



AN ISO 9001 : 2015 CERTIFIED COMPANY

Detailed project report

Sample edition

Projections from FY 2027-28

Project report

Wire Nails

Installed capacity 17 MT per day

Sector Metal products

Total project cost ₹1,003.08 lakh

Illustrative sample
Figures are representative

Project at a glance

Wire Nails
17 MT per day

Product	Wire Nails	Sector	Metal products
Installed capacity	17 MT per day	Annual capacity	5,610 MT per year
Selling price (ex-GST)	₹71,700 per MT	Working days	330 a year
Manpower	60 people	Plant and machinery	₹473.30 lakh
Total project cost	₹1,003.08 lakh	Promoter's contribution	₹250.77 lakh (25%)
Term loan	₹752.31 lakh (75%)	Cash credit limit	₹297.07 lakh
Revenue, Year 3	₹2,815.66 lakh at 70%	Net profit, Year 3	₹291.04 lakh
Return on investment	29.0% a year	Break-even, Year 3	34.9% of capacity
Average DSCR	2.18	Payback period	3.0 years

This is an illustrative sample. Its figures are generated from industry-typical ratios to show the format and depth of an NPCS project report. They are not taken from any NPCS report or any real project, and should not be used for investment or lending decisions.

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1 Introduction

The project modelled here is a unit producing wire nails in the metal products sector, sized at 17 MT per day. Working 330 days a year, the plant can turn out 5,610 MT per year at full capacity. The product's applications range from construction and carpentry to hardware stores.

The projections cover the first five years of operation, starting FY 2027-28. By Year 3 the plant runs at 70% of capacity, with revenue of ₹2,815.66 lakh and a net profit of ₹291.04 lakh.

2 Uses and applications

Demand for the product comes mainly from the following uses:

- Construction and carpentry
- Packaging and crate making
- Furniture makers
- Hardware stores

3 Market potential

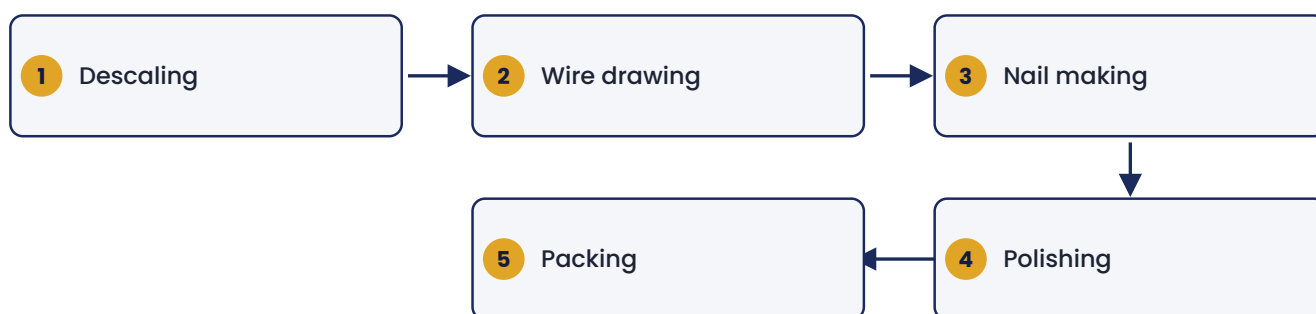
Wire nail demand follows house building, formwork and shuttering on construction sites, furniture and carpentry, and wooden crate and pallet making for industrial packing. Nails are heavy for their value, so freight decides who wins a market: regional units supplying hardware dealers within a few hundred kilometres compete on delivered price, size range and steady supply rather than brand. Units that draw their own wire from MS wire rod control gauge and cost better than units that buy drawn wire.

The usual customers for a unit of this kind are hardware and building-material dealers; construction and shuttering contractors; wooden crate, pallet and packing case makers; furniture and carpentry workshops; roofing and fencing contractors; and government and PSU buyers through tenders.

For a real project, the market survey is redone for the chosen location, covering present demand, expected growth and the existing manufacturers nearby.

4 Manufacturing process

The manufacturing process runs in five stages. Each stage is described below, and the flow chart shows the sequence.



