budapest, P.O.B. 237 | Phone : +36-1-250-2374<br>+36-1-250-2528/12<br>Fax : +36-1-250-3069 | Manufacturing of oil filters<br>Roadsafety electronics<br>Electronical Door-lock system   | 90                   | 90                          | 36              | 25                  |
| 11. AVF Car Electrical Equipment Factory<br>H-1388 Budapest,<br>P.O. Box 85, Váci ut 20-26.                                | Phone : +36-1-140-1540<br>Fax : +36-1-140-1542                      | Starting engine and generator (diesel, petrol)<br>manufacturing of motor vehicles and buses   | 798                  | 157                         | 600             | 570                 |

| Members/Address   | Representative/Phone                           | Manufactured Product   | Total Sales<br>MMHFT | Automobit industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|--|----------------------|-----------------------------|-----------------|---------------------|
| 12. Bakoony Plants Ltd.<br>H-8201 Veszprém, P.O. Box 78.                                      | Phone : +36-88-423-648<br>Fax : +36-88-427-916 | Car electrical products, spark-plugs,<br>fine ceramics, low voltage contact switches,<br>assembly technical products, wind-screen wipers | 3,030                | 2,420                       | 2,100           | 1,400               |
| 13. Bakoony Ceramic Ltd.<br>H-8201 Veszprém<br>Cserédo P.O.B. : 78                            | Phone : +36-88-427-126<br>Fax : +36-88-421-715 | Industrial ceramics,<br>Spark-plugs  | 449                  | 308                         | 280             | 182                 |
| 14. Bakoony Mechanical Engineering Ltd.<br>H-2800 Tatabánya,<br>Buzavirag u. 4.               | Phone : +36-34-310-740<br>Fax : +36-34-316-740 | Machined parts manufacturing for vehicle<br>industry (cardan, toothed gear, pump,<br>swing axle, pinion-shaft, clutch parts)             | 150                  | 15                          | 50              | 90                  |
| 15. Bellonics László entrepreneur<br>H-3300 Eger,<br>Szevornyí J.u.62/a.                      | Phone : +36-36-413-547<br>Fax : +36-36-352-107 | Piston ring, cylinder bushing production   | 6                    | 6                           | 0               | 10                  |
| 16. BÉRYVA Fine Assembly<br>Manufacturing Ltd.<br>H-3301 Eger P.O. Box 2.                     | Phone : +36-36-411-556<br>Fax : +36-36-411-112 | Part units of vehicle pneumatics,<br>pneumatic automation elements (gas spring,<br>resilient bumper, door operator)                      | 1,956                | 142                         | 403             | 1,260               |
| 17. BÉRVINA Drive Technics Deposit<br>Company<br>H-1145 Budapest<br>Erzsebet kiralyhno u.41/B | Phone : +36-1-252-4829<br>Fax : +36-1-252-4829 | Polyurethane toothed belts, flat belts,<br>special V-belts   | 8                    | 0.2                         | 0.8             | 8                   |
| 18. Borsod Car Company<br>H-3526 Miskolc Zoolcai kapu 11.                                     | Phone : +36-46-338-500<br>Fax : +36-46-338-070 |  |                      |                             |                 |                     |
| 19. BHG Information Technical Ltd.  |  | Manufacturing of tools, injection molding,<br>forging. Printed circuit manufacturing and<br>installation.                                | 5,032                | 120                         | 120             | 1,260               |
| 20. BIPW Rába Axle Ltd.   | Phone : +36-94-327-996                         | Trailer and agricultural vehicle undercarriage   | 2,100                | 2,100                       | 0               | 600                 |
| 21. Capari Robert entrepreneur<br>H-8330 Sármeg Simon I. u.34.                                | Phone : +36-87-352-222                         | Wrought parts.   | 16                   | 16                          | 0               | 4                   |
