



सत्यमेव जयते

Action Plan for Project Profile

On

“Nuts and Bolts”

Under Public Procurement Policy, 2012,
O/o the Development Commissioner (MSME),
Ministry of MSME, Govt. of India



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COMMERCIAL DETAILS

COMMERCIAL DETAILS

- **HSN Code of the Product** : 7318 (at 4 digit level), 73181110, 73181190, 73181200, 73181300, 73181400, 73181500, 73181600, 73181900, 73182100, 73182200, 73182300, 73182400, 73182910 & 73182990 (at 8 digit level).
- **NIC Code of the Product** : NIC 2008 – 25991
- **Clusters already existing on the Product (if any) (Data from Cluster Division of HQ)** : There is one Cluster on “Nuts & Bolts” has been identified with 80 MSMEs at Samalkha, Panipat, Haryana under MSE-CDP Scheme. It is understood that there is no significant progress has been made in the Cluster except one awareness programme being held under the Scheme.
- **Possibility to establish Clusters on the Product** : Yes, there is great possibility to establish cluster on the identified product. There is a lot of scope for setting up of the Nuts & Bolts Cluster in and around of large industrial area/ estate/hub, etc.
- **Probable areas or districts where products manufacturing or projects can be established** : There is existence of large group of independent manufacturers of such product. The possible areas are : Ahmedabad, Aurangabad, Bhubaneswar, Bokaro, Delhi, Hyderabad, Indore, Jamshedpur, Jalandhar, Kolkata, Ludhiana, Mumbai, Pune, Rajkot, Ranchi, Rourkela, and other parts of the country to cater the need of local industries as well as large industries.
- **Number of industries registered as MSME, available in the manufacturing of the product (Data Division / NIC Division of HQ)** : 16,294.
The State-wise details is annexed as per **Annexure I & II.**
- **Number of Industries available in large scale industries (To be obtained from State Government)** : 11 (Eleven)
Sundream Group, Noida; Sundram Fasteners, Chennai; Daksh Fasteners, Ludhiana; Sterling Tools, Faridabad; Kapsons India, Jalandhar; GS Auto International Ltd., Ludhiana; Remax Fasteners Industries, Ludhiana; Simmonds Marshall Ltd., Pune; Varun Enterprise, Ludhiana; Kova Fasteners, Ludhiana; Ananka Fasteners, Mumbai.

➤ **Data about the imports of this product for the past three years (Refer DC office Website) :**

Sl.No.	Name of the Product	Value (Rs. in Crores)		
		2017 – 18	2018 – 19	2019 – 20
I.	Nuts & Bolts	537.08224	605.787325	500.074988

Top 10 trading partners (import of "Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (including spring washers) and similar articles, of iron or steel.") of India in 2020 :

- i. China with a share of 21% (129 million US\$)
- ii. Korea with a share of 14.8% (90 million US\$)
- iii. Japan with a share of 11.9% (72 million US\$)
- iv. Germany with a share of 11.2% (68 million US\$)
- v. USA with a share of 6.92% (42 million US\$)
- vi. Other Asia, nes with a share of 5.17% (31 million US\$)
- vii. Singapore with a share of 5.07% (30 million US\$)
- viii. Thailand with a share of 3.89% (23 million US\$)
- ix. United Kingdom with a share of 3.28% (19.9 million US\$)
- x. Italy with a share of 3.09% (18.8 million US\$)

Source: TradeEconomy.com

➤ **Data available for the exports well against this product for the past three years (Refer DC office Website) :**

Sl.No.	Name of the Product	Value (Rs. in Crores)		
		2017 – 18	2018 – 19	2019 – 20
II.	Nuts & Bolts	331.619889	376.404072	358.52051

Top 10 export destinations of "Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (including spring washers) and similar articles, of iron or steel." from India in 2020 :

- i. USA with a share of 21% (100 million US\$)
- ii. Germany with a share of 12.9% (60 million US\$)
- iii. Netherlands with a share of 10.7% (50 million US\$)
- iv. United Kingdom with a share of 7.57% (35 million US\$)
- v. United Arab Emirates with a share of 5.51% (25 million US\$)
- vi. Italy with a share of 3.94% (18.5 million US\$)
- vii. Saudi Arabia with a share of 2.84% (13.3 million US\$)
- viii. Qatar with a share of 2.49% (11.6 million US\$)
- ix. Brazil with a share of 2.26% (10.6 million US\$)
- x. France with a share of 2.14% (10 million US\$)

Source: TradeEconomy.com

➤ **Scope for the number of units/number of years can be established further :**

A lot of scope is there for manufacturing of the instant product considering the domestic as well as in the International Market. The new industries need to satisfy the scope of intervention by means of the availability of technology, raw-material, market survey, competitive price, quality, standardization and skilled manpower before penetrating into the proposed activity. The nuts and bolts business in India is expected to the size of about INR 460 Billion by 2023. The mounting demands of the automobiles and construction industries are expected to expand the global nuts and bolts making business by 5.5 percent by the year 2026. Asia alone is expected to give a major boom to the nuts and bolts businesses in the coming 4 – 5 years adding up about \$7.5 Billion to the fastener manufacturing industry.

➤ **The demand in the Domestic Market :**

No doubt that there is having huge domestic demand of the product. It is estimated that about Rs.2000.00 Crores of market on the product is there in all category of industries like Micro, Small, Medium and Large Industries. The MSEs are also playing a vital role to cater the demand of Large Industries by way of ancillarisation. Some, 2000 Units (both organized and un-organized) engaged in manufacturing of vehicle fasteners in Ludhiana – the Manchester of India – who are together producing 4 crore metric ton of fasteners per month to cater the need of local market.

➤ **Demand of the Export Market :**

Available data from DGCIS reveals that about 500 Crores market is already exists in the International Market. The demand needs to be increased significantly. Export structure of 7318 - Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter-pins, washers (including spring washers) and similar articles, of iron or steel. - From India in 2020 represented by the following main commodity groups :

- i. **51%** (240 million US\$): **731815** - Screws & bolts (excl. of 7318.11-7318.14), whether or not with their nuts/washers, of iron/steel
- ii. **18.8%** (88 million US\$): **731819** - Threaded arts. of iron/steel (excl. of 73.07, 7318.11-7318.16)
- iii. **11.7%** (55 million US\$): **731816** - Nuts of iron/steel
- iv. **7.18%** (33 million US\$): **731822** - Washers (excl. of 7318.21) of iron/steel
- v. **5.74%** (26 million US\$): **731829** - Non-threaded arts. sim. to rivets, cotters and the like, of iron/steel (excl. of 7318.21-7318.24)
- vi. **1.75%** (8.22 million US\$): **731811** - Coach screws of iron/steel
- vii. **1.4%** (6.6 million US\$): **731821** - Spring washers & oth. lock washers, of iron/steel
- viii. **0.549%** (2.57 million US\$): **731824** - Cotters & cotter-pins, of iron/steel
- ix. **0.496%** (2.32 million US\$): **731823** - Rivets of iron/steel
- x. **0.452%** (2.12 million US\$): **731814** - Self-tapping screws of iron/steel

Source: TradeEconomy.com

TECHNICAL DETAILS

TECHNICAL DETAILS

- **Sector in which the Product is falling** : General Engineering
- **End users of the Products / Sectors** : Industrial transport, Fabrication – Cum – Construction, Railways, Aircraft, Wagon, Bicycles, Automobile, Body Builders, Electrical industries, Building activities, Heavy and Light Industries, Steel and Wooden furniture, Machine tools, Agriculture Machines and Agricultural implements, General purposes, etc.
- **Governing Indian Specification** : IS 1363 : 1992, IS 1364 (part 2) : 2002, IS 1367 : 1994, IS 2389 : 1968, IS 4206 : 2012
- **Governing International Specification** : ISO 4016 : 1988, ISO 4016 : 1999, ISO 4018 : 1999, ISO 4017 : 1988, ISO 3506 - 1 : 2009, ISO 80000, ISO 888 :2012
- **Flow process chart of the Manufacturing** : Nuts – Manufacturing Process
Bolts – Manufacturing Process
(The Flow Chart of manufacturing of Nuts & Bolts is annexed as per **Annexure-III & IV**)
- **Qualitative Parameters of the Product** :

The quality of “Bolts & Nuts” has to be superior and good in all aspects in order to fulfill the requirement of the customer and standard provided by the customer. The products are to be checked at every stage of operations with regard to the various critical dimensions of products and its form. To achieve this, right quality of material has to be used depending on the type and classification of the product. After completion of the process, final inspection as per the standard given is made. Necessary rectification in the process cycle is made if required to maintain the standard. The BIS has formed a number of standards for fasteners like :-

IS 1363 :1967 : Black hexagon bolts, nuts & lock nuts (dia 6 – 39 mm)

IS 1367 : 1967 : Technical Supply Conditions for threaded fasteners

IS 4260 – 1967 : dimension of lengths and thread lengths for bolts, Screws and Studs.