Process flow for wire nails

- 1 Descaling.** Wire rod is cleaned of scale.
- 2 Wire drawing.** Rod is drawn to the nail diameter.
- 3 Nail making.** Wire is cut, headed and pointed automatically.
- 4 Polishing.** Nails are tumbled with sawdust to clean and polish.
- 5 Packing.** Nails are weighed and packed.

5 Raw materials

The main raw materials are MS wire rod and packing material. In Year 3, at 70% utilisation, raw materials cost ₹1,704.15 lakh, about 60.5% of sales. The table shows how this cost splits between materials.

Raw material	Share of cost	Year 3 cost (₹ lakh)
MS wire rod	92.0%	1,567.82
Packing material	8.0%	136.33
Total raw materials	100.0%	1,704.15

6 Plant and machinery

Plant and machinery accounts for ₹473.30 lakh of the project cost. The automatic nail making machines takes the largest share, and the other items and their indicative costs are listed below.

Machinery and equipment	Indicative cost (₹ lakh)
Wire drawing machine	141.99
Automatic nail making machines	189.32
Polishing drum	47.33
Pointing and grip dies	47.33
Packing and weighing	47.33
Total plant and machinery	473.30

7 Land, building and utilities

Land and site development is taken at ₹58.17 lakh and building and civil works at ₹254.92 lakh. Other fixed assets, including electrification, furniture, testing equipment and power backup, add ₹59.21 lakh. Land rates vary widely by location, so these are the figures most likely to change in a real project.

Utilities in Year 3 cost ₹245.24 lakh for power and fuel, or 8.7% of sales. The plant also needs a reliable water supply for cleaning and domestic use, and for the process where required.

8 Manpower

The unit employs 60 people. Wages and salaries come to ₹128.88 lakh in Year 1 and are assumed to rise by 5% a year.

Category	Number	Monthly wage (₹)	Annual cost (₹ lakh)
Management, supervision and administration	9	30,500	32.94
Skilled workers and operators	21	19,500	49.14
Semi-skilled and unskilled workers	30	13,000	46.80
Total (Year 1)	60		128.88

9 Licences and approvals

The main registrations and approvals for a unit like this are listed below. They differ from state to state, so check the current requirements with the relevant departments.

- Udyam (MSME) registration
- GST registration
- Consent to establish and consent to operate from the State Pollution Control Board
- Factory licence or registration under the applicable labour law, where the workforce threshold applies
- Fire safety NOC, where required
- Trade licence from the local body
- BIS IS 723:2023 for steel countersunk head wire nails, the quality reference used by buyers and tenders
- MS wire rod to IS 7887 and drawn wire to IS 280, both listed under the Steel and Steel Products Quality Control Order, so inputs must carry the BIS mark

10 Project cost and means of finance

Setting up the unit costs ₹1,003.08 lakh in all, of which plant and machinery is ₹473.30 lakh. The estimate includes a 5% contingency on building and machinery, pre-operative expenses and the margin money needed to start working capital.

Cost of project	₹ lakh
Land and site development	58.17
Building and civil works	254.92
Plant and machinery	473.30
Other fixed assets (electrification, furniture, lab equipment, DG set)	59.21
Contingencies	36.41
Preliminary and pre-operative expenses	22.05
Margin money for working capital	99.02
Total cost of project	1,003.08

Means of finance

The project is financed 75:25 between bank debt and the promoter's own funds. A term loan covers ₹752.31 lakh and the promoter brings in ₹250.77 lakh. Separately, a cash credit limit of ₹297.07 lakh finances 75% of the working capital requirement.

