Form1.
Summary of the pipe production from recycled rubber

1. Introduction to products or services

1.1. The goal of plan

The main goal of this plan is to establish pipe production unit from recycled rubber in Lorestan province. This plan will be exploited from 2018 with 30 personnel and 70% of the practical capacity in 1 working shift of 12 hours and 300 day annually and will reach its 100% of the practical capacity by 2021.

1.2. Characteristics and advantages

The pipe hose is hollow and flexible which is designed for transferring the liquids between places. Sometimes, the hose is called pipe while, the hose is soft and flexible and the pipe is hard and inflexible. Usually, the hose is cylindrical with a circular section. In designing the hose, there are different factors involved such as different applications and performance, size, pressure, length, chemical consistency and so forth directly and indirectly. In term of material, there are 2 hose types:

1. Vinyl hoses (a polymer resin made plastic material): vinyl hoses are light and for this reason are used easily in high diversity and are favorable for the housewives.
2. Rubber hoses: rubber hoses re heavy and are mostly used by contractors and professionals. These hoses are used for long-term and heavy jobs (also, some of them are produced of combinational materials known as vinyl-rubber hoses). For reaching higher pressing strength, these hoses can be strengthened by steel rope or fibers.

Some advantages of the rubber hoses

Water rubber hoses are designed under the pressure for easily use in smooth and rough surfaces as well as easily maneuver among the trees and bushes and other physical barriers.

- These hoses are applicable and durable in all climates due to large temperature range.
- In spite of PVC and other polymers made hoses, rubber hoses are not hardened in cold weather and not cracked and would not be adhesive in hot weather and maintain its form.
- Due to having antioxidant and anti-resonant, rubber hoses are desirably strong in different climates and direct sunlight.

1.3. Custom fees

Table1. Products custom fees and tariffs

No.	Description	Tariff code	Fees %
1	Volcanized, soft rubber hoses without supplies and accessories	40091100	10

1.4. ISIC code

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The plant considered is for rubber hoses production. The ISIC code related to this product is 2519 in the department of industry, mine and commerce systems in subgroup rubber products manufacturing and its measurement scale is ton.

Table2. Product ISIC code

ISIC code	Description	Scale
2519512306	Volcanized, soft rubber hoses without supplies and accessories	Ton

1.5. Introduction to products application

Rubber hoses are used in water transfer and in other environments for liquids transfer. Particular applications are:

- Hoses for gardening and agriculture and irrigation and water transfer
- Firefighting hoses
- Air hoses in diving
- Hoses in air brake system
- Hoses in gap brake system
- Hoses in car parts

2. Suggested sites

Based on surveys, the cities such as Kuh Dasht, Pol Dokhtar and Borujerd are suitable sited for establishing this unit.

3. Raw, auxiliary materials and consumables

The raw material for this plan is corroded rubber, ethylene, propylene (EPDM) and other foam making and packing materials

4. Sales plan and target market (local and foreign)

The target market at first is to supply locally in sections and then for additional production, the export would be done to Iraq and eastern neighbors.

Table3. Products production and sales plan

Description	2018	2019	2020	2021
Production capacity	70%	80%	90%	100%
Production level (t)	700	800	900	1000
Sales level (m.Rial)	94500	108000	121500	135000

5. Annual nominal and practical capacity

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Nominal capacity

The Nominal capacity is the production in ideal situation. This capacity is registered by the machineries manufacturers and is based on the engineering and designing principles. Nominal production of this product is 150 kg per hour and 110 ton annually for 2 lines in 300 days.

5.2. Practical capacity

The practical capacity is the maximum available capacity in typical situation which is considered as a percentage of the nominal one. Considering that machineries are not capable of 100% production, based on the time for repair, maintains and failure etc. their efficiency is 90% considered. The practical capacity for this unit is 1000 ton annually.

6. Production procedure and technology

7. Investment costs

7.1. Fixed investment

Table4. Investment costs

No.	Description	Costs			
		Dollar	Rial	Rial	Total
1	Land	0	0	2750	2750
2	Landscaping	0	0	2136	2136
3	Building construction	0	0	16095	16095
4	Machineries and equipment	510000	510000	1761	19371
5	Branches and installation	0	0	6694	6694
6	Vehicles	0	0	3408	3408
7	Service and official equipment	0	0	310	310
8	Other and unpredicted costs (5% of above costs)	0	0	2538	2538
9	Pre-exploiting costs	0	0	1100	1100
10	Total fixed investment costs	510000	510000	36792	54402
11	Working capital in 100% of capacity	0	0	25752	25752
12	Total investment costs	510000	510000	62544	80154