| 22. DANUVIA Machine Industrial Ltd.<br>H-1149 Budapest, Angolai 12.                           | Phone/Fax : +36-1-183-1973                     | Manufacturing of hydraulic elements  |                      |                             |                 |                     |
| 23. Dalkin-Bakony Axtele Switch<br>Producing Ltd.   | Phone : +36-34-311-117                         | Clutch-disc and devices  | 38                   | 58                          | 0               | 12                  |
| 24. Elasznicó Ltd.  |  | Passenger car tires, tire spare parts, tire profiles   | 15                   | 15                          | 0               | 9                   |
| 25. Eltec Electro technical Ltd.  |  | Cable-strand manufacturing, electronic components  | 62                   | 40                          | 57              | 150                 |
| 26. ELASZTO-ART<br>H-6063 Lábcsitiek,<br>P.O. Box 19.   | Phone : +36-76-342-058<br>Fax : +36-76-342-155 | Technical rubber goods, metal-rubber composis,<br>mixtures (sunmornings, door sealings,<br>water-cooler tubes)                           | 76                   | 26                          | 12              | 42                  |

| Members/Address   | Representative/Phone   | Manufactured Product  | Total Sales<br>MMHFT | Automobil Industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|---|----------------------|-----------------------------|-----------------|---------------------|
| 27. ELCOMETAL Ltd.<br>H-6724 Szeged,<br>Ustakos u. 4.   | Phone : +36-62-324-333<br>Fax : +36-62-474-333                   | Manufacturing of special vehicle industry fasteners<br>(e.g. manufacturing of brake-lining rivets according<br>to form DN 7338 B)                               | 35                   | 30                          | 4.5             | 10                  |
| 28. ELZETT CERTA ZPSZ Company<br>H-3981 Satoraljajhely<br>Bereczky u. 13-28.                              | Phone : +36-41-321-122<br>Fax : +36-46-345-460                   | Lock manufacturing (outer latches, lock inserts,<br>door lock latches), manufacturing of castings,<br>tools   | 2,100                | 380                         | 1,785           | 1,550               |
| 29. ELZETT Safety Techniques Ltd.<br>H-1138 Budapest<br>Vaci ut 117-119.                                  | Phone : +36-1-120-8014<br>Fax : +36-1-129-0692                   | Vehicle door opener locking system,<br>address manufacturing  | 598                  | 196                         | 203             | 482                 |
| 30. Es Cade Ltd.<br>H-2314 Halasztelek,<br>Kisgyar u. 23.   | Phone : +36-1-276-0867<br>+36-24-374-509<br>Fax : +36-1-277-6314 | Plastic components for vehicle industry<br>(air conducting passenger compartment<br>elements, etc.)   |                      |                             |                 |                     |
| 31. FERRO-FEM<br>H-8500 Papa,<br>Celli ut 17.   | Phone : +36-89-324-244<br>Fax : +36-89-313-015                   | Lock manufacturing (outer latches, lock inserts,<br>door lock latches), manufacturing of castings,<br>tools   |                      |                             |                 |                     |
| 32. FLYG Breakapport Factory<br>H-3600 Ozd Hódmezőcsanak<br>Nagyvölgyi u. 7.                              | Phone : +36-48-471-344/1282                                      |   |                      |                             |                 |                     |
| 33. FRIMAG Tools Manufacturing Ltd.<br>H-8061 Mór,<br>Iparlel P.O. Box 47.                                | Phone : +36-22-407-809<br>+36-22-407-661                         | Polyurethane shaping tools  | 119                  | 119                         | 112             | 60                  |
| 34. GANZ K.K. Ltd.<br>H-1475 Budapest, P.O.B. 87,<br>H-1101 Budapest,<br>Kobanyai ut 41/c.                | Phone : +36-1-114-4380<br>Fax : +36-1-210-1189                   | Development, manufacturing and<br>distribution of low voltage devices<br>(Cooling, heating controlling assembly,<br>brake-lamps, fog-lamps, wind-screen wipers) | 953                  | 31                          | 212             | 500                 |