Source of funds	₹ lakh
Promoter's contribution (25%)	250.77
Term loan from bank (75%)	752.31
Total means of finance	1,003.08
<i>Cash credit limit for working capital (separate)</i>	<i>297.07</i>

11 Working capital

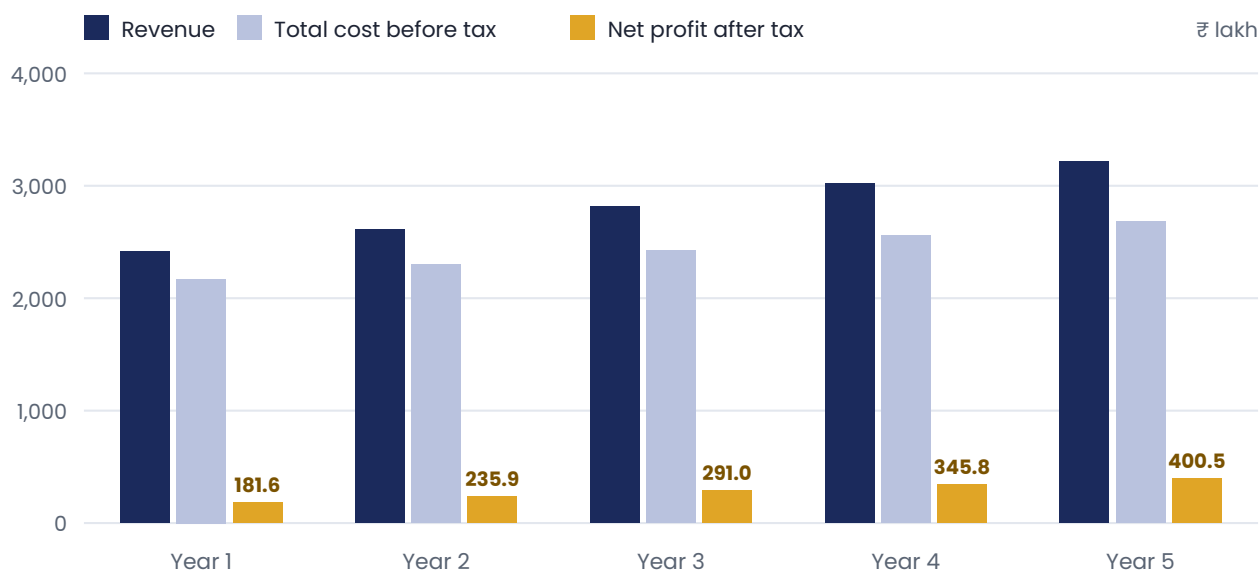
Working capital is worked out from holding periods: 30 days of raw material, 15 days of finished goods and 45 days of credit to customers, less 30 days of credit from suppliers. In Year 1 the requirement is ₹396.09 lakh. The bank funds ₹297.07 lakh through cash credit and the promoter's margin covers ₹99.02 lakh.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Raw material stock (30 days)	120.06	130.06	140.07	150.07	160.08
Work in progress (5 days)	24.65	26.65	28.65	30.66	32.66
Finished goods (15 days)	75.08	81.13	87.20	93.29	99.39
Trade receivables (45 days)	297.54	322.34	347.14	371.93	396.73
Total current assets	517.33	560.18	603.06	645.95	688.86
Less: trade creditors (30 days)	121.24	131.34	141.44	151.55	161.65
Working capital requirement	396.09	428.84	461.62	494.40	527.21

12 Projected profitability

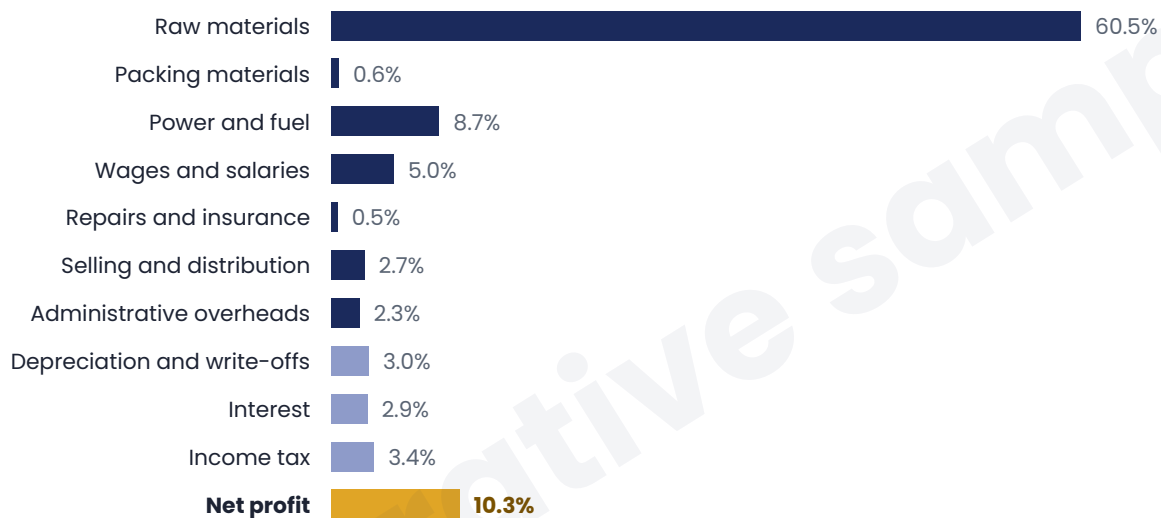
Revenue grows from ₹2,413.42 lakh in Year 1, at 60% utilisation, to ₹3,217.90 lakh in Year 5 at 80%. Net profit rises from ₹181.64 lakh to ₹400.49 lakh over the same period, an average net margin of 10.1%.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Capacity utilisation (%)	60%	65%	70%	75%	80%
Revenue from operations	2,413.42	2,614.54	2,815.66	3,016.78	3,217.90
Raw materials consumed	1,460.70	1,582.42	1,704.15	1,825.88	1,947.60
Packing materials	14.36	15.56	16.75	17.95	19.15
Power and fuel	210.21	227.73	245.24	262.76	280.28
Wages and salaries	128.88	135.32	142.09	149.19	156.65
Repairs and maintenance	9.47	9.94	10.44	10.96	11.51
Insurance	3.30	3.30	3.30	3.30	3.30
Cost of production	1,826.92	1,974.27	2,121.97	2,270.04	2,418.49
Gross profit	586.50	640.27	693.69	746.74	799.41
Selling and distribution expenses	64.70	70.10	75.49	80.88	86.27
Administrative overheads	57.76	60.65	63.68	66.87	70.21
Operating profit (EBITDA)	464.04	509.52	554.52	598.99	642.93
Depreciation	107.23	92.78	80.34	69.61	60.35
Preliminary expenses written off	4.41	4.41	4.41	4.41	4.41
Interest on term loan	77.54	65.07	49.04	31.25	11.50
Interest on cash credit	32.68	32.68	32.68	32.68	32.68
Profit before tax	242.18	314.58	388.05	461.04	533.99
Income tax	60.54	78.64	97.01	115.26	133.50
Profit after tax	181.64	235.94	291.04	345.78	400.49



Revenue, total cost before tax and net profit after tax, ₹ lakh

Where each rupee of sales goes in Year 3



Each cost head as a percentage of Year 3 sales

13 Cash flow statement

Cash generated from profit and depreciation covers the term loan repayments in every year. The closing cash balance builds up to ₹1,003.82 lakh by the end of Year 5.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Sources of funds					
Promoter's contribution	250.77	–	–	–	–
Term loan from bank	752.31	–	–	–	–
Cash credit (working capital) from bank	297.07	–	–	–	–
Net profit after tax	181.64	235.94	291.04	345.78	400.49
Depreciation	107.23	92.78	80.34	69.61	60.35
Preliminary expenses written off	4.41	4.41	4.41	4.41	4.41
Increase in trade creditors	121.24	10.10	10.10	10.11	10.10
Total sources	1,714.67	343.23	385.89	429.91	475.35
Application of funds					
Fixed assets	882.01	–	–	–	–
Preliminary and pre-operative expenses	22.05	–	–	–	–
Increase in inventories	219.79	18.05	18.08	18.10	18.11
Increase in trade receivables	297.54	24.80	24.80	24.79	24.80
Repayment of term loan	67.20	145.43	161.45	179.24	198.99
Drawings	–	–	–	–	–
Total application	1,488.59	188.28	204.33	222.13	241.90
Net cash flow	226.08	154.95	181.56	207.78	233.45
Opening cash balance	–	226.08	381.03	562.59	770.37
Closing cash balance	226.08	381.03	562.59	770.37	1,003.82

14 Projected balance sheet

The projected balance sheet balances in every year. Net worth grows from ₹414.77 lakh at the end of Year 1 to ₹1,705.66 lakh at the end of Year 5, while the term loan outstanding falls from ₹685.11 lakh to nil.

As at year end (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Liabilities					
Promoter's capital	250.77	250.77	250.77	250.77	250.77
Reserves and surplus	181.64	417.58	708.62	1,054.40	1,454.89
Term loan	685.11	539.68	378.23	198.99	–
Cash credit from bank	297.07	297.07	297.07	297.07	297.07
Trade creditors	121.24	131.34	141.44	151.55	161.65
Total liabilities	1,535.83	1,636.44	1,776.13	1,952.78	2,164.38
Assets					
Gross fixed assets	882.01	882.01	882.01	882.01	882.01
Less: accumulated depreciation	(107.23)	(200.01)	(280.35)	(349.96)	(410.31)
Net fixed assets	774.78	682.00	601.66	532.05	471.70
Preliminary expenses not written off	17.64	13.23	8.82	4.41	–
Inventories	219.79	237.84	255.92	274.02	292.13
Trade receivables	297.54	322.34	347.14	371.93	396.73
Cash and bank balance	226.08	381.03	562.59	770.37	1,003.82
Total assets	1,535.83	1,636.44	1,776.13	1,952.78	2,164.38

15 Depreciation

Depreciation is charged on the written-down value method at Income Tax Act rates: 10% on building, 15% on plant and machinery and 10% on other fixed assets. Land is not depreciated, and preliminary expenses are written off over five years.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Building and civil works (cost ₹267.67 lakh, 10% WDV)					
Opening written-down value	267.67	240.90	216.81	195.13	175.62
Depreciation	26.77	24.09	21.68	19.51	17.56
Closing written-down value	240.90	216.81	195.13	175.62	158.06
Plant and machinery (cost ₹496.96 lakh, 15% WDV)					
Opening written-down value	496.96	422.42	359.06	305.20	259.42
Depreciation	74.54	63.36	53.86	45.78	38.91
Closing written-down value	422.42	359.06	305.20	259.42	220.51
Other fixed assets (cost ₹59.21 lakh, 10% WDV)					
Opening written-down value	59.21	53.29	47.96	43.16	38.84
Depreciation	5.92	5.33	4.80	4.32	3.88
Closing written-down value	53.29	47.96	43.16	38.84	34.96
Total depreciation	107.23	92.78	80.34	69.61	60.35
Preliminary expenses written off	4.41	4.41	4.41	4.41	4.41

16 Term loan repayment

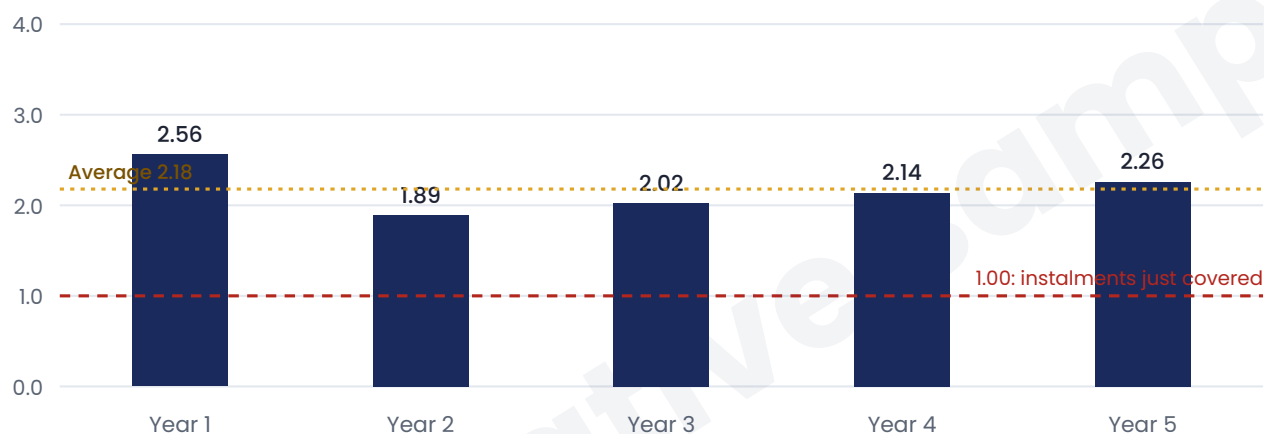
Repayment of the ₹752.31 lakh term loan starts after a moratorium of 6 months, during which interest at 10.5% is serviced. The loan is then cleared in 54 EMIs of ₹17,54,101 each, and the annexure gives the monthly schedule.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Opening balance	752.31	685.11	539.68	378.23	198.99
Interest	77.54	65.07	49.04	31.25	11.50
Principal repaid	67.20	145.43	161.45	179.24	198.99
Closing balance	685.11	539.68	378.23	198.99	—

17 Debt service coverage

The debt service coverage ratio averages 2.18 over the repayment years, with a low of 1.89 in Year 2. A DSCR above 1 means the unit earns enough to meet its loan instalments, and the model keeps a margin above that in every year.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Net profit after tax	181.64	235.94	291.04	345.78	400.49
Depreciation and write-offs	111.64	97.19	84.75	74.02	64.76
Interest on term loan	77.54	65.07	49.04	31.25	11.50
Total available for debt service (A)	370.82	398.20	424.83	451.05	476.75
Principal repayment	67.20	145.43	161.45	179.24	198.99
Interest on term loan	77.54	65.07	49.04	31.25	11.50
Total debt service (B)	144.74	210.50	210.49	210.49	210.49
DSCR (A / B)	2.56	1.89	2.02	2.14	2.26

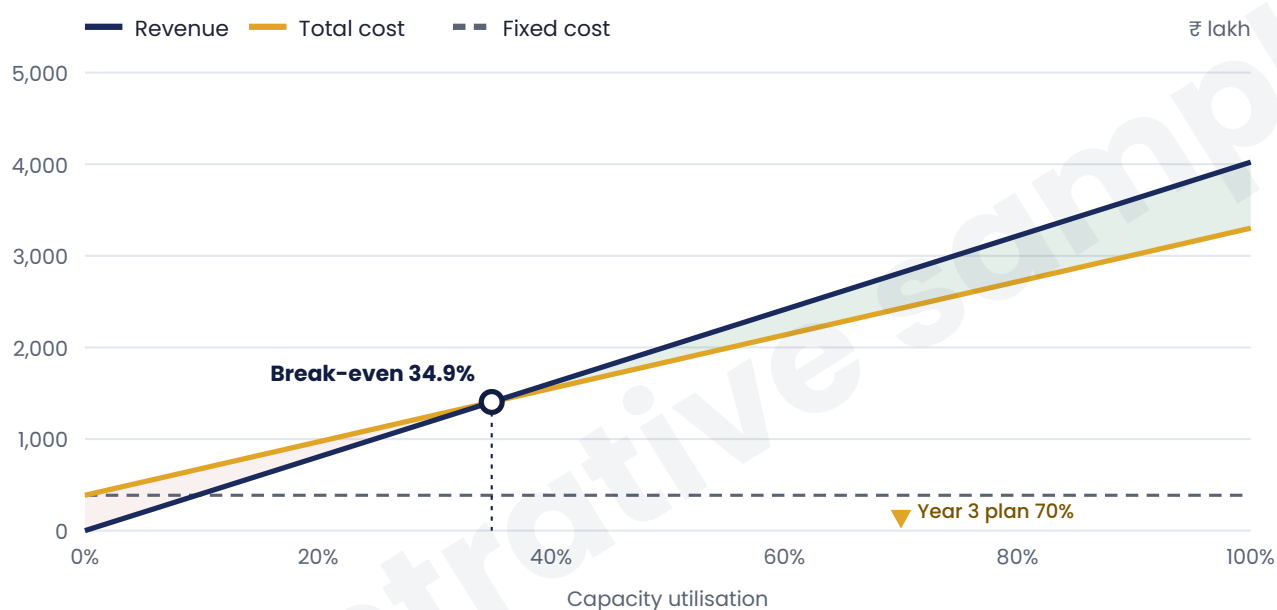


DSCR by year. A ratio above 1.00 means cash accruals cover the term loan instalments.