IS 4172 – 1967 : dimension of redials under the head of bolts and nuts etc.

IS 6623 – 1972 : high tensile friction grip nuts, etc.

➤ **Details of Products Licenses to Obtain :**

To start a Nut and Bolt Manufacturing business in India, He / She should acquire a Trade License from the Local Municipal Authorities. He / She should obtain a factory License. He / She must register in the Udyam Portal (udyamregistration.gov.in) for availing Udyam Registration under Ministry of MSME or with State Govt. agencies for availing Government subsidies. NOC from State Pollution Control Board. GST Registration, PAN, Aadhar Card, Trademark registration, etc. Registered with the Registrar of Companies (ROC) as a Limited Liability Partnership (LLP) or a Private Limited Company.

➤ **Equipment required for the Manufacturing of the Product :**

Double stroke solid die cold head forging machine, Head trimming machine, Thread rolling machine, Wire painting machine, Nut tapping machine, Steel polishing dyer machine, Bull block wire drawing machine, Cooler and Boiler , Straightening machine, Power Press, Planting tank, Steel Polishing barrel with an electric motor, Automatic nut forming plant, Weighing scale, etc.

➤ **Test facilities required for the Product :**

Metallurgical Testing, Mechanical Testing, Chemical Analysis, Magnetic Particle Inspection (MPI), Salt Fog Chamber and Failure Analysis, Tensile testing, Shear Testing, etc.

➤ **The technology existing the manufacturing of the product :**

Mainly the Cold forging/Threading process and Hot forging by power press process is being adopted for manufacturing of “Nuts & Bolts”. In this way, the instant product is being produced in more complex parts. Calibrated steel rods with diameter of 0.6 to 38 mm, as well as rods of non – ferrous alloys (aluminum, Copper, etc.) of round, hexagonal and other forms of cross-section are subject to cold heading.

➤ **Suggested modern technology for implementation or available in the market :**

Many of the recent innovations in Nuts & Bolts technology owe much to market place directives for smaller and lighter packers produced quickly and cost – effectively. Miniature fastener types and styles have evolved to fit effectively in the increasingly restrictive design envelopes encountered in industries ranging from electronics to aerospace. Moreover, self-contained in die – fastening systems, for stamping process, powdered metal process, Innovative delivery systems and automation for handling and installation purpose, etc. are available in the market for its implementation.

➤ **Raw material required and availability :**

Nuts & Bolts and fastener materials are made with a wide variety of materials. Steel is the most common material used for making nuts and bolts and fastener materials. Apart from this Alloy; Steel, Silicon, Bronze, Brass, Aluminum, Chrome, Titanium, Plastic and other exotic materials are also being used for manufacturing of this product. Some of these materials are again separated into different grades. This is done to describe specific alloy mixtures, hardening as well as processes involved. Apart from this, some nuts and bolts are available with a variety of coatings & platings. This is done to increase the resistance against corrosion & alter the appearance of the fastener. Fastener material can be important when choosing a fastener due to keeping in view the strength, brittleness, corrosion resistance, galvanic corrosion properties, etc. Of course the cost of the material is an important factor to determine which materials to choose for manufacturing the product.

➤ **Covering Raw Material Standards Indian/International Standards :**

International standard	Corresponding Indian Standard	Degree of Equivalence
ISO 225 : 1983	IS 8536 :1987 Fastener – Bolts, Screws, Studs and Nuts – Symbols and designation of dimensions (First revision)	Identical
ISO 898 – 1 : 1999	IS 1367 (Part 3) : 2002 Technical Supply Conditions for threaded steel fasteners : Part 3 Mechanical Properties of fasteners made of carbon steel and alloy steel – Bolts, Screws and studs (fourth revision)	Identical
ISO 4017 : 1999	IS 1364 (Part 2) : 2002 Hexagon head bolts Screws and nuts of product – grades A & B : Part 2 Hexagon head screws (Size range (M 1.6 to M 64) (Fourth revision)	Identical

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Detailed Project Report
On
“Nuts and Bolts”

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Name of the Project	:	Nuts & Bolts
Quality And Standards	:	IS 1363 : 1992, IS 1364 (Part 2) : 2002, IS 1367 : 1994, IS 2389 : 1968, IS 4206 : 2012
NIC Code of the Product	:	NIC 2008 – 25991
Production Capacity (Per Annum)	:	Quantity : 360 MT Per Annum
Cost of Project	:	Fixed Cost : Rs.54, 77, 250/- Working Capital : Rs.19, 67, 385/- Total : Rs.74, 44, 635/-
DSCR (Avg.)	:	2.52
Avg. Net Profit Per Annum (Before Tax)	:	Rs. 57.83 Lakh
% Rate of Return of Capital (Avg.)	:	54.37
Avg. Break Even Point (BEP)	:	40.01
Proposed Site	:	---
Recommendation	:	The project is Technically & Economically Feasible and Viable.

1. Introduction

Nuts and Bolts are type of industrial fasteners used in various products, machines, structures etc. A fastener is used for joining, holding or assembling of a single or multiple components. Bolts and nuts are in the category of headed and threaded fasteners. Bolt is a piece of metal rod, whose one end is upsetted and other end is threaded. Nut is the item which rolls on these threads. Nut and bolts are available in various shapes, designs and sizes. There are many industries producing these nuts and bolts of various sizes, but the demand too is increasing as well as the raw material for the product is easily and indigenously available. The major raw material is mild steel wire coil/ rod of required diameter. The composition of material controls the quality of the nuts and bolts. Nuts and bolts are classified in two ways: i) Their uses and ii) Shape of head. In terms of use, nuts and bolts are of several types: Larger dia bolts, machine bolts, stand bolts, foundation nuts and bolts etc. In terms of shape, nuts and bolts are classified by head shape like hexagonal head, square head, round head, pan head, truss head etc. Based on the process of manufacture, it is classified as machined nuts & bolts and hot forged nuts and bolts.

2. Govt. Policy and Frame Work

In India, especially in Jharkhand there is a lot of potential for nuts and bolts industry considering the existence of Automobile, Automobile ancillary units, Steel ancillary units, Forging ancillary units, fabrication units etc. As India is in a position to reduce the import of nuts and bolts, the govt. is encouraging such kind of units to set up under Atmanirbhar and Vocal for Local. With increase of population, the need of automobile and other sector is growing which will require a growing demand of nuts and bolts along with other components. Thus there is tremendous scope of nuts and bolts Industry in India.

2.1 Policy for Nuts and Bolts / Engineering Industries:

The Indian engineering sector is of strategic importance to the economy owing to its intense integration with other industry segments. The sector has been de-licensed and enjoys advantage in FDI. With the aim to boost the manufacturing sector, the Government has relaxed the excise duties on factory gate tax, capital goods, consumer durables and vehicles.

- In November 2020, to strengthen the capital goods (CG) sector, the government has set up a 22-member inter-ministerial committee through initiatives, which will help this sector to effectively contribute to the national target of achieving a US\$ 5 trillion economy and a US\$ 1 trillion manufacturing sector.
- The Government announced Rs. 150,000 (US\$ 2,250) income tax deduction on interest paid on loans for purchase of electric vehicles in the Union Budget 2019 – 20.

- The Union Cabinet has approved incentives up to Rs. 10,000 crore (US\$ 1.47 billion) for investors by amending the M-SIPS scheme in order to further incentivize investment in electronics sector, create employment opportunities and reduce dependence on import by 2025.
- The new Auto Policy is a roadmap for the automobile industry after the removal of quantitative restrictions, what is the new auto policy all about under the earlier regime, stipulated minimum investments and levels of indigenization which was squared off against forex outgo on kit imports.