| 35. GLASUNTON Ltd.<br>H-3104 Salgotarjan,<br>Budapest ut 29.  | Phone : +36-32-310-263<br>Fax : +36-32-310-553                   | Drawn plate glass, cemented, hardened, heat<br>isolating glass manufacturing, processing,<br>distribution, wind-screen side and rear glass                      | 1,800                | 600                         | 630             | 1,010               |
| 36. HAJDU Industrial Machinery Ltd.<br>Nagyvölgyi u. 7.   | Phone : +36-48-471-344/1282                                      | Heat technical devices, manufacturing of<br>plate forming and moulding tools  | 4,030                | 0                           | 693             | 1,520               |
| 37. HODGER Vehicle Manufacturing Ltd.<br>H-6800 Hódmezővásárhely<br>Erzsébeti u. 5/a.                     | Phone : +36-62-345-211<br>Fax : +36-62-344-654                   | Vehicle subassembly, body manufacturing   | 600                  | 600                         | 240             | 230                 |
| 38. Horvath & Son Parts Manufacturing<br>Trading and Servicing Ltd.<br>H-2120 Dunakeszi,<br>Esze T. u. 7. | Phone : +36-27-341-442   | Manufacturing of brake-tubes, hydraulics<br>tubes, and foro-meter devices   | 15                   | 10                          | 0.75            | 10                  |
| 39. IKARUS Foux Ltd.<br>H-5520 Szegehalom<br>Kintési ut 76.   | Phone : +36-66-371-455<br>+36-66-371-441<br>Fax : +36-66-371-656 | Machined structural devices manufacturing<br>for vehicles   | 750                  | 500                         | 225             | 460                 |

| Members/Address  | Representative/Phone                                 | Manufactured Product  | Total Sales<br>MMHFT | Automobil industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|--|--|---|----------------------|-----------------------------|-----------------|---------------------|
| 40. IKARUS Press Technique Ltd.<br>H-1163 Budapest,<br>Margit u. 114.                            | Phone : +36-1-164-2099                               | Manufacturing of bodies, body elements  | 654                  | 582                         | 181             | 130                 |
| 41. IKARUS Sealed Subsidiary<br>H-6727 Szeged,<br>Főgyári u. 13.<br>H-6701 Szeged, P.O.B. 112    | Phone : +36-62-324-088<br>Fax : +36-62-324-449       | Manufacturing of bus-doors,<br>and stoking devices  | 648                  | 585                         | 48              | 369                 |
| 42. DMAG Ltd.<br>H-8061 Mór, P.O. Box 47.  | Phone : +36-22-407-367<br>Fax : +36-22-407-806       | Manufacturing of seats, steering wheels,<br>indoor upholstery and cable strands<br>(buses, trucks, cars)                      | 2,700                | 2,700                       | 500             | 1,350               |
| 43. INA Bearing Producing Ltd.   |  | Bearings, rolling bearings, relative and<br>linear bearings   | 180                  | 63                          | 63              | 8                   |
| 44. Iron and Construction Industrial<br>Cooperative<br>H-4400 Tiszavasváry, Napszi út 2.         | Phone : +36-42-372-711                               | Manufacturing of tube strain clamps and<br>machined parts, tanks, steel constructions,<br>boilers                             | 62                   | 1                           | 14              | 87                  |
| 45. ITT AUTOMOTIVE Hungary Ltd.<br>H-1072 Budapest Rakocsi út 42.                                | Phone : +36-1-268-1241<br>Fax : +36-1-268-1245       | Car electrical products   | 300                  | 300                         | 300             | 350                 |
| 46. KALOPLASZTIK Ltd.<br>H-6300 Kaloosa, P.O.B. 79<br>Gombolyagi út 1.                           | Phone : +36-78-361-200<br>Fax : +36-78-361-752       | Die-casting of thermally plasticating<br>plastics, manufacturing of technical form items,<br>extruded profile bands, mixtures | 355                  | 9.3                         | 7               | 296                 |
