

PRE-FEASIBILITY REPORT FOR THE PRODUCTION OF DEGREASING AGENT FOR METAL PROCESSING

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1. Introduction of Technology/Process/Product:

Name of Technology/Process/Product:

Production of Degreasing Agent for Metal Processing

Summary:

BASOL 77XX, a general purpose alkaline base degreasing agent, is being used for processing of arms ammunition components. PCSIR Laboratories Complex, Peshawar has developed an indigenous technology for the preparation of degreasing agent having similar properties as BASOL 77XX.

Project brief (*Local/International Perspective*):

BASOL 77XX is produced from locally available raw materials. The product has a growing demand in the arms and ammunition and metal industry as well as in automobile industry. No such product is produced in the country and investment in the project will not only help in import substitution but will also serve as a valuable export commodity.

2. Main Parameters of Technology/Process/Product:

Main Feature:

- Superior metal degreasing performance
- Can be used at lower concentration
- Water soluble
- Based on highly stable/alkaline inorganic materials
- Solution with lower viscosity profile, easy to pump, pour and blend

Input (*Raw materials with specifications*):

Commercial grade

- Rosin
- Caustic Soda

- Soda Ash
- Tri -sodium Phosphate
- Sodium Silicate

Output (Products, byproducts with specifications):

Product: Degreasing Agent

- | | |
|--------------------|----------------------|
| • pH (1% solution) | 12.00-13.00 |
| • Appearance | Yellow powder |
| • Solubility | Freely water soluble |

Byproducts: Nil

Application/Uses:

- Metal industry
- Arms and ammunition industry
- Automobile industry

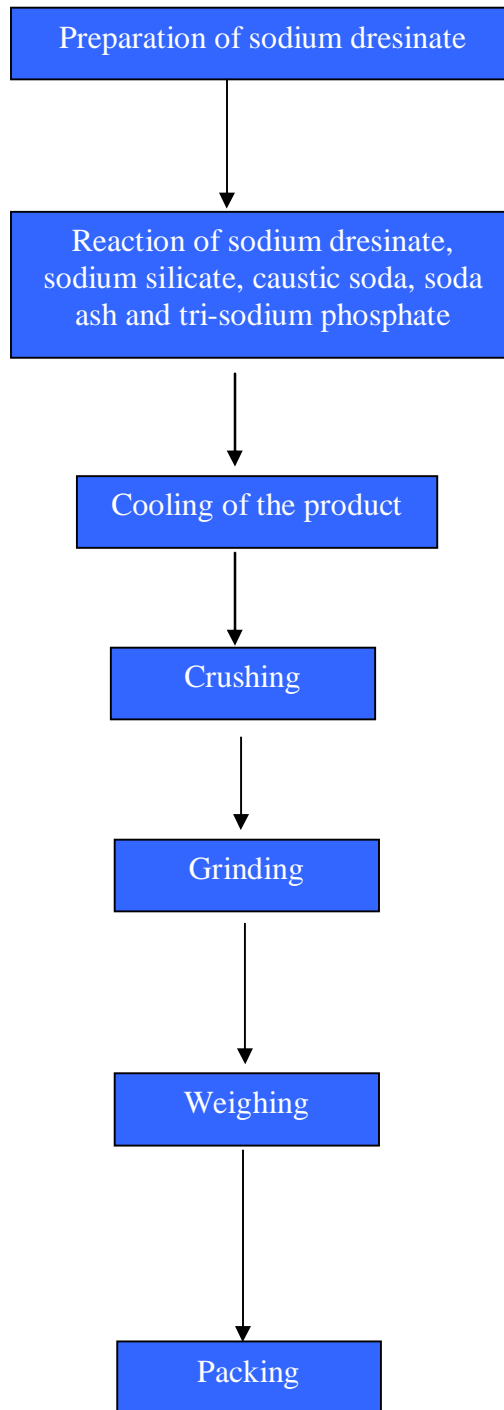
Trial Result:

Successful

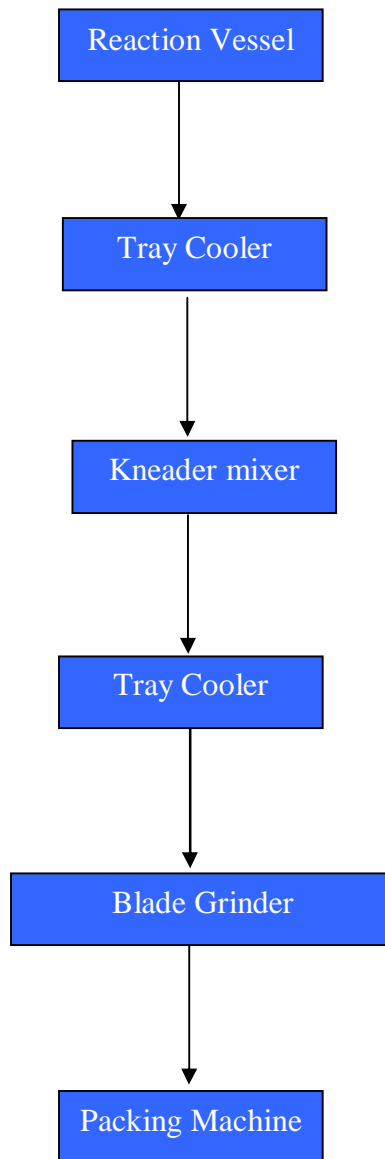
Technical Data:

Proposed capacity	10 ton /day
Production time per batch	1 ton in 2 hours
Packing size	50 kg

Production Process/Flow Diagram:



Equipment Layout diagram:



Machinery required with specifications:

S. No	Item	Description	Qty	Cost (Million Rs)
1.	Kneader mixer	Capacity: 1000 kg	01	5.00
2.	Blade grinder	Type: Continuous Product size: 1mm -5 mm	01	1.50
3.	Reaction vessel	Capacity: 1000 kg Temperature: 200 °C	01	1.50
4.	Feeding hoppers	Capacity: 500 kg each	05	0.25
5.	Conveying systems with conveyer belts	Length: 20 ft each, Electric	06	1.00
6.	Tray coolers	Capacity: 1000 kg each, Stainless steel	02	0.20
7.	Weighing scales	Range: upto 1000 kg each	02	0.20
8.	Storage tanks	Capacity: 1000 kg each	10	0.10
			Total	9.75

Standard specifications & test methods:

- pH (1% solution) 12.00-13.00
- Appearance Yellow powder
- Solubility Freely water soluble

Quality control equipment with specifications:

S. No	Item	Quantity	Cost (Million Rs)
1.	pH Meter (Digital)	01	0.20
2.	Glass Apparatus	01	0.10
3.	Chemicals	01	0.10
4.	Precision Weighing Balance	01	0.15
5.	Heating Oven (300 °C)	01	0.50
6.	Furnace (1000 °C)	01	0.50
Total			1.55

Environmental Impact:

Environment friendly

Availability of technical support:

Available

Available of Brochures/Pamphlets:

Available

Status of registration/Patent/Trade Mark:

Nil

3. Estimation of Fixed Capital Investment (PKR):

Land:

Land (Proposed area: 0.25 acre)

Building:

Rs. 10.00 million

Furniture and Fixture:

Rs. 0.25 million

Plant & Machinery:

Sr. No	Description	Cost (Million Rs)
1.	Machinery/Equipment	9.750
2.	Installation and Erection cost @ 6%	0.585
3.	Instrumentation and Control @ 5 %	0.488
4.	Services facilities including designing, consultancies etc @ 5 %	0.488
5.	Lab Equipment and Miscellaneous items	1.55
	Total	12.87

Technology Transfer Fee:

Rs. 5.00 Million

Total Fixed cost of the Project:

Sr. No	Description	Cost (In million Rs)
1.	Land (Proposed area: 0.25 acre)	-
2.	Building	10.00
3.	Furniture and fittings	0.25
4.	Plant & Machinery	12.87
	Total Fixed cost of the Project	23.12

Total Project Cost

Sr. No	Description	Cost (Million Rs)
1.	Total Fixed cost of the Project	23.12
2.	Working capital	15.00
	Total Project Cost	38.12

4. Marketing Aspects:

Total industry and annual growth:

Nil

Current demand:

100 tons/year

Local production facilities:

Nil

Imports:

1000 ton/year

Major users:

- Metal industry
- Arms and ammunition industry
- Automobile industry

Marketing strategy:

- Supply of samples to SMEDA for marketing
- Distribution of brochures among stakeholders
- Display of the samples at various chambers of commerce and industry
- Publicity through electronic and print media
- Holding of seminars and exhibitions

5. Details of Cost:

Sr. No	Description	Cost (Rs)
1.	Direct Production Cost	60/kg
2.	Raw materials cost per unit	55.00/kg
3.	Direct wages cost per unit	0.90/kg
4.	Production overheads cost per unit	1.40/kg
5.	Admin and selling expenses per month	100,000.00
6.	Salaries and benefits per month	200,000.00
7.	Utilities charges per month	150,000.00
8.	Communication expenses per month	5000.00
9.	Publicity and advertisement expenses per month	150,000.00