2.2 Finance for Micro, Small and Medium Enterprises:

Financial assistance schemes for micro, small and medium enterprises are available both for existing as well as new entrepreneurs. Few of the schemes like PMEGP, CGTMSE, CLCSS and Interest Subvention Schemes are highlighted below. Moreover, every State Govt. has also their own financial schemes for assisting MSMEs. The Commercial Banks and Financial Corporations have their financial assistance schemes for MSME Sector.

(i) Prime Minister Employment Generation Programme (PMEGP):

Ministry of MSME, Government of India is operating Prime Minister Employment Generation Programme with the main objective for generating employment opportunities in rural as well as urban areas through setting up of new self employment ventures/projects/micro enterprises. The scheme is administered by Khadi and Village Industries Commission at National level and by District Industries Centres and Khadi & Village Industries Boards at State level. The Quantum and Nature of Financial Assistance is given below:

Categories of beneficiaries under PMEGP	Beneficiary's Contribution	Rate of Subsidy on Project cost	
		Urban	Rural
Area (Location of Project/Unit)		Urban	Rural
General Category	10%	15%	25%
Special Category (including SC/ST/OBC/Minorities/Women, Ex-Servicemen, Physically Handicapped, NER, Hill and Border Area)	05%	25%	35%

- The maximum cost of the project/unit admissible under manufacturing sector is Rs. 25.00 lakh. For up-gradation is Rs. 1.00 Crore.
- The maximum cost of the project/unit admissible under service sector is Rs. 10.00 lakh. For up-gradation is Rs. 25.00 lakh.

(ii) Credit Guarantee Scheme for Micro and Small Enterprises:

(a) Launched by the Government of India to make available collateral-free credit to the micro and small enterprise sector. Both the existing and the new enterprises are eligible to be covered under the scheme. The scheme provides guarantee to lending institutions for the credit facilities provided by them to the eligible borrowers under the provisions of the scheme.

(b) Eligible Credit Facility: The credit facilities which are eligible to be covered under the scheme are both term loans and working capital facility up to Rs.2.00 Crore per borrowing unit, extended without any collateral security or third party guarantee to a new or existing micro and small enterprise.

(iii) Credit Linked Capital Subsidy Scheme (CLCSS):

The objective of the scheme is to facilitate technology to MSEs through institutional finance for induction of well established and proven technologies in the specific sub-sector/products approved under the scheme.

Nature of Assistance:

Upfront subsidy of 15% on institutional credit up to Rs. 1.0 Crore (i.e., subsidy cap of Rs. 15.00 lakh) for identified sectors/sub-sectors/technologies.

(iii) Interest Subvention Scheme for MSMEs:

The scheme provides for an interest relief of 2% per annum to eligible MSMEs on their outstanding fresh/incremental term loan/working capital to the extent of Rs. 100 lakh.

2.3 Basis and Presumptions:

2.3.1 The unit will work on single shift of 8 hrs. basis for 25 days in a month and 300 working days in a year.

2.3.2 Cost of machinery: Cost of machinery is estimated at available market price.

2.3.3 Cost of Raw Material and Labour: Cost of Raw Material and Labour are estimated at current market rates.

2.3.4 Working Capital: Working Capital requirements are estimated on the basis of first year. For calculation of working capital requirements, it is assumed that raw material required will be 50% as the capacity utilization is 50% but other two items i.e. Salary and Wages and Utility and miscellaneous expenses are taken as 60%. All these are increased @ 10% every year.

2.3.5 Depreciation: For calculation of depreciation, line method is used.

- 2.3.6** Tax: Tax is calculated as per current rates. However, the Director's expenses, perks etc are not considered. Therefore, actual taxes may vary.
- 2.3.7** Land required for the unit is on lease basis @ Rs. 50,000 per year.
- 2.3.8** Margin Money was considered as 25 % of the project cost.
- 2.3.9** Rate of Interest for Term Loan was considered as 10.70 % and for Working Capital 11.10 %

3. Technical Feasibility

3.1 Infrastructural Facility:

The proposed project site is located at a place where following infrastructures are available.

- ✓ The place is linked by Rail and Road.
- ✓ There are proper communication facilities like telephone, postal, internet etc.
- ✓ There is regular transport service.
- ✓ Skilled workforce is available locally.
- ✓ Manufacturers/suppliers of raw materials/accessories are available nearby.
- ✓ The continuous power supply is available.
- ✓ Proper sanitation and water supply is also available.
- ✓ Business support services like transport agents, clearing agents, auditors, technical consultants, machine repairing facility are available in the locality.
- ✓ Local training facilities are additional advantage.
- ✓ Financial service providers like banks are also available in the locality.

3.2 Technical Know How:

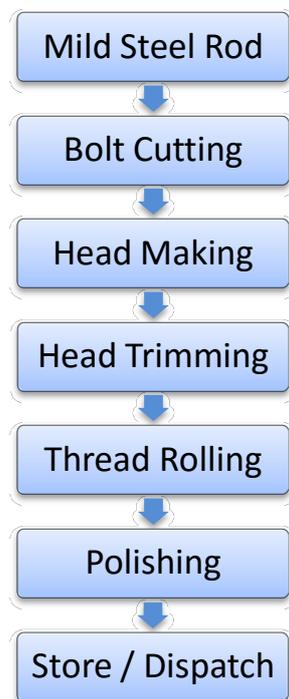
Hot forged nuts & bolts are manufactured by a process of hammering or pressing when the material is in a red hot condition or to be scientifically specific, when it is above the re-crystallization temperature of the material. The process of forming the product by hot forging is restored to as this process invests certain advantages over the product manufactured by machining only. Some of these are saving in materials, better grain structure and grain flow, improved strength, high production and the like. At the same time it is tested after manufacturing operations in order to control mechanical properties of the components required to impart in it.

The raw material used for manufacture of bolts is M. S. Rounds. As some of the rounds available are rusty and not perfectly round and straight, it is necessary to make them round. The rounds are pickled in the acid tank, washed and drawn in a drawing machine. The cleaned rod is fed into the cold heading machine. In the machine, one end of the rod is cut into the desired length with cutting stroke and simultaneously the head formation takes at other end. For the HT bolts, forging are done on hot

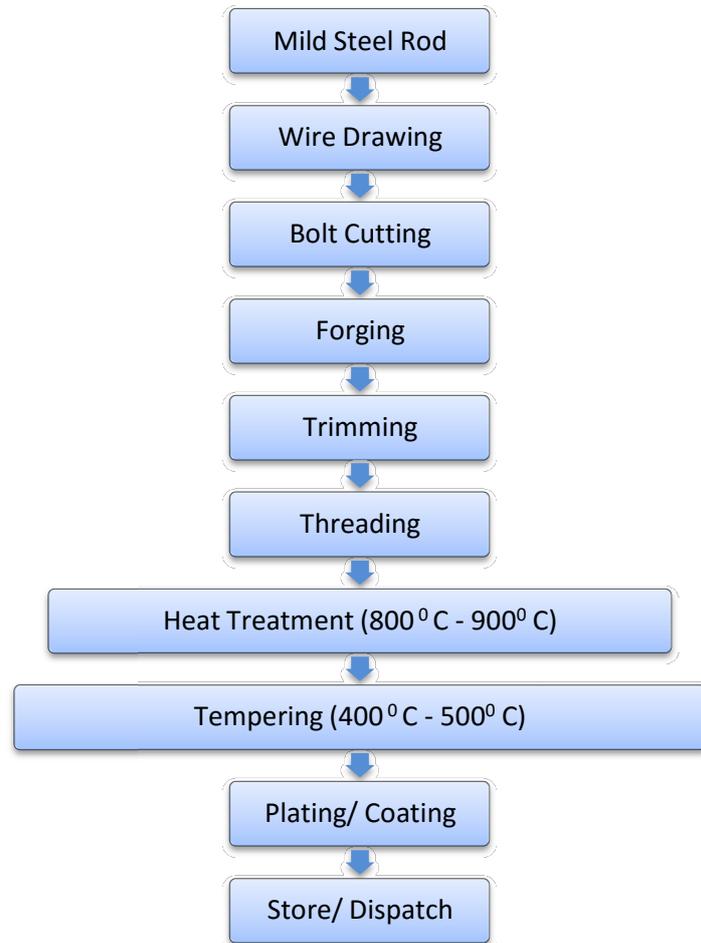
forging press. The pins are then trimmed in the trimming machine. In quality bolts, the lower side of the head is also faced. Threading is done in the thread rolling machines.

While manufacturing nuts, the hexagonal rod of desired size is procured and the nuts are cut on the automatic nut-cutting machine. After that the nut blanks are drilled and tapped on the nut-tapping machine. Finally, these are deburred in the polishing barrel.

Process Flow Chart (M. S. Bolt)



Process Flow Chart (H. T. Bolt)



3.3 Raw Material:

Mild Steel Rod and Hexagonal Rod of desired size.

3.4 Quality Control:

As per IS 1363: 1992, IS 1364 (Part 2): 2002, IS 1367: 1994, IS 2389 : 1968, IS 4206 : 2012.

4. Market Feasibility

A lot of scope is there for manufacturing of the instant product considering the domestic as well as in the International Market. The new industries need to satisfy the scope of intervention by means of the availability of technology, raw-material, market survey, competitive price, quality, standardization and skilled manpower before penetrating into the proposed activity. The nuts and bolts business in India is expected to size to about INR 460 Billion by 2023. The mounting demands of the automobiles and construction industries are

expected to expand the global nuts and bolts making business by 5.5 percent by the year 2026. Asia alone is expected to give a major boom to the nuts and bolts businesses in the coming 4 – 5 years adding up about \$7.5 Billion to the fastener manufacturing industry.

5. Cost of the Project

5.1 Land and Building:

Sl. No.	Particulars	Cost (in Rs.)
1	20 Decimal Land on Lease basis @Rs. 50,000/- Per Year	
2	Construction of Work shed, Store, Office and Lab 1500 Sq. Feet @300 per Sq. Ft.	4,50,000.00
3	Tin Boundary Wall	1,50,000.00
Total Constructional Cost :		6,00,000.00

5.2 Machinery and Equipment:

Sl. No.	Description of Machinery and equipment	Quantity	Rate (in Rs.)	Total Cost (in Rs.)
1.	Double Stroke Solid die cold forging machine suitable for bolt dia 6 mm to 18 mm and length 20 mm to 150 mm with 15 HP electric motor	1 No	8,05,000.00	8,05,000.00
2	Head trimming machine upto 18 mm dia bolt X 150 mm length with 10 HP electric motor	1 No	5,40,500.00	5,40,500.00
3	Thread rolling machine suitable for upto 18mm dia bolt X length 150 mm with 15 HP electric motor	1 No	4,83,000.00	4,83,000.00
4	Bull Block wire drawing machine	1 No	1,15,000.00	1,15,000.00
5	Wire pointing machine with 1 HP motor	1 No	17,250.00	17,250.00
6	Steel polishing barrel with electric motor	1 No	51,750.00	51,750.00
Nut Making Section				
7	Automatic nut forming plant, 5 section capacity 18 mm dia with 25 HP motor, lubricant and coolant pump	4 Nos.	3,59,375.00	14,37,500.00
8	Nut tapping machine with 3 HP motor and starter	4 Nos.	63,250.00	2,53,000.00
9	Semi muffle oil fired furnace	1 No.	1,78,250.00	1,78,250.00
10	Tempering furnace H. T. Air circulated type electrically heated temp. Upto 500 ⁰ C 3 KW rating	1 No.	86,250.00	86,250.00
11	Die, tools, gage and measuring instruments	L.S.		1,72,500.00
12	Fire Fighting Equipments	L.S.		7500.00
			Total	41,47,500.00
10	Installation and Electrification Charges @ 10 %			4,14,750.00
			Total	45,62,250.00

5.3 Other Fixed Assets:

Sl. No.	Description	Quantity	Rate (in Rs.)	Total Cost (in Rs.)
1	Tube lights, Fans, Air Coolers/Water Coolers and Exhaust Fans etc.	LS		50,000.00
2	Almirahs, Shelves, Tables, Chairs etc. for Stores, Supervisors and Designing Room	LS		50,000.00
3	Computer and office equipment	LS		25,000.00
4	Other Miscellaneous Items	LS		10,000.00
			Total	1,35,000.00

5.4 Preliminary Expenses:

Sl. No.	Particulars	Cost (in Rs.)
1.	Consultancy	5,000.00
2.	Legal Charges	25,000.00
3.	Other Preliminary Expenses like Elect. Connection Charges, water Connection Charges, Traveling and communication etc	1,50,000.00
	Total	1,80,000.00

5.5 Total Fixed Cost:

Sl. No.	Particulars	Cost (in Rs.)
1.	Work-shed	6,00,000.00
2.	Machinery and Equipment	45,62,250.00
3.	Other Fixed Assets	1,35,000.00
4.	Preliminary Expenses	1,80,000.00
	Total	54,77,250.00

5.6 Working Capital (Per Month):

5.6.1 Cost of Raw Material per Month (at 100 % Capacity utilization) :

Sl. No.	Particulars	Quantity (MT)	Rate (Rs./MT. or Ltr.)	Cost (in Rs.)
1.	M.S. Wire/ rod 6 mm – 18 mm dia	19.75	48,000	9,48,000.00
2.	Hexagonal M.S. rod 6mm – 18 mm dia	10.75	48,500	5,21,375.00
3.	Furnace Oil (Ltr.)	1200	Rs. 40/ Ltr.	48,000.00
4.	Packing/ polishing materials and consumables		L.S.	10,000.00
	Total			15,27,375.00

5.6.2 Cost of Salary and Wages per Month (at 100 % Capacity utilization):

Sl. No.	Designation	Nos. Required	Salary/Wages pm (in Rs.)	Total Cost (in Rs.)
1	Manager Cum Supervisor	1	18,000.00	18,000.00
2	Diploma Engineer	1	15,000.00	15,000.00
3	Skilled Workers	4	12,000.00	48,000.00
4	Semi Skilled Workers	4	10,000.00	40,000.00
5	Helpers/Assistants	1	9,500.00	9,500.00
6	Watchman cum Peon	3	9,000.00	27,000.00
7	Total:			1,57,500.00
8	Perquisites 15 %			23,625.00
Grand Total				1,81,125.00

5.6.3 Utility and Miscellaneous Expenses (at 100 % Capacity utilization):

Sl. No.	Particulars	Total Cost (in Rs.)
1	Electricity	25,000.00
2	Insurance	1,000.00
3	Maintenance and Consumables	3,000.00
4	Office Expenses	1,000.00
5	Communication expenses	1,000.00
6	Transportation Expenses	5,000.00
7	Sales Expenses	5,000.00
Total		41,000.00

5.6.4 Working Capital Estimates per Month (On the basis of first year i.e. 50% Capacity Utilization):

Sl. No.	Particulars	Basis of W.C. Requirement	Cost per Month (in Rs.)	Working Capital (in Rs.)
A.	Current Assets			
1	Raw Materials	1 Months Cost	7,63,688.00	7,63,688.00
2	Stock of Semi Finished Goods*	½ months cost	4,90,519.00	2,45,259.00
3	Land Lease Rent	1 Month Cost	4,167.00	4,167.00
4	Debtors**	2 Months Sale	5,15,119.00	10,30,238.00
5	Cash in hand	15% of Sl. 1,2 & 4		3,05,878.00
A. TOTAL CURRENT ASSETS				23,49,229.00
B.	Current Liabilities			
1	Creditors	½ Months Raw Material	7,63,688.00	3,81,844.00
B. TOTAL CURRENT LIABILITIES				3,81,844.00
C. WORKING CAPITAL (A - B)				19,67,385.00

* 50% of Raw material + 60% of wages & salaries

** 50% of Raw Material + 60 % of (Wages and Salaries + Utilities + Misc. Expenses)

5.7 Total Cost/Investment:

Sl. No.	Particulars	Cost (in Rs.)
1.	Total Fixed Cost	54,77,250.00
2.	Working Capital	19,67,385.00
	Total	74,44,635.00

Loan from Financial Institution → Rs. 55, 83,476/-

Margin Money → Rs. 18, 61,159/-

6. Economic Viability (Figures in Rs. Lakh)

6.1 Projected Profitability Statement:

Sl. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
1	Installed Capacity: 360 MT Per Annum								
2	Utilized Capacity								
2(a)	%	50%	55%	60%	65%	70%	75%	80%	85%
2(b)	Production of MS Nuts/Bolts in MT	180	198	216	234	252	270	288	306
3	Turn Over (By sale @ Rs 85,000 per MT of Nuts/ Bolts)	153.00	168.30	183.60	198.90	214.20	229.50	244.80	260.10
4	Cost of Production								
4(a)	Raw Material	91.64	100.81	109.97	119.14	128.30	137.46	128.30	146.63
4(b)	Salary and Wages	13.04	14.35	15.78	17.36	19.09	21.00	23.10	25.41
4(c)	Utilities and Miscellaneous Expenses	02.95	03.25	03.57	03.93	04.32	04.75	05.23	05.75
5	TOTAL COST {4(a)+4(b)+4(c)}	107.64	118.40	129.32	140.42	151.71	163.22	156.63	177.79
6	Gross Profit (Turn over- Cost of Production)	45.36	49.90	54.28	58.48	62.49	66.28	88.17	82.31
	LESS								
7(a)	Interest on Term Loan 11.10%	3.47	2.84	2.14	1.38	0.55	-	-	-
7(b)	Interest on Working Capital 10.70%	1.46	1.19	0.91	0.59	0.24	-	-	-
7(c)	Depreciation on Building 5%	0.14	0.13	0.12	0.12	0.11	0.10	0.10	0.09
7(d)	Depreciation on Machinery and Equipment 10%	4.56	4.11	3.70	3.33	2.99	2.69	2.42	2.18
7(e)	Depreciation on other Fixed Assets 15%	0.20	0.17	0.15	0.12	0.11	0.09	0.08	0.06
7(f)	Preliminary Expenses Written off	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
8	TOTAL {7(a) to 7(f)}	10.08	8.69	7.26	5.79	4.25	3.14	2.85	2.59
9	Net Profit Before Tax (6-8)	35.28	41.21	47.01	52.69	58.24	63.14	85.32	79.71
10	Tax (30%)	10.59	12.36	14.10	15.81	17.47	18.94	25.60	23.91
11	Net Profit after Tax	24.70	28.85	32.91	36.88	40.77	44.20	59.72	55.80
12	Net Profit % on Sales (NPBT/TO) X 100	23.06	26.94	30.73	34.44	38.06	41.27	55.76	52.10
13	Return on Investment %	33.18	38.75	44.21	49.55	54.76	59.37	80.22	74.95

6.2 Repayment Schedule of Total Fixed Cost (75% of Rs.54,77,250) :

6.2.1 Repayment of Term Loan:

Total Loan: Rs. 41,07,937/-

Rate of Interest: 9.00 %

Year	Quarter	Repayment (in Rs.)	Interest (in Rs.)	Total Installment (in Rs.)	Balance (in Rs.)
					41,07,937.00
1	1	1,64,901.00	92,428.00	2,57,329.00	39,43,035.00
	2	1,68,611.00	88,718.00	2,57,329.00	37,74,424.00
	3	1,72,405.00	84,924.00	2,57,329.00	36,02,091.00
	4	1,76,284.00	81,045.00	2,57,329.00	34,25,735.00
2	1	1,80,250.00	77,079.00	2,57,329.00	32,45,484.00
	2	1,84,306.00	73,023.00	2,57,329.00	30,61,178.00
	3	1,88,453.00	68,876.00	2,57,329.00	28,72,725.00
	4	1,92,693.00	64,363.00	2,57,329.00	26,80,031.00
3	1	1,97,028.00	60,300.00	2,57,329.00	24,83,002.00
	2	2,01,462.00	55,867.00	2,57,329.00	22,81,540.00
	3	2,05,995.00	51,334.00	2,57,329.00	20,75,545.00
	4	2,10,629.00	46,699.00	2,57,329.00	18,64,915.00
4	1	2,15,369.00	41,960.00	2,57,329.00	16,49,546.00
	2	2,20,214.00	37,114.00	2,57,329.00	14,29,331.00
	3	2,25,169.00	32,159.00	2,57,329.00	12,04,162.00
	4	2,30,236.00	27,093.00	2,57,329.00	9,73,925.00
5	1	2,35,416.00	21,913.00	2,57,329.00	7,38,509.00
	2	2,40,713.00	16,616.00	2,57,329.00	4,97,796.00
	3	2,46,129.00	11,200.00	2,57,329.00	2,51,667.00
	4	2,51,667.00	5,662.00	2,57,329.00	---

6.2.2 Repayment of Working Capital Loan (75% of Rs.19, 67,385):

Total Loan : Rs. 14,75,538

Rate of Interest: 10.50 %

Year	Quarter	Repayment (in Rs.)	Interest (in Rs.)	Total Installment (in Rs.)	Balance (in Rs.)
					14,75,538.00
1	1	57,039.00	38,732.00	95,772.00	14,18,498.00
	2	58,537.00	37,235.00	95,772.00	13,59,961.00
	3	60,073.00	35,698.00	95,772.00	12,99,887.00
	4	61,650.00	34,122.00	95,772.00	12,38,237.00
2	1	63,269.00	32,503.00	95,772.00	11,74,968.00
	2	64,929.00	30,842.00	95,772.00	11,10,038.00
	3	66,634.00	29,138.00	95,772.00	10,43,403.00
	4	68,383.00	27,389.00	95,772.00	9,75,020.00
3	1	70,178.00	25,594.00	95,772.00	9,04,841.00
	2	72,020.00	23,752.00	95,772.00	8,32,821.00
	3	73,911.00	21,861.00	95,772.00	7,58,909.00
	4	75,851.00	19,921.00	95,772.00	6,83,058.00
4	1	77,842.00	17,930.00	95,772.00	6,05,216.00
	2	79,885.00	15,886.00	95,772.00	5,25,330.00
	3	81,982.00	13,789.00	95,772.00	4,43,347.00
	4	84,134.00	11,637.00	95,772.00	3,59,212.00
5	1	86,343.00	9,429.00	95,772.00	2,72,868.00
	2	88,609.00	7,162.00	95,772.00	1,84,258.00
	3	90,935.00	4,836.00	95,772.00	93,322.00
	4	93,322.00	2,449.00	95,772.00	0

6.3 Cash Flow Statement (Figures in Rs. Lakh):

Sl.No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
	Sources of funds								
1	Term Loan + Margin Money	54.77							
2	Working Capital Loan + Margin Money	19.67							
3	Cash Accrual	45.36	49.90	54.28	58.48	62.49	66.28	88.17	82.31
	Total Inflow A	119.81	49.90	54.28	58.48	62.49	66.28	88.17	82.31
	Application of Funds								
4	Purchase of Work shed and Boundary Wall	6.00							
5	Procurement of Machinery and Equipment	45.62							
6	Purchase of other fixed assets	1.35							
7	Preliminary Expenses	1.8							
8	Increase in Working Capital (11.10 % per year)	19.67	1.97	2.16	2.38	2.62	2.88	3.17	3.49
9	Repayment of Term Loan	6.82	7.45	8.15	8.9	9.74	-	-	-
10	Interest on Term Loan @ 9.00 %	3.47	2.84	2.14	1.38	0.55	-	-	-
11	Repayment of Working Capital Loan	2.70	2.63	2.92	3.24	3.59	-	-	-
12	Interest on Working Capital Loan @ 10.50 %	1.46	1.19	0.91	0.59	0.24	-	-	-
13	Tax	10.59	12.36	14.10	15.81	17.47	18.94	25.60	23.91
	Total Outflow B	99.48	28.44	30.39	32.30	34.21	21.82	28.76	27.40
	Net Surplus A-B	20.33	21.46	23.89	26.18	28.28	44.46	59.40	54.91
	Opening Balance	0	20.33	41.79	65.68	91.86	120.13	164.59	223.99
	Closing Balance	20.33	41.79	65.68	91.86	120.13	164.59	223.99	278.90
	DSCR*	2.05	2.33	2.55	2.75	2.94			
	AVERAGE DSCR for 5 years	2.52							

* Debt Service Coverage Ratio (DSCR) = (Cash Accrual after Tax + Interest) / (Interest + Repayment)

6.4 Balance Sheet:

Sl.No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
	Liabilities								
1	Term Loan (for Fixed Cost)	41.08	34.26	26.8	18.64	9.73	-	-	-
2	Working Capital Loan	14.76	12.38	9.75	6.83	3.59	-	-	-
3	Net Profit after Taxes (accumulated)	24.70	28.85	32.91	36.88	40.77	44.20	59.72	55.80
	Total	80.53	75.49	69.46	62.35	54.09	44.20	59.72	55.80
	Assets								
1	Work Shed	5.70	5.42	5.14	4.89	4.64	4.41	4.19	3.98
2	Machinery and Equipment (Net Block)	41.06	36.95	33.26	29.93	26.94	24.25	21.82	19.64
3	Other Fixed Assets (Net Block)	0.11	0.10	0.08	0.07	0.06	0.05	0.04	0.04
4	Preliminary Expenses (Unwritten)	1.85	1.6	1.35	1.1	0.85	0.6	0.35	0.1
5	Net Current Assets (W.C.+ Cash Flow Balance)	40.00	63.43	87.52	113.91	142.43	187.14	246.84	302.06
	Total	88.73	107.50	127.35	149.90	174.92	216.45	273.24	325.82

6.5 Break Even Point:

Sl.No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
1	Fixed Cost								
a.	Salaries	13.04	14.35	15.78	17.36	19.09	21.00	23.10	25.41
b.	Maintenance	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04
c.	Electricity	0.15	0.17	0.18	0.20	0.22	0.24	0.27	0.29
d.	Insurance	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
e.	Sales Expenses	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06
f.	Interest (Total)	4.93	4.03	3.05	1.97	0.79	0.00	0.00	0.00
g.	Depreciation	4.90	4.41	3.96	3.57	3.21	2.89	2.60	2.34
h.	Preliminary Expenses Written Off	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
	TOTAL FIXED COST	23.32	23.26	23.29	23.42	23.64	24.47	26.31	28.40
2	Variable Cost								
a.	Raw Material	91.64	100.81	109.97	119.14	128.30	137.46	128.30	146.63
b.	Salary and Wages	13.04	14.35	15.78	17.36	19.09	21.00	23.10	25.41
c.	Utility and Miscellaneous Expenses	2.95	3.25	3.57	3.93	4.32	4.75	5.23	5.75
	TOTAL VARIABLE COST	107.64	118.40	129.32	140.42	151.71	163.22	156.63	177.79
3	Sales	153.00	168.3	183.6	198.9	214.2	229.5	244.8	260.1
4	Sales-Variable Cost	45.36	49.90	54.28	58.48	62.49	66.28	88.17	82.31
5	BEP = Fixed Cost X 100/(Sales-Variable Cost)%	51.42	46.60	42.91	40.04	37.83	36.92	29.85	34.51

1. Details of test facilities available in India:

The test facilities for manufacturing of instant product are available all over India. More specifically the facility is available with NML, CMERI & Other NABL Accreditation Certified Private labs.

2. Sources of Raw Material:

- i. M/s Usha Martin Industries, Tatisilwai, Ranchi
- ii. M/s. Manek Lal and Sons, 23, Ganesh Chandra Avenue, Kolkata-700013.
- iii. M/s. ABM Fasteners (India), 79A, Pocket GG-1, Vikas Puri, Delhi-110018, India.
- iv. M/s. M. V. Wires Pvt. Ltd., Podder Estate, Mahilong, Ranchi.
- v. M/s. Devindra Industries, 3857, New Janta Nagar, Opposite ITI, Gill road, Ludhiana-141003, Punjab.
- vi. Local Market.

3. Details of Machineries and Equipment Suppliers:

- i. M/s. Sohal Engineering Corporation, 61, Ganesh Chandra Avenue, Kolkata-700013.
- ii. M/s. Perfect Machine Tools Co. Pvt. Ltd., Bell Building, Sir P. M. Road, Fort, Mumbai.
- iii. M/s. Industrial Machine Corporation, F-36-C, Sainik Market, Main Road, Ranchi-834001.
- iv. M/s. Kalihar Machine Tools, Plot No. 18696/1, K.M. Singh, St. No.7, Ludhiana.
- v. M/s. S. B. Machine Tools, 23/4, Lane No.-11, Anand Parbat Industrial Area, New Rohtak Road, New Delhi-110005, India.
- vi. M/s. Royal Forging & Engineering, 51/K Dockyard Road, Mazagaon, Lohar Khata, Shop No. 5, Mazagaon, Mumbai-400010, Maharashtra, India.
- vii. M/s. Premier Machine Tools, E-194, Indl. Area, Phase 8B, Mohali-160071, Punjab, India.
- viii. M/s. Polo Machinery Pvt. Limited, 12, Amar Park, Zakhira, New Rohtak, New Delhi-110035, India.

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SCHEMES & CONSULTANCY SERVICES

SCHEMES AND CONSULTANCY SERVICES

➤ **Existing Schemes available and their details :**

In order to support Micro, Small and Medium Enterprises (MSMEs), Government has been implementing various schemes initiatives to enhance MSME competitiveness including the manufacturing of “Nuts and Bolts” by way of Credit Linked Capital Subsidy (CLCSS), Credit Guarantee Scheme (CGTMSE), Interest Subvention Scheme for MSMEs, Lean Manufacturing, Design Improvement, Zero Defect Zero Effect Certification, Support for Incubators, Intellectual Property Rights & Digital Empowerment of MSMEs, Procurement and Marketing Scheme (PMS), A Scheme for Promoting Innovation, Rural Industry and Entrepreneurship (ASPIRE), Micro & Small Enterprises – Cluster Development programme (MSE-CDP), Scheme of Fund for Regeneration of Traditional Industries (SFURTI), Upskilling through testing/ technology centres, Support for tooling / technology services, etc.

➤ **Proposed Scheme (if existing is not suitable) :**

Production-linked incentive scheme may be introduced to incentivize products that require use of deep manufacturing, enhancing India’s manufacturing capabilities and attracting investment in cutting – edge technologies, etc. having lower imports bill.

➤ **Details of agencies who can provide guidance (CSIR, MSME-TCs, Sector Councils, etc.):**

Yes. The agencies like CSIR, MSME-TCs and Sector Councils can provide technical guidance for manufacturing of “Nuts & Bolts”. However, other agencies both from Government & Private Sector, Equipment Manufacturers may also help for providing complete tool down and its solution.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

SUMMARY, RECOMMENDATIONS AND

CONCLUSION

Scope of Nuts and Bolts Industry in India:

- ❖ The mounting demands of the automobiles and the construction industries are expected to expand the global nuts and bolts making business by 5.5 percent by the year 2026. The versatile nature of the nuts and bolts used in every industry including domestic use has fueled the growth of the nuts and bolts making business in India. Asia alone is expected to give a major boom to the nuts and bolts businesses in the coming 4 – 5 years adding up about \$ 7.5 Billion to the fastener manufacturing industry as well.
- ❖ The growth of the nuts and bolts making business is dependent on many other industries like the electricity, transportation, construction, etc. Therefore, the growth of other industries will have a positive impact on the growth of the nuts and bolts manufacturing business. Many Indian nuts and bolts manufacturers have managed to influence and put their mark on global platform due to high market potential of the nuts and bolts making business.
- ❖ One of the biggest trends in fastening technology is smaller parts compact designs for components inherently shrink the “real estate” available to place and install hardware. Miniature fastener types and styles have evolved to fit effectively in the increasingly restrictive design envelopes encountered in industries ranging from electronics to aerospace.
- ❖ Self-contained in die fastening systems represent a promising new technology to install fasteners during the stamping process. Working in tandem with a stamping process (and properly tooled die) to feed and install clinch fasteners, these portable systems now on the market eliminate secondary operations typically required for fastener insertions. Users can realize increased productivity, quality and savings and gain a competitive edge as the system provides a capability to perform two operations (stamping and fastener – installation) simultaneously in the die.
- ❖ Increasing sale of automobiles in India is significantly driving the growth of the auto ancillary market in the country, including automobile sector-specific fasteners. Growing usage of fasteners for manufacturing automotive parts such as engines, chassis, molding, suspension system and wheels among others, is expected to drive the growth of the Indian Industrial fasteners market during the forecast period.

Uses and Advantage of the Product:

- ❖ The use of nuts and bolts as intermediary products and also as auxiliary products has ensured implement of its application across almost every industry in India.
- ❖ The minimal investment, high inventory turnover ratio and bulk orders are the ardent advantage of the product.

Policy Initiatives by Government of India:

- ❖ The “**Make in India**” and “**Local for Vocal**” initiatives have encouraged all the industrial and MSMEs to set up plants for the products for which they have been importing thereby desiring the demand for nuts and bolts fasteners.
- ❖ With the introduction of the globalised policies by the Indian Government, the Indian nuts and bolts manufacturers can penetrate the global market easily. It has also attracted the global market to enter into the Indian market by means of bilateral trade relationship for a specific country. The nuts and bolts business in India is expected to rise to about INR 460 Billion by 2026. The significant growth of the automobile industry in India has been contributing to the automobile specific nuts and bolts making business in a large scale.
- ❖ There is a need for galvanizing “**district export hubs**” under Govt. of India’s “**One District, One Product**” initiative.
- ❖ Focusing and Implementing the Deep Manufacturing processes which will be resulted in lower duty on raw material and intermediates and checking unfair imports. This will lay the foundation for a resilient and low-cost economy and high manufacturing and exports of the product.
- ❖ Broadening of the definition of MSMEs, a Rs. 3.0 lakh Crore relief packages, the Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength (CHAMPIONS), infusion of tech-support and e-market linkages are some of the measures for MSMEs during the Pandemic situation have started yielding results.

Problems/Threats:

- ❖ The Covid – 19 situation hinders many units which forced them to restrict their production or lock-down/closed their units/slashed working hours which resulted forced layoffs.
- ❖ Due to slow down in Auto Industry like Maruti, Tata Motors, Ashok Leyland, etc. many entrepreneurs restricting their production, as a result most of the units are unable to meet even the basic expenses such as electricity bills and salary payments, etc.
- ❖ The delayed payment from PSUs is also another factor for slow-down of these companies.
- ❖ Lack of product differentiation and elasticity of prices of raw materials such as alloys, stainless steel and copper are hindering the growth of the market.
- ❖ Spurious and low quality fasteners affect longevity adversely and may result in accidents with catastrophic consequences.
- ❖ The price of steel in India is influenced by Demand and Supply forces and international prices. The increasing prices of raw materials, which are used in the manufacturer of industrial fasteners, reduce profitability.

Suggestions and Recommendations:

- ❖ Exchanging information on regulatory framework and institutional structure lies for the product between trading partner countries under the ambit of SME co-operation framework.
- ❖ Exploring the possibility for organizing Trade Fairs, Exhibitions, Buyers - Sellers meets/ conferences, etc. for showcasing the products and trade negotiations from each side.
- ❖ Reaffirming the importance of MSMEs participation in production network, value chains, manufacturing and services sector, technical assistance and capacity building. This will help boosting country's MSME exports to new heights and restricting imports to large extent.
- ❖ Exploring and exchanging the ideas on critical areas for MSMEs like technology transfer, access to finance, skill development, innovations, incubation centers etc. required for the product.
- ❖ Sector/Product specific market studies may be given priority through International Exchange Programme under MSME Co-operation Scheme.
- ❖ Developing and understanding towards export-import procedures & documentation. Imparting knowledge in the area of logistics and enhancing benefits from exports – imports by understanding Foreign Trade Policy.
- ❖ Support mechanism through a special scheme to encourage domestic industries like China which is supplying the nuts and bolts in large quantity as they have Cluster type of manufacturing system which increases productivity and quality as a result the cost per piece reduces drastically. China is also providing support to export and free transportation from industry to Port to their manufacturer companies. These industries are also availing 4% rebate which increases their profit. Therefore, China product is cheaper than Indian product which is the main reason for increasing import of this product. Therefore, it is suggested for setting up of Clusters on this product in the industrial hubs like Ahmadabad, Chennai, Kolkata, Mumbai, Ludhiana, etc along-with the provision for rebate on purchase of raw-materials, so that domestic industries could manufacture and supply the products at a competitive price. By this way, we can check the import from China and penetrate our product in the international market. Promotion of exports oriented MSMEs including exports of nuts and bolts as a focus area can be considered under 'Make in India' Cluster initiative.
- ❖ Development of robust mechanism for reporting data of production, export and import for all goods and sub-sector items under the broad head of nuts and bolts on import of Capital Goods and spare parts from China. Calculation of the value of imported Capital Goods machines on the basis of depreciation value for the benefit of MSMEs.
- ❖ There is need of clear assurances over market access issues in countries such as China and non-tariff barriers on Indian companies.
- ❖ Government has to impose anti-dumping duties, permitted under the WTO, for restricting imports when such imports have been established as unfairly affecting the market for goods and services produced by Indian industries. Government has also to impose Safeguard duties to protect domestic industries against a surge of imports from other countries.

- ❖ Taking appropriate measures to make MSMEs competitive through support like access to low cost credit for export, provision of land in SEZs and EOUs on discounted rates, facility for working capital, technology up gradation, etc. which will reap the benefit of the availability/use of vacant lands in various SEZs in India.
- ❖ India has to review its existing bilateral FTAs with some of RCEP members as well as newer agreements with potential for Indian exports which would serve India's interest to invest strongly in negotiating bilateral agreements with the US and the EU. It will help to penetrate the international markets which would help boosting exports of this product.
- ❖ The Rules of Origin criteria as laid down in the RCEP should strongly be followed to determine the national source of a product which restricts other countries to dump their products by routing them through other countries that enjoyed lower tariffs. This will eradicate the fear of "inadequate" protection against surges in imports.
- ❖ MSEs quoting price within price band L1+15% shall be allowed to supply at least 20% of tendered value at L1 price subject to bringing down of price by MSEs to L1 price in a situation where L1 price is from someone other than Micro and Small Enterprise under the Public Procurement Policy, 2012.
- ❖ There should be a "Knowledge Centre" for MSME exports, a separate EPC (engineering, procurement, construction) for e-commerce with a single – window export clearing mechanism.

Conclusion:

The Indian engineering sector is of strategic importance to the economy owing to its intense integration with other industry segments. Nuts and Bolts are type of industrial fasteners used in various products, machines, structures, etc. There are many industries producing these nuts and bolts of various sizes, but the demand too is increasing day by day. The versatile nature of the nuts and bolts used in every industry including domestic use has fueled the growth of the nuts and bolts making business in India considering the easy and indigenously available raw material for the product. The mounting demands of the automobiles, electricity, transportation and construction industries are expected to expand the global nuts and bolts making business by 5.5 percent by the year 2026. Many Indian nuts and bolts manufacturers have managed to influence and put their mark on global platform due to high market potential of the nuts and bolts making business and the introduction of the globalised policies, bilateral trade relationship, etc. by the Indian Government. As India is in a position to reduce the import of nuts and bolts, the govt. is encouraging such kind of units to set up under **AtmaNirbhar Bharat** and become **Vocal for Local**. The new industries need to satisfy the scope of intervention by means of the availability of technology, raw-material, market survey, competitive price, quality, standardization and skilled manpower before penetrating into the manufacturing of the product.

India's fight against COVID – 19 has brought about a renewed focus on AtmaNirbhar Bharat. Taking into consideration, the situation, created by the pandemic COVID – 19, it has become important for India to have a strong backbone in manufacturing including manufacturing of Nuts and Bolts. This calls for an increased focus on building domestic capacities and capabilities to fulfill domestic demand with indigenous production as well as to increase India's presence in global markets particularly in its top export destinations. Thus, COVID – 19 offers an opportunity to revisit the ease of doing business and competitiveness of Indian economy, industry and manufacturing.

In the current dynamic times amid COVID – 19, noticeable changes are being witnessed in the global supply-chains. This is the most opportune time for India to focus on capturing a significant share in the world economic system. At this juncture, various foreign companies are looking at India for investments; it becomes pertinent to sustain the momentum of implementing reforms both at the Centre and State levels. Further, offering a red carpet to foreign investors and companies by providing the most favourable terms for setting up manufacturing bases in our country is crucial to make India one of the best destinations for doing business.

References:

1. Export - Import Data hosted by DGCIS, Department of Commerce, Ministry of Commerce and Industry, Government of India and TradeEconomy.com
2. Export - Import Data hosted by DC (MSME) website.
3. Industries data from Data Division/NIC Division of O/o DC (MSME), New Delhi.
4. Cluster data from Cluster Division website of O/o DC (MSME), New Delhi.
5. Information from Industries Associations located in the state of Jharkhand and Other States.
6. Inputs from MSME Technology Centres at Aurangabad, Ahmedabad, Indore, Ludhiana, Hyderabad, Kolkata, Bhubaneswar, Jamshedpur, Guwahati and Jalandhar.
7. Inputs from MSME – Development Institute: Ahmedabad, Karnal, Kolkata and Ludhiana.
8. Data from website hosted by different manufacturers, traders, research paper, related articles, etc.