| 47. KEMIPUR Polüuretán System Ltd.<br>H-2083 Solyvár<br>Terstyánszky út 89.                      | Phone : +36-1-188-6747<br>+36-26-339-372             | Plastic parts manufacturing   | 1,200                | 180                         | 180             | 20                  |
| 48. K & K 95 Co.   |  | Manufacturing of brake tubes,<br>small forged parts.  | 10                   | 10                          | 0               | 1                   |
| 49. István Kiss individual entrepreneur<br>H-3435 Martfű,<br>Hosok u. 4.                         | Phone/Fax : +36-36-450-748                           | Processing of rubber industrial products,<br>adhesive production  | 7                    | 0                           | 0               | 8                   |
| 50. KVI Company<br>H-2421 Nagyvértes<br>KVI Művek u. 2.  | Phone/Fax : +36-25-311-273<br>Phone : +36-60-338-024 | ABA shackles, exhaust pipes, pressed and<br>welded plate parts special screws   | 100                  | 30                          | 40              | 84                  |
| 51. KLIMA Industrial Cooling and Air<br>Technique Ltd.<br>H-1138 Budapest<br>Cserevénka u. 84/b. | Phone/Fax : +36-1-183-6116                           | Manufacturing of industrial cooling<br>equipment, air filter, primary filters,<br>water protecting caps                       | 110                  | 50                          | 0               | 148                 |
| 52. Kresz & Fiedler Ltd.<br>H-7720 Pocsyvárad,<br>Pocsy országút 1/1.                            | Phone/Fax : +36-72-465-001                           | Processing of plastics, manufacturing of tools  | 21                   | 5                           | 12.5            | 15                  |



| Members/Address   | Representative/Phone   | Manufactured Product   | Total Sales<br>MMHFT | Automobil Industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|--|----------------------|-----------------------------|-----------------|---------------------|
| 53. KUNPLAST Technical Plastics Industrial Ltd.<br>H-6100 Kiskunfélegyháza, Szegedi út 66.  | Phone : +36-76-463-455<br>Fax : +36-76-362-991                   | Processing of thermally plasticating and hardening plastics (bumpers, motor protecting casing, licence plate illumination, indoor lamps, ash-trays, fuses) | 1,150                | 520                         | 690             | 650                 |
| 54. Kozlekedési Muszergyártó Ltd.<br>(Transportation Machinery Parts)   | Phone : +36-1-120-1475   | Manufacturing of precision instruments for vehicles  | 400                  | 400                         | 280             | 290                 |
| 55. KVATTRO Ltd.<br>H-8400 Ajka, P.O. Box 132<br>Cvar u. 35.  | Phone : +36-88-312-557<br>Fax : +36-88-311-815                   | Electromechanic assembly, cold pressing, manufacturing of plastic parts, surface treatment (pressed metal parts for vehicle industry)                      | 210                  | 22                          | 83              | 480                 |
| 56. MGYARMET Precision Foundry<br>Deposit company<br>H-2060 Bicske,<br>Kantársai út 12.   | Phone : +36-22-350-717<br>+36-22-350-834<br>Fax : +36-22-350-625 | Water pump, impeller lock system hinge   | 206                  | 206                         | 184             | 100                 |
| 57. MBKE Electronics Ltd.<br>H-7400 Kaposvár<br>Izso u. 3.  | Phone : +36-82-414-511<br>+36-82-410-417                         | Car electric, electronics, plastic parts, robot controls (generator, voltage controllers), wind-screen wiper-washer controls                               | 370                  | 120                         | 0               | 150                 |
| 58. MEZOGEP IKNAMAR<br>(Agricultural Machinery Parts)   | Phone : +36-68-311-655   | Vacuum-pump, CNC guided metal processing   | 2,821                | 1,301                       | 2,550           | 780                 |
