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ملاحح اساسية عن  
مشروع تصنيع الاجزاء المطاطية للسيارات والشاحنات  
مقدمة الى  
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الكويت

Project Profiles  
Automobile Rubber Components  
Presented to  
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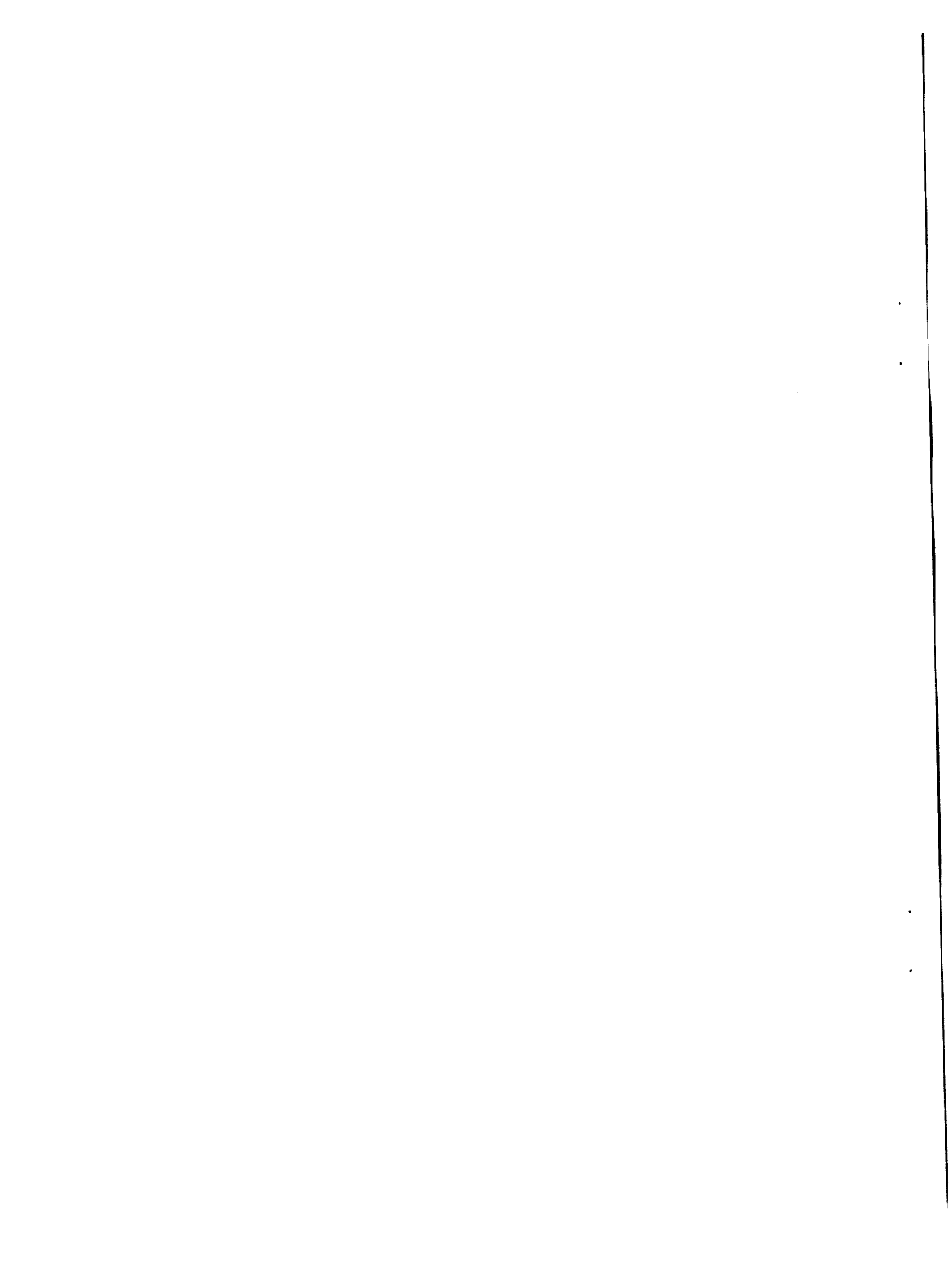
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## ملخص مؤشرات المشروع