18 Break-even analysis

At Year 3 levels the unit breaks even at 34.9% of installed capacity, against planned utilisation of 70%. On a cash basis, leaving out depreciation and write-offs, break-even falls to 27.2%.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Revenue from operations	2,413.42	2,614.54	2,815.66	3,016.78	3,217.90
Variable costs	1,749.97	1,895.81	2,041.63	2,187.47	2,333.30
Contribution	663.45	718.73	774.03	829.31	884.60
Fixed costs (incl. depreciation and interest)	421.27	404.15	385.98	368.27	350.61
Break-even as % of installed capacity	38.1	36.6	34.9	33.3	31.7
Cash break-even as % of installed capacity	28.0	27.8	27.2	26.6	25.9
Break-even sales	1,532.45	1,470.19	1,404.07	1,339.66	1,275.41



Break-even chart at Year 3 prices and costs, scaled to full capacity. Shaded areas show the loss zone (left) and profit zone (right).

19 Financial ratios

Liquidity and leverage improve over the projection. The current ratio stays at or above 1.78, while debt-equity drops from 1.65 to zero as the term loan is repaid.

Ratio	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Current ratio	1.78	2.20	2.66	3.16	3.69
Quick ratio	1.25	1.64	2.07	2.55	3.05
Debt-equity ratio (term loan / net worth)	1.65	0.82	0.40	0.15	0.00
Total outside liabilities / net worth	2.66	1.48	0.86	0.50	0.27
Interest coverage ratio	3.20	4.22	5.75	8.21	13.09
DSCR	2.56	1.89	2.02	2.14	2.26
Gross profit margin (%)	24.3	24.5	24.6	24.8	24.8
Operating profit (EBITDA) margin (%)	19.2	19.5	19.7	19.9	20.0
Net profit margin (%)	7.5	9.0	10.3	11.5	12.4
Return on capital employed (%)	25.2	27.6	28.9	29.2	28.9
Break-even (% of installed capacity)	38.1	36.6	34.9	33.3	31.7

20 Key assumptions

- Commercial production starts in April 2027, and all assets are in use from the first year.
- Capacity utilisation of 60% in Year 1, rising to 80% by Year 5, over 330 working days a year.
- Selling price of ₹71,700 per MT, excluding GST, held constant through the projection.
- Raw materials at 60.5% of sales, packing materials at 0.6%, power and fuel at 8.7%, and selling and distribution at 2.7%.
- Wages and salaries rise by 5% a year; repairs and administrative overheads rise by 5% a year.
- Working capital based on 30 days of raw material, 5 days of work in progress, 15 days of finished goods and 45 days of receivables, less 30 days of creditors.
- Term loan at 10.5% interest with a 6-month moratorium and 54 monthly instalments; cash credit at 11% on 75% of the working capital requirement.
- Depreciation on the written-down value method at Income Tax Act rates; income tax at a flat 25% of profit for simplicity.
- Contingency of 5% on building and machinery; preliminary and pre-operative expenses written off over five years.
- All amounts in ₹ lakh unless stated otherwise, excluding GST.

21 Conclusion

On these illustrative assumptions, a wire nails unit of 17 MT per day costs ₹1,003.08 lakh to set up, earns an average return of 29% on that investment and pays back in about 3 years. An average DSCR of 2.18 and break-even at 34.9% of capacity point to a project that can carry its bank debt. Actual figures depend on the location, the machinery chosen, input prices and the promoter's plans, which is why a full report is prepared for each project.

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A Annexure: monthly loan repayment schedule

Term loan of ₹752.31 lakh at 10.5% a year. Amounts in ₹ lakh.

No.	Month	Opening balance	Interest	Principal	Instalment	Closing balance
1	Apr 2027	752.31	6.58	–	6.58	752.31
2	May 2027	752.31	6.58	–	6.58	752.31
3	Jun 2027	752.31	6.58	–	6.58	752.31
4	Jul 2027	752.31	6.58	–	6.58	752.31
5	Aug 2027	752.31	6.58	–	6.58	752.31
6	Sep 2027	752.31	6.58	–	6.58	752.31
7	Oct 2027	752.31	6.58	10.96	17.54	741.35
8	Nov 2027	741.35	6.49	11.05	17.54	730.30
9	Dec 2027	730.30	6.39	11.15	17.54	719.15
10	Jan 2028	719.15	6.29	11.25	17.54	707.90
11	Feb 2028	707.90	6.19	11.35	17.54	696.55
12	Mar 2028	696.55	6.09	11.45	17.54	685.11
13	Apr 2028	685.11	5.99	11.55	17.54	673.56
14	May 2028	673.56	5.89	11.65	17.54	661.91
15	Jun 2028	661.91	5.79	11.75	17.54	650.16
16	Jul 2028	650.16	5.69	11.85	17.54	638.31
17	Aug 2028	638.31	5.59	11.96	17.54	626.35
18	Sep 2028	626.35	5.48	12.06	17.54	614.29
19	Oct 2028	614.29	5.38	12.17	17.54	602.13
20	Nov 2028	602.13	5.27	12.27	17.54	589.86
21	Dec 2028	589.86	5.16	12.38	17.54	577.48
22	Jan 2029	577.48	5.05	12.49	17.54	564.99
23	Feb 2029	564.99	4.94	12.60	17.54	552.39
24	Mar 2029	552.39	4.83	12.71	17.54	539.68
25	Apr 2029	539.68	4.72	12.82	17.54	526.86
26	May 2029	526.86	4.61	12.93	17.54	513.93
27	Jun 2029	513.93	4.50	13.04	17.54	500.89
28	Jul 2029	500.89	4.38	13.16	17.54	487.73
29	Aug 2029	487.73	4.27	13.27	17.54	474.46
30	Sep 2029	474.46	4.15	13.39	17.54	461.07
31	Oct 2029	461.07	4.03	13.51	17.54	447.56
32	Nov 2029	447.56	3.92	13.62	17.54	433.94
33	Dec 2029	433.94	3.80	13.74	17.54	420.19
34	Jan 2030	420.19	3.68	13.86	17.54	406.33
35	Feb 2030	406.33	3.56	13.99	17.54	392.34
36	Mar 2030	392.34	3.43	14.11	17.54	378.23
37	Apr 2030	378.23	3.31	14.23	17.54	364.00
38	May 2030	364.00	3.19	14.36	17.54	349.65
39	Jun 2030	349.65	3.06	14.48	17.54	335.17

No.	Month	Opening balance	Interest	Principal	Instalment	Closing balance
40	Jul 2030	335.17	2.93	14.61	17.54	320.56
41	Aug 2030	320.56	2.80	14.74	17.54	305.82
42	Sep 2030	305.82	2.68	14.87	17.54	290.96
43	Oct 2030	290.96	2.55	15.00	17.54	275.96
44	Nov 2030	275.96	2.41	15.13	17.54	260.83
45	Dec 2030	260.83	2.28	15.26	17.54	245.58
46	Jan 2031	245.58	2.15	15.39	17.54	230.18
47	Feb 2031	230.18	2.01	15.53	17.54	214.66
48	Mar 2031	214.66	1.88	15.66	17.54	198.99
49	Apr 2031	198.99	1.74	15.80	17.54	183.19
50	May 2031	183.19	1.60	15.94	17.54	167.26
51	Jun 2031	167.26	1.46	16.08	17.54	151.18
52	Jul 2031	151.18	1.32	16.22	17.54	134.96
53	Aug 2031	134.96	1.18	16.36	17.54	118.60
54	Sep 2031	118.60	1.04	16.50	17.54	102.10
55	Oct 2031	102.10	0.89	16.65	17.54	85.45
56	Nov 2031	85.45	0.75	16.79	17.54	68.66
57	Dec 2031	68.66	0.60	16.94	17.54	51.72
58	Jan 2032	51.72	0.45	17.09	17.54	34.63
59	Feb 2032	34.63	0.30	17.24	17.54	17.39
60	Mar 2032	17.39	0.15	17.39	17.54	–