| 59. MOLTON Machine Elements<br>Manufacturing and Distributing Ltd.<br>H-3301 Eger, P.O. Box 360<br>Móder u.26.                    | Phone : +36-36-410-622/120<br>Fax : +36-36-312-453               | Gas spring manufacturing and distribution  | 8                    | 4,8                         | 1               | 10                  |
| 60. MOM Machine Industrial Ltd.<br>H-7300 Komló,<br>Eplök utja 5-7.   | Phone : +36-72-481-517<br>Fax : +36-72-486-259                   | Brake cylinders, arms, clutch elements   | 350                  | 350                         | 105             | 230                 |
| 61. MAMG Automatic Ltd.<br>H-1037 Budapest<br>Szépvölgyi út 41.   |  | Electronical parts manufacturing of thermally plasticating products pressed casting  | 380                  | 380                         | 300             | 2,300               |
| 62. Miskolc Mechanical Machinery Ltd.<br>(MMG)  |  | Electronical devices.<br>Manufacturing of thermally plasticating products  | 130                  | 60                          | 10              | 170                 |
| 63. New Strigon Metal Industrial and Precision Engineering Products<br>Manufacturing Ltd.<br>H-2500 Esztergom,<br>Simor J. u. 54. | Phone/Fax : +36-33-312-495<br>Phone : +36-33-312-217             | Body manufacturing   | 56                   | 12                          | 0               | 36                  |
| 64. OZDIONTODE Ltd.   | Phone : +36-48-471-344   | Manufacturing of brake equipment.<br>(Drum brake, disc)  | 156                  | 156                         | 0               | 130                 |
| 65. PEMU Car Industrial Branch of Pest Country Plastic Industrial Ltd.<br>H-2083 Solymár,<br>Terszentszky-út 89.                  | Phone : +36-26-339-033/151<br>Fax : +36-26-339-148               | Plastics processing (Manufacturing of Volkswagen roof ladders, bumpers, etc.)  | 4,000                | 50                          | 800             | 1,452               |

| Members/Address   | Representative/Phone   | Manufactured Product   | Total Sales<br>MMHFT | Automobil industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|--|----------------------|-----------------------------|-----------------|---------------------|
| 66. PORKORIT Ltd.<br>(Tools factory)  | Phone : +36-1-166-8853   | Dust Metallurgy and tool manufacturing   | 210                  | 35                          | 9               | 160                 |
| 67. PERION Battery Factory Ltd.<br>H-1138 Budapest,<br>Vaci ut.135-139.   | Phone : +36-1-129-0616<br>Fax : +36-1-129-0263                   | Manufacturing and distribution of motorcar starting batteries and alkaline batteries   | 2,116                | 1,390                       | 135             | 696                 |
| 68. PREC-CAST Foundry Ltd.<br>H-3960 Satorjujtelek,<br>Ipar u. 2.   | Phone : +36-47-322-956<br>Fax : +36-47-322-137                   | High precision aluminum and zinc diecasting, tools and shapes manufacturing for (certain cast iron parts, brake equipment and engine parts)              | 567                  | 280                         | 567             | 140                 |
| 69. Puskas-Tivadar Factory<br>H-1138 Budapest<br>Topolya u. 4.  | Phone : +36-1-129-9529<br>Fax : +36-1-140-1942                   | Electronical devices   | 120                  | 2                           | 0               | 93                  |
| 70. RATI Car Equipment<br>Rajnai Attila entrepreneur<br>H-7300 Komo, Kossuth L. u. 3.   | Phone : +36-72-483-384<br>Fax : +36-72-481-252                   | Repair of electronic devices, plastics processing (later mountable consols, grilles, elbow-rests, etc.) SUZUKI dashboard panel, door handles)            | 67                   | 67                          | 12              | 55                  |
| 71. RATIPUR Car Equipment Ltd.<br>Rajnai Attila entrepreneur<br>H-7300 Komo, Kossuth L. u. 3.   | Phone : +36-72-483-384<br>+36-72-483-385<br>Fax : +36-72-481-252 | Various air directing and other later mountable plastic car equipment  | 76                   | 76                          | 67              | 42                  |
| 72. Raba Sarvar Ltd.<br>H-9600 Sarvar,<br>Ipartelep u. 6.   | Phone : +36-94-327-297<br>+36-94-315-404<br>Fax : +36-94-327-296 | Vehicle parts, tools, fire-place manufacturing (fasteners, toothed shafts, piston-pin assembly, SUZUKI pedal system)                                     | 1,136                | 969                         | 284             | 981                 |
| 73. RAK Rajnai Arpad<br>H-7300 Komo,<br>Székely Bertalan u. 2/d.  | Phone : +36-1-204-11175514<br>Fax : +36-1-166-6170               | Car industrial and electric parts manufacturing and distribution (manufacturing of SUZUKI antenna, electric noise-filters, wild freighters, CB antennas) | 8                    | 6                           | 0.8             | 12                  |
| 74. Rona Tamás entrepreneur<br>H-1142 Budapest,<br>Tani u. 95.  | Phone : +36-1-120-1345   | Rati brake-lining even for first building in, asbestos-free disk brake, drum brake and clutch disc   | 150                  | 150                         | 90              | 80                  |
| 75. Spiraller Ltd.<br>Spring, Technical Furnitur<br>Manufacturing and Assembling<br>Industrial Ltd.<br>H-1163 Budapest,<br>Batsuryi u. 6. | Phone : +36-1-271-0405<br>+36-1-271-1465<br>Fax : +36-1-271-0405 | Manufacturing of springs and industrial furniture  | 120                  | 60                          | 20              | 40                  |
| 76. SZYM Szekesfeharvar Grinding<br>Machines Manufacturing Ltd.<br>H-8001 Szekesfeharvar<br>P. O. Box 86.                                 | Phone : +36-22-313-012<br>Fax : +36-22-329-464                   | Manufacturing of air brakes  | 310                  | 230                         | 280             | 240                 |
| 77. Szendroi Metal Industrial Ltd.  |  | Aluminium steel, stainless steel devices, welded and pressed components  | 150                  | 0.1                         | 149             | 130                 |

| Members/Address  | Representative/Phone                           | Manufactured Product  | Total Sales<br>MMHFT | Automobil industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|--|--|---|----------------------|-----------------------------|-----------------|---------------------|
| 78. Tatabanya Spring Manufacturing Ltd.<br>H-2801 Tatabanya,<br>P. O. Box 1301.  | Phone : +36-34-334-577<br>Fax : +36-34-310-452 | Manufacturing of various springs,<br>fasteners, tools production (brake system<br>springs, fastener rings)                                  | 70                   | 25                          | 10              | 70                  |
| 79. TAURIL Rubber Producing and<br>Distributing Ltd.<br>H-1108 Budapest,<br>Ujhög ut 25-31   | Phone/Fax : +36-1-260-2455                     | Manufacturing and distribution of fine technical<br>rubber products (105-120 different types)   | 700                  | 350                         | 350             | 400                 |
| 80. Taurus Palma Rubber and Plastics<br>Industrial Subsidiary<br>H-4400 Nyiregyháza,<br>Derkovits u. 137.                                    | Phone : +36-42-315-234<br>Fax : +36-42-311-264 | Manufacturing and distribution of air<br>springs, vehicle industrial bellows and<br>other vehicle industrial rubber and<br>plastic products | 960,5                | 617,2                       | 307,3           | 492                 |
| 81. TECHNOCAR<br>H-8130 Ercyng, P.O.B. 32  | Phone : +36-22-372-302                         | Manufacturing, distribution of heavy-duty<br>vehicle springs  | 47                   | 47                          | 47              | 40                  |
| 82. Újpesti Csepelgyár<br>H-1325 Budapest<br>P.O.B. : 43<br>H-1043 Budapest<br>Dugonics u. 11.   | Phone : +36-1-169-8766<br>Fax : +36-1-169-5488 | Manufacturing of shock absorber   | 236                  | 236                         | 58              | 132                 |
| 83. UNITED TECHNOLOGIES<br>AUTOMOTIVE-H<br>H-2100 Godollo<br>Haraszti u. 4.  | Phone : +36-28-310-611<br>Fax : +36-28-310-396 | Cable-strand manufacturing and assembly   | 500                  | 500                         | 500             | 400                 |