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- اسم المشروع : تصنيع الاجزاء المطاطية للسيارات والشاحنات
- الانتاج : انايب مطاطية و سيور (قايش)
- حجم السوق (منطقة الاسكوا) : انايب (راديتير) ٨٣ مليون وحدة في ١٩٩٠ و يزداد الى ١١٢ مليون وحدة في سنة ٢٠٠٠ سيور ٢٤ مليون وحدة في سنة ١٩٩٠ و يزداد الى ٦٥ مليون وحدة في سنة ٢٠٠٠ انايب (موقف) ٥٥ مليون وحدة في سنة ١٩٩٠ و يزداد الى ٧٥ مليون وحدة في سنة ٢٠٠٠ اخرى بحدود ٣٠٠٠ طن سنويا
- الطاقة التصميمية للمشروع : ٥ ملايين وحدة انايب (راديتير) ٢ مليون وحدة سيور ٢ مليون متر انايب (موقف) ٣٠٠٠ طن ملحقات اخرى
- مساحة الارض المطلوبة : ٦٠٠٠ متر
- كلفة المباني : ١٦٠٠٠٠٠٠ دولار
- كلفة المعدات : ١٥٠٠٠٠٠٠ دولار
- الاستثمارات الثابتة : ٧٤٢٠٠٠٠٠ دولار
- عدد العمال : ١٠٦
- كلفة الانتاج : ١٨١٢٠٠٠٠٠ دولار
- المبيعات المتوقعة : ٢٣٠٠٠٠٠٠٠ دولار
- الارباح المتوقعة : ٤٨٨٠٠٠٠٠ دولار



## AUTOMOBILE RUBBER COMPONENTS

### 1. Introduction

The term automobile rubber components as applicable to automotive equipment covers a very wide range of items starting from the simplest to the sophisticated. Items like rubber mats, radiator hoses, would come under the former category. Brake hoses and rubber to metal components, V belts come under the latter category. Hoses for radiators, V belts for fans are fast moving items in the spares market and to a lesser extent this is also true of brake hoses and rubber to metal bushings.

### 2. Demand

The replacement demand of rubber components is related to the population of the vehicles and the frequency of replacement. Based on the experience of some developing countries, and prevailing operating conditions of vehicles in ESCWA region\*, the following replacement frequencies have been adopted for certain components:

Type of component	No. per vehicle	Replacement frequency	Replacement requirement per year
Hoses	2	2	1
V Belts	1	2	0.5
Brake Hoses	2	3	0.67

\* ESCWA region incorporates the member countries: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, U.A.E., Yemen Arab Republic (YAR), Yemen People's Democratic Republic (PDRY) and PLO.

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The population of vehicles as projected, for ESCWA region is shown below:

Class of vehicle	Population	
	1990	2000
Passenger cars	6,000,000	8,000,000
Light commercial vehicles	1,600,000	2,300,000
Heavy commercial vehicles	400,000	500,000
Buses	130,000	186,000
Tractors	150,000	213,000
Total	8,280,000	11,199,000

Accordingly the replacement demand for rubber components is worked out as shown hereunder:

Type of component	Demand yearly 1990	(No.) in million 2000
Hoses	8.3	11.2
V-Belts	4.2	5.6
Brake hoses	5.5	7.5
Other components such as extruded sections as estimated about (3000 t)		

This large volume of demand justifies establishment of more than one manufacturing facilities in ESCWA region.

### 3. Technology and process of manufacture

As already stated, manufacturing technology for the production of hydraulic hoses for brake assembly, V belts and rubber to metal components is of sophisticated nature. Moreover 'brake hoses' is of a critical safety item in an automotive equipment. The manufacturing process generally consists of preparation of rubber with additives, chemicals and synthetic rubber, mouldings, curing inspection and packing.

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4. Capacity

Brake Hoses (in million meter) (bore 8 mm to 10 mm)	2
Radiator Hoses (million nos.)	5
V Belts (million Nos.)	2
Extruded components including rubber to metal components (Ton)	3000

5. Cost of the project

	<u>\$ (million)</u>
Land 6000 sq.m.	0.12
Building 2000 sq.m.	1.60
Plant and machinery	5.00
Misc. expenses	<u>0.70</u>
	<u>7.42</u>

6. Manpower Requirements: as estimated below:

Designation	Salary p.m.	No.	Amount p.m. (\$)
Managers	4,000	2	8,000
Engineers	3,000	4	12,000
Foremen, Technicians	1,500	30	45,000
Skilled workers	1,000	80	80,000
Unskilled workers	600	50	30,000
Admin.	1,000	<u>20</u>	<u>20,000</u>
Total		196	195,000
Total per year			\$ 2.34 million

7. Turnover

\$ 23 million

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	<u>\$ Million</u>
8. <u>Inputs</u>	
Raw materials	10.35
Consumables	1.15
Power 3000 KW	0.58
Salaries and Wages	2.34
Miscellaneous manufacturing expenses	0.69
Sales and Service expenses	0.46
Repair and maintenance	0.30
Interest	1.65
Depreciation	<u>0.60</u>
	<u>18.12</u>
9. <u>Net profit before tax</u>	<u>4.88</u>