ANNEXURE – I

State Wise total MSME Registered under UAM for 25991 - Manufacture of metal fasteners (nails, rivets, tacks, pins, staples, washers and similar non-threaded products and nuts, bolts, screws and other threaded products :

Sl. No.	State	Micro	Small	Medium	Total
1	ANDHRA PRADESH	100	52	2	154
2	ARUNACHAL PRADESH	1	3	0	4
3	ASSAM	29	11	0	40
4	BIHAR	116	33	0	149
5	CHHATTISGARH	72	65	1	138
6	GOA	7	2	1	10
7	GUJARAT	779	314	14	1107
8	HARYANA	648	358	16	1022
9	HIMACHAL PRADESH	10	8	3	21
10	JHARKHAND	98	22	0	120
11	KARNATAKA	358	131	3	492
12	KERALA	73	16	0	89
13	MADHYA PRADESH	253	79	1	333
14	MAHARASHTRA	1778	589	12	2379
15	MANIPUR	2	0	0	2
16	MEGHALAYA	2	5	0	7
17	MIZORAM	3	0	0	3
18	NAGALAND	2	0	0	2
19	ODISHA	48	20	1	69
20	PUNJAB	1320	468	12	1800
21	RAJASTHAN	194	41	1	236
22	SIKKIM	0	0	0	0
23	TAMIL NADU	1261	270	4	1535
24	TELANGANA	240	131	2	373
25	TRIPURA	0	0	0	0
26	UTTAR PRADESH	415	115	2	532
27	UTTARAKHAND	39	11	1	51
28	WEST BENGAL	517	133	3	653
29	ANDAMAN AND NICOBAR ISLANDS	5	0	0	5
30	CHANDIGARH	121	11	0	132
31	DADAR AND NAGAR HAVELI	2	1	0	3
32	DAMAN AND DIU	3	3	0	6
33	DELHI	264	95	0	359
34	JAMMU AND KASHMIR	8	6	0	14
35	LADAKH	0	0	0	0
36	LAKSHADWEEP	0	0	0	0
37	PUDUCHERRY	13	7	0	20
	Total:-	8781	3000	79	11860

Source : Data Division/NIC Division of Hqtr.

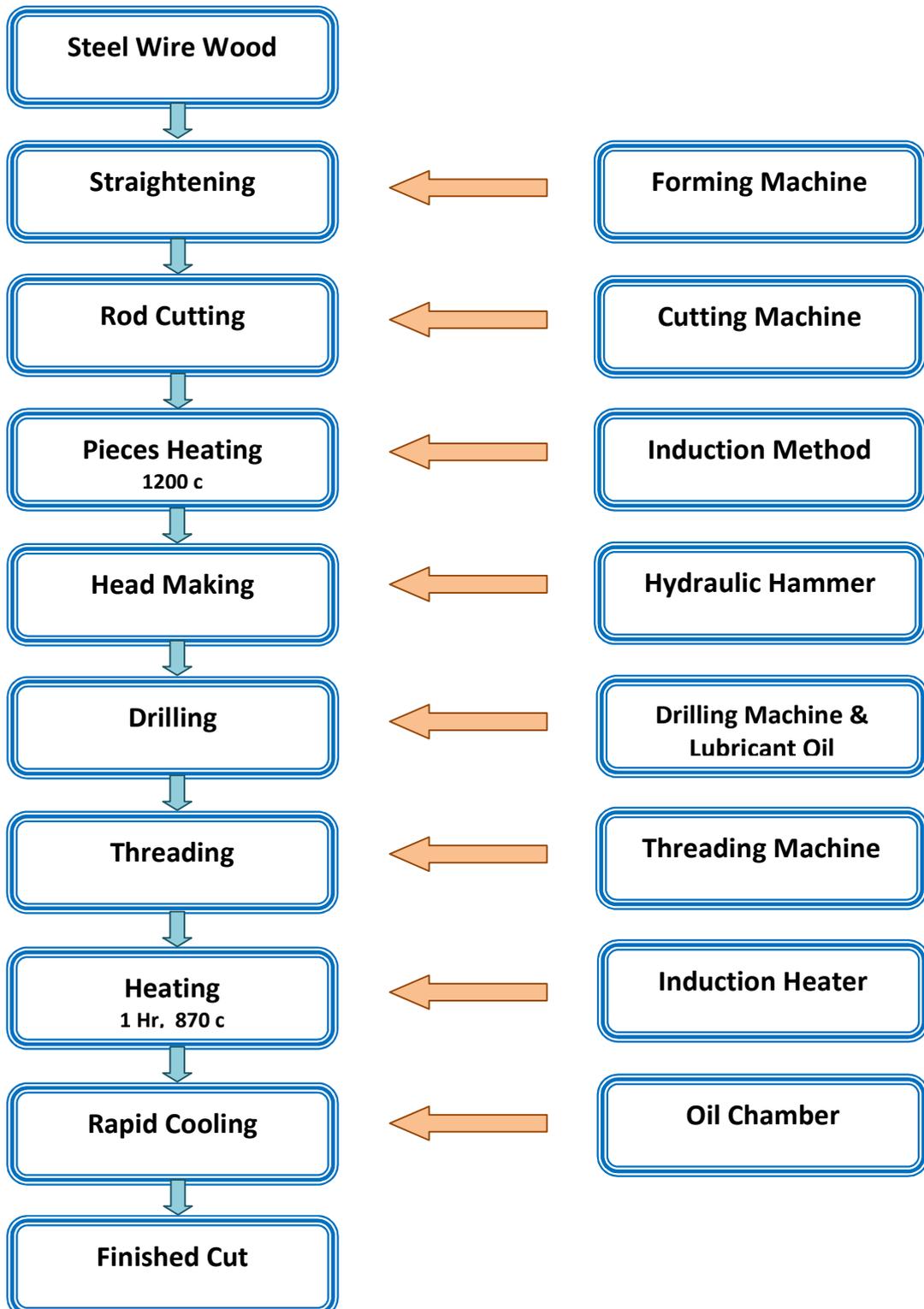
ANNEXURE – II

State Wise total MSME Registered under UDYAM Registration for 25991 - Manufacture of metal fasteners (nails, rivets, tacks, pins, staples, washers and similar non-threaded products and nuts, bolts, screws and other threaded products) :

Sl. No.	State	Micro	Small	Medium	Total
1	ANDHRA PRADESH	46	3	0	49
2	ARUNACHAL PRADESH	2	0	0	2
3	ASSAM	14	2	0	16
4	BIHAR	74	0	0	74
5	CHHATTISGARH	47	8	2	57
6	GOA	3	1	0	4
7	GUJARAT	313	62	6	381
8	HARYANA	204	56	15	275
9	HIMACHAL PRADESH	12	1	1	14
10	JHARKHAND	50	1	0	51
11	KARNATAKA	157	11	4	172
12	KERALA	30	5	0	35
13	MADHYA PRADESH	132	9	0	141
14	MAHARASHTRA	744	115	20	879
15	MANIPUR	2	0	0	2
16	MEGHALAYA	0	3	0	3
17	MIZORAM	1	0	0	1
18	NAGALAND	0	0	0	0
19	ODISHA	33	2	0	35
20	PUNJAB	578	164	15	757
21	RAJASTHAN	85	10	1	96
22	SIKKIM	0	0	0	0
23	TAMIL NADU	439	52	7	498
24	TELANGANA	110	21	1	132
25	TRIPURA	2	0	0	2
26	UTTAR PRADESH	194	16	9	219
27	UTTARAKHAND	24	2	0	26
28	WEST BENGAL	218	45	6	269
29	ANDAMAN AND NICOBAR ISLANDS	3	0	0	3
30	CHANDIGARH	46	8	0	54
31	DADAR AND NAGAR HAVELI	5	2	0	7
32	DAMAN AND DIU	0	0	0	0
33	DELHI	115	28	2	145
34	JAMMU AND KASHMIR	23	3	0	26
35	LADAKH	1	0	0	1
36	LAKSHADWEEP	0	0	0	0
37	PUDUCHERRY	6	2	0	8
	Total:-	3713	632	89	4434

Source : Data Division/NIC Division of Hqtr.

FLOW CHART
(Nuts Manufacturing Process)



FLOW CHART
(Bolts Manufacturing Process)