| 84. Vehicle Instruments manufacturing<br>Ltd.<br>H-1134 Budaörs u. 5-7.  | Phone : +36-1-120-1475<br>Fax : +36-1-129-9015 | Manufacturing of vehicle instruments  |                      |                             |                 |                     |
| 85. Vehicle Parts and Brake-Assembly<br>Manufacturing Company<br>H-3400 Mezőkovesszél,<br>Lóvei ut 35.<br>H-3401 Mezőkovesszél, P.O. Box 36. | Phone : +36-49-312-622<br>Fax : +36-49-312-256 | Brake elements manufacturing  | 180                  | 150                         | 36              | 190                 |
| 86. VSZAM Moldgraf<br>H-1116 Budapest,<br>Fehérvári ut 120.  | Phone : +36-1-185-3415                         | Manufacturing and distribution of<br>friction elements  | 85                   | 56                          | 56              | 36                  |
| 87. Voith Ltd.<br>H-4034 Debrecen,<br>Harmasbégyi ut 13.   | Phone : +36-52-342-515                         | Manufacturing and trading of asbestosfree<br>brake-linings  | 32                   | 32                          | 6               | 20                  |
| 88. V technique Machinery Industry Ltd.<br>H-1116 Budapest,<br>Fehérvári ut 120.   | Phone : +36-89-324-244                         | Manufacturing of friction elements<br>exhaust pipes   | 320                  | 320                         | 35              | 86                  |
| 89. Volan Bus (Vehicle technical Ltd.)   |  | Bus repairing, body work,<br>reworking of major body work parts   | 750                  | 600                         | 200             | 320                 |
| 90. VT Galvano Plastic Ltd.  |  | Surface treatment, surface treated components,<br>galvanizing   | 369                  | 14                          | 57              | 285                 |

| Members/Address   | Representative/Phone                           | Manufactured Product  | Total Sales<br>MMHFT | Automobil industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|---|----------------------|-----------------------------|-----------------|---------------------|
| 91. 4 Asztracs-Plaszt Ltd.<br>H-1181 Budapest<br>Vashari u. 1.  | Phone : +36-30-415-977<br>Fax : +36-29-352-675 | Manufacturing of Lada, Skoda, Trabant,<br>Dacia, and Wartburg accessories   | 15                   | 5                           | 0               | 14                  |
| 92. Worgmark Engineering Office   | Phone : +36-60-335-402                         | Marketing and quality<br>Safety systems   | 4.5                  | 3                           | 0               | 8                   |
| 93. AGTINOVA Engineering and<br>Trading Ltd.<br>H-1143 Budapest,<br>Gizella ut 42-44                  | Phone : +36-1-251-4552<br>Fax : +36-1-252-1146 | Elaboration of technological, architectural,<br>constructional engineering plans,<br>construction planning, computer system<br>development, environment protection, trading | 54                   | 3                           | 0               | 16                  |
| 94. ALTA Deposit Company<br>H-1031 Budapest,<br>Huszti ut 25.   | Phone : +36-1-157-1273<br>Fax : +36-1-157-2973 | Computer system development, trading  | 3                    | 1                           | 0               | 2                   |
| 95. ALLJTERV FKI Ltd.<br>H-1116 Budapest,<br>Fehervari ut 144.  | Phone/Fax : +36-1-185-0153                     | Production technology of aluminum based<br>products, manufacturing of metal powders,<br>certification of aluminum based products  | 250                  | 0.5                         | 0               | 25                  |
| 96. Car Industrial Research and<br>Development Ltd.<br>H-1115 Budapest,<br>Csoka u. 7.                | Phone : +36-1-185-4977<br>Fax : +36-1-166-7570 | Development, testing and qualification of<br>vehicles and parts manufacturing,<br>environment protection, tribology   |                      |                             |                 |                     |