7.2. Working capital

Table5. Working capital

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No.	Description	Day	1st year	Base year
1	Raw and auxiliary materials	30	5075	7250
2	Current and produced products inventory	30	6146	8585
3	Debts	30	6225	8698
4	Cash	30	982	1219
Total			18428	25752

8. Production costs

Table6. Production costs

Description	Total costs (m.Rial)
Raw and packing material	87000
Energy	1397
Repair, maintenance and spare parts	2648
Personnel's salary	6061
Unpredicted (6%)	5826
Depreciation	4533
Insurance	92
Sales and official costs	1350
Total operational and non-operational production costs	108907

9. Economic indices

Description	Amount-measurement scale
NPV	1218397 m Rial
IRR	26.86%
PBP	5.63 years equal to 2021

Islamic Republic of Iran
Ministry of Economic Affairs and Finance
Organization for Investment
Economic and technical Assistance of Iran

PROJECT PROFILE – SUMMARY SHEET

Project Introduction

1. Project title: pipe production from recycled rubber

2. Sector: producing products of polymer and rubber
Sub sector: producing other polymer products

3. Products/Services: pipe production from recycled rubber

4. Location: … Free zone ☐ Economic special zone ☐ Industrial Estate ■ Main Land ☐

5. Project description:
Today, as fuel costs increases, many countries seek increase the energy recycle of the eroded tires; since except the abovementioned issues, they have known that the tires thermal value is more than the coal. The estimations conducted in Iran implied that out of 13 million useless tires which are annually put in environment, about 3% of it (about 390000 tires) are used in Iranian coating industries. From the tire stocks, only 25 weight percent is used in rubber recycling industries (including material recycle and coating industry) and remaining 75% are deposited in environment. The sulfur produces of it is also lower than the coal. Its recycle causes reduction of wastes volume by 90%. In order to get rid of the rubber wastes, the most important, healthiest and most economical ways is to recycle them. Because, it doesn't damage the environment, but also prevents from consumption of the fossil fuels and causes the energy economizing. One of the products produced of the recycled rubber is the rubber pipes which are used for agriculture and gardening. This is highly desirable in addition to the advantages for Iran due to lack of sufficient water supply sources and it would be supported by governmental and public entities.

6. Annual capacity: 1000 t

Project Status

7. Local / internal raw material access 100 %

8. Sale: 80% locally
- Anticipated export market 20 %

9. Construction Period 24 month
Beginning of activity: 03/2018
In-site beginning of activity: 03/2018
End of project: 02/2019
Commercial activity beginning: 03/2019

Project Status

10. Project Status:

- Feasibility study available? Yes ■ No ☐
- Required land provided? Yes ☐ No ■
- Legal permissions (establishment license, foreign currency quota, environment, etc) taken? Yes ☐ No ■
- Partnership agreement concluded with local/foreign investor? Yes ☐ No ■
- Financing agreement concluded? Yes ☐ No ■
- Agreement with local / foreign contractor(s) concluded? Yes ☐ No ■
- Infrastructural utilities (electricity, water supply, telecommunication, fuel, road, etc) procured? Yes ☐ No ■
- List of know-how, machinery, equipment, as well as seller / builder companies defined? Yes ☐ No ■
- Purchase agreement for machinery, equipments and know- how concluded? Yes ☐ No ■

Financial Structure

11. Financial Table

Description	Local Currency Required			Foreign Currency Required Million Dollar	Total Million Dollar
	Million Rials	Rate	Equivalent in Million Dollar		
Fix Capital	36792	34530	1.07	0.51	1.58
Working Capital	25752	34530	0.75	0.00	0.75
Total Investment	62544	34530	1.81	0.51	2.32

- Value of foreign equipment/machinery 0.51 million dollar
- Value of local equipment/machinery 0.051 million dollar
- Value of foreign technical know- how 0 million dollar
- Value of local technical knows- how 0 million dollar

- Net Present Value (NPV): 12183.97 million Rial for 12 Year
- Internal Rate of Return (IRR) 26.86%
- Payback Period (PP) 5.63 Year (2021)

General Information

12. Project Type : Establishment ■ Expansion and completion ☐

13. Company Profile:

-Name (legal /natural persons): Sepinud Shargh institute of strategic studies
-Company Name: engineering consultation
-Address: unit 5, No. 3, Boostan 3 St., Pasdaran, Tehran
-Tel: 02122584901 Fax: 02122580343
-E-mail: info@sepinud.com Web site: www.sepinud.com

-Local entrepreneur : private sector ■ public sector ☐ other☐

Please attach follow documents if available

- Pre-feasibility study ■
- Feasibility study ☐
- Legal permissions (establishment license, foreign currency quota, environment, etc) ☐

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