
UNIT 13 ENGINEERING GOODS

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13.0 OBJECTIVES

After studying this unit, you should be able to:

- describe the major segments of engineering industry
- explain the trends of exports
- analyse the products and markets for exports
- enumerate the problems
- suggest the measures to boost export.

13.1 INTRODUCTION

Engineering industry is reckoned as one of the most dynamic sectors of the Indian economy. It employs over 25 lakh people and accounts for nearly one-third of each the productive capital, value added and output in the organised sector. If we add such details about the small scale sector which contributes substantially to both production and exports of engineering goods, the importance of this industry grows further. Again, nearly 80 per cent of the foreign collaborations entered into by the Indian engineering units originate from this sector. Besides, 35 per cent of the Indian joint ventures operating abroad are represented by the engineering units. Share of engineering industry in all-India exports is, however, 10 per cent. In this unit, you will learn various components of Indian engineering industry, products & markets for engineering goods, problems & strategies to boost the exports.

13.2 INDIAN ENGINEERING INDUSTRY

Indian engineering industry has maintained a high level of growth during the successive Five Year Plans. Excepting for the first-half of eighties, its growth rate has been higher than the all-India. Based on information available from the Department of Industrial Development, Ministry of Industry, product-wise details in respect of selected engineering items in the organised sector is as follows:

Automobile Industry: Various items manufactured in the industry include: commercial vehicles, cars, jeeps, two wheelers, mopeds and three wheelers. There has been a substantial growth in the production of these items in the recent years.

Auto Components: Growth of this industry is closely linked with the automobile manufacturing. A large quantity of auto components is produced and supplied as original equipment to manufacturers. Keeping in line with the growth in production/sales of automobiles over the past few years, the auto component industry has registered a steady growth. The industry is constantly engaged in upgrading its technology. A number of foreign manufacturers have entered into collaboration with Indian units for supply of components to meet their domestic and export requirements.

Agricultural Machinery: Agricultural machinery comprise tractors, power tiller, combine harvesters and other machinery and implements. Over the years, this industry has registered an enormous growth and its production surged up substantially. Started with foreign technology, the Indian tractor industry is today totally indigenous. Other items manufactured in this sector include: power tillers, self-propelled harvesters and a host of implements.

Earth Moving and Construction Machinery: This sector is closely linked with major developmental and infrastructure schemes such as coal, minerals, mining irrigation and power projects, ports, steel and fertilizers. This industry has been manufacturing a variety of items like shovels, bulldozers, excavators, scrapers, motor graders, walking draglines and mobile cranes. This industry has been built up with the help of foreign technology from world leaders and we are now reasonably self sufficient in the production of earthmoving and construction machinery.

Diesel Engines: This industry provides prime movers for vehicles and equipment which are portable and mobile. These engines are also used in agricultural machinery, generating sets, fishing boats, ships, earthmoving machinery and locomotives.

Machine Tools: Various items manufactured in the industry include: conventional machines, NC/CNC machine tools, machinery centres, wire cut EDM, metal forming press etc. Production of this industry has increased substantially. Over the years, this industry has absorbed high dose of foreign technology and is constantly in touch with buyers to meet their diverse requirements.

Electrical Industry: The industry covers equipment used in generation, transmission and distribution of power. Specific items manufactured by the industry are generators, boilers, turbines, transformers and switchgears. Over the years, this industry has executed massive projects in thermal, hydro, nuclear power stations, docks, chemicals, petro-chemical complexes, metallurgical units like steel plants and aluminum complexes. The Indian electric industry is well equipped to meet domestic requirements and undertake overseas projects.

Transmission Line Towers: With the aggressive development of power generation in the country, the transmission line towers industry has witnessed a tremendous growth. Apart from meeting local requirements, this industry is now in a position to compete successfully in overseas markets.

Other Items: Other major items manufactured by the Indian Engineering industry include textile machinery, cement machinery, packaging machinery, material handling equipment, paper and pulp machinery, industrial gears and gear boxes, oil field equipment, air pollution control equipment, water pollution control equipment, printing machinery, metallurgical machinery, mining machinery, dairy machinery, freight containers, railway wagons and a host of electronics and consumer durables. Barring occasional setbacks, the situation in most of these industry segments is comfortable.

13.3 EXPORTS OF ENGINEERING GOODS

By virtue of its dominant position in the industrial sector, the Indian engineering industry has registered a spectacular growth on the export front. Exports of Indian engineering goods which valued at Rs. 5.16 crores in 1956-57 spurted to over Rs. 14 thousand crores in 1996-97. It has reached to Rs. 17190.58 crores in the year 1998-99. A significant feature of India's engineering exports is that with the exception of a marginal deceleration they always scaled

new heights until 1982-83, when the figure touched a level of Rs. 1160 crores. The growth of engineering exports during the sixties and seventies was the highest. In 1983-84, the exports of engineering goods, however, dipped to Rs. 1,000 crores which latter picked up to Rs. 1,150 crores in 1984-85. This stagnation in export of engineering products was an off-shoot of the industrial recession in developed countries and near completion of construction activity in the Middle East. The position was retrieved in 1987-88, when foreign exchange earnings of engineering goods surged to Rs. 1,448 crores as against Rs. 1,150 crore in 1986-87. Thereafter, the exports never looked backward and touched a level of Rs. 14,879 crore in 1996-97. It further reached to 17190.58 crores in the year 1998-99.

Higher growth in the export of Indian engineering products is mainly attributed to the development of huge infrastructure and technical expertise built for production of a number of industrial and consumer items within the country and favourable developments abroad. In fact, some of the international developments, such as, high labour cost and pollution problems in developed countries, together with massive construction and development work in Gulf and South East Asia provided a great stimulus to Indian Engineering exports. Further, tariff concessions allowed under the Generalised Scheme of Preferences by developed countries on their imports from developing nations have strengthened the competitive edge of our engineering exports. Again, thanks to joint ventures, production cooperation and sub-contracting by some of our enlightened entrepreneurs, we have been able to sell most effectively a number of engineering products in the markets of both developed and developing economies.

Other factors which gave filling to the development of Indian engineering exports are: devaluation of Indian Rupee in the mid-sixties, adoption of Export Policy Resolution conferring priority to exports, recognition of Export Houses, liberalisation of imports, simplification of export procedures and documentation, relaxation in licensing and investment policies, and introduction of a number of export benefits and facilities.

13.3.1 Sectoral Distribution

India's engineering exports encompass a wide range of items, which broadly be classified as capital goods, primarily steel and pig iron based items, consumer durables, non-ferrous products and management & consultancy services. Sectoral exports of Indian engineering goods are given in Table 13.1.

Table 13.1: Exports of Indian Engineering Products

| <i>(Rs. Crores)</i> | | | | | |
|--------------------------------|---------------------|--------------------|--------------------|-------------------|-------------------|
| Sector | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 |
| Capital Goods | 3,094.70 (30.90) | 3,737.76 (29.3) | 4,863.61 (32.7) | 5446.97 (31.8) | 5447.87 (31.7) |
| Prime Iron & Steel | 1,711.37 | 283.96 | 2,322.67 | 3,262.18 | 2516.84 |
| Ferrous allows | (17.1) | (18.7) | (15.7) | (19.1) | (14.6) |
| Iron & Steel Prod. (Mfrd.) | 1,643.77 (16.4) | 2,232.62 (17.5) | 2,668.41 (17.9) | 2939.03 (17.2) | 3302.41 (19.2) |
| Non-Ferrous Metals & Prod. | 792.77 (7.9) | 824.69 (6.5) | 1,098.36 (7.4) | 1280.60 (7.5) | 1130.76 (6.6) |
| Consumer Durables | 2,252.39 (22.5) | 3,054.97 (24.0) | 3,295.95 (22.1) | 3458.25 (20.2) | 3967.70 (23.1) |
| Management & Tech. Services | 525.00 (5.2) | 500.00 (3.9) | 630.00 (4.2) | 715.00 (4.2) | 825.00 (4.8) |
| Total | 10,020.00 | 12,734.00 | 14,879.00 | 17102.03 | 17190.58 |

Note: Figures in bracket show percentage to total.

Source: Engineering Export Promotion Council, New Delhi.

In the early sixties, India's exports of engineering goods comprised mainly steel and pig iron based items like castings, buckets, drums, steel tubes, trunks, hand tools, agricultural implements, builders, hardware, locks, padlocks, steel furniture, aluminium, brass and copper

utensils, electric fans and storage batteries. As reflected in Table 1, there has been a substantial growth in the export of capital goods and consumer durables. Initially, there were no exports of basic steel but the export of simple steel and pig iron based products was sizeable.