| 97. Szochenyi Istvan College Public and<br>Rail Vehicles Institute<br>H-9026 Győr,<br>Hedervari ut 3. | Phone : +36-96-429-722                         | Vehicle main units planning, testing and<br>technological qualification   | 0                    | 0                           | 0               | 6                   |
| 98. WORGMARK Engineering Bureau<br>H-1039 Budapest,<br>Hunyadi J. u. 7.                               | Phone : +36-60-335-402                         | Marketing and quality assurance system<br>development   | 4.5                  | 3                           | 0               | 8                   |
| <b>Supporting Member Companies</b>  |  |   |                      |                             |                 |                     |
| 99. ARIES-TRADE Bt<br>H-1701 Budapest<br>P.O.B. 72.   | Phone/Fax : +36-1-178-0305                     | Car trade   |                      |                             |                 |                     |
| 100. BEROHA Tubes & Steel Trading Ltd.<br>H-1138 Budapest,<br>Vaci ut 202.                            | Phone/Fax : +36-1-129-8233                     | Part whole sale.  |                      |                             |                 |                     |
| 101. Europa Gamma Ltd.<br>H-2360 Gyál,<br>Landler J. u. 73.   | Phone : +36-1-280-6390<br>Fax : +36-1-280-5792 | Car trade   |                      |                             |                 |                     |
| 102. FABICAD Ltd.<br>H-1148 Budapest<br>Fogarasi ut 10.   | Phone/Fax : +36-1-221-3721<br>+36-1-183-2025   | Computers for Auto parts  |                      |                             |                 |                     |

| Members/Address   | Representative/Phone                           | Manufactured Product | Total Sales<br>MMHFT | Automobil industry<br>MMHFT | Export<br>MMHFT | Number<br>Employees |
|---|--|----------------------|----------------------|-----------------------------|-----------------|---------------------|
| 103. General Motors Hungary<br>H-9971 Szigetghard,<br>Fuzessy u. 15.  | Phone : +36-94-80-451<br>+36-94-80-449         | Car Assembly         |                      |                             |                 |                     |
| 104. Hungarian SUZUKI Ltd.<br>H-2500 Esztergom,<br>Schweidel J. u. 52.  | Fax : +36-06-33-312-014                        | Car Assembly         |                      |                             |                 |                     |
| 105. IKAROS Vehicle Manufacturing Ltd.<br>H-1165 Budapest,<br>Marpat u. 114.  | Phone : +36-22-316-429<br>Fax : +36-22-314-089 | Bus Assembly         |                      |                             |                 |                     |
| 106. KARAGENT Bt.<br>H-1022 Budapest<br>Detekó u. 3/a.  | Phone/Fax : +36-1-115-8137                     | Car Trade            |                      |                             |                 |                     |
| 107. Multi-Tec Ltd.<br>H-5300 Karcag<br>Puszkodmányi ut. 11.  |  | Car Trade            |                      |                             |                 |                     |
| 108. QUALIPROD Quality & Engineering<br>Consultant Ltd.<br>H-1027 Budapest,<br>Fo u. 68. 111/654,<br>H-1371 Budapest, P.O.B. 433.         | Phone : +36-1-201-8374                         | Consultants          |                      |                             |                 |                     |
| 109. Rabi Miklos Export-Import<br>H-1161 Budapest,<br>Rakoczi ut. 53.   | Phone/Fax : +36-1-271-5871                     | Car Trade            |                      |                             |                 |                     |
| 110. TÜV Rheinland Hungary<br>International Engineering<br>Supervisory & Consulting Organization<br>H-1399 Budapest,<br>Paulay Ede u. 52. | Phone : +36-1-268-0896<br>Fax : +36-1-268-0671 | Consultants          |                      |                             |                 |                     |









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