With the induction of foreign technology in the Indian engineering industry, the situation has changed. We now witness a large number of capital goods and consumer durable products being exported from the country. This syndrome is discernable, particularly after the mid-seventies. The major items exported from the country include: complete vehicles, aluminium products, bicycles and parts, auto parts, internal combustion engines, steel products, industrial and sanitary castings, hand tools and small tools, textile and knitting machinery, industrial machinery, electric power machinery, wires and cables and management consultancy services.

13.3.2 Markets for Engineering Goods

Indian engineering products are exported to over 100 countries, both developing and developed. Until mid-seventies, a major part of our engineering exports was directed to Asia and Africa. With the share of developed countries rising gradually in the eighties, the scenario changed completely. During this period, the East European countries also emerged as big market for Indian engineering exports.

Table 13.2: Major Markets for Export of Engineering Goods

(US \$million)

| Country | 1994-95 | 1995-96 | 1996-97 | 1997-98 | 1998-99 | 1999-2000 |
|-----------|---------|---------|---------|---------|---------|-----------|
| USA | 489.54 | 601.42 | 913.00 | 890.44 | 768.44 | 933.47 |
| UK | 215.50 | 320.55 | 360.17 | 339.70 | 289.03 | 339.05 |
| UAE | 222.91 | 261.91 | 318.94 | 268.84 | 306.79 | 334.84 |
| Germany | 157.62 | 206.07 | 174.92 | 211.46 | 224.07 | 208.41 |
| Singapore | 218.77 | 279.43 | 260.75 | 269.88 | 167.74 | 206.26 |
| Italy | 57.04 | 75.30 | 87.48 | 163.86 | 118.72 | 153.03 |
| Sri Lanka | 156.98 | 146.23 | 153.87 | 166.98 | 163.13 | 147.67 |
| Malaysia | 87.61 | 132.68 | 205.57 | 193.00 | 73.12 | 140.95 |

Source: CMIE, July 2000.

The Europe and North America which earlier used to buy only a negligible part of India's engineering products now account for substantial part of the total. This shift in the directional pattern of engineering exports, which is attributed mainly to the entrepreneurial ability and several product/capacity adjustments within the country, is a pointer to the growing acceptability of our products in the developed world. Look at Table 13.2 which shows major markets for engineering exports from India. The major markets are USA followed by UK, UAE, Germany, Singapore, Italy, Sri Lanka & Malaysia.

Check Your Progress A

- 1) Enumerate five major products under engineering goods.

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- 2) Enumerate four major items of export of engineering goods.

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3) Enumerate five major markets for India's engineering goods export.

4) State whether following statements are **True** or **False**.

- i) 5% of the Indian Joint ventures operating abroad are represented by the engineering units.
- ii) Higher growth in the export of engineering products is mainly attributed to the development of huge infrastructure and technical expertise.
- iii) Capital goods constitute second largest export items of engineering products.
- iv) USA is the largest market for India's engineering goods.
- v) India's engineering goods are exported to both developed and developing countries.

13.3.3 Export Targets

The stagnation which affected Indian engineering exports between 1982-83 and 1986-87, is now a part of the history. The opening up of several economies in the world and integration of India with the new trading system offer enormous opportunities for expansion of Indian engineering exports. This is amply reflected in the continuous growth of our engineering exports. In the wake of this change, the Government of India has adopted a liberal approach towards growth and expansion of external sector. If the present trend continues, the Indian engineering exports would grow further. Details of some of the potential items and markets for Indian engineering exports are as follows:

Products: Scientific and medical equipment, steel tubes and pipes, passenger and commercial vehicles, hand tools and cutting tools, compressors, IC engines, household appliances, construction and milling machinery, forgings and castings, aluminum products, cables, specialised industrial machinery, agricultural machinery (including tractors), auto parts, machine tools, two wheelers, including bicycles and industrial fasteners.

Markets: North America (USA), Europe (Germany, UK, France, Italy and Netherlands), Japan, Australia and Middle East (Egypt, Saudi Arabia, Iran and Iraq) Asia Pacific (China, Singapore, Malaysia, Indonesia, Thailand and South Korea) CIS (erstwhile USSR), Africa (East Africa, Nigeria and Zimbabwe) and India's neighbouring countries (Bangladesh, Sri Lanka, Pakistan, Bhutan and Burma).

13.4 PROBLEMS OF ENGINEERING GOODS EXPORT

Realisation of higher export earnings from engineering exports are beset with a number of problems. One, with massive technological changes which have taken place in the developed market economies, many of the advantages which were accruing to India on account of inexpensive labour have become redundant. Second, Taiwan and South Korea which were only marginal exporters of industrial items in the world during the sixties and seventies now provide us tough competition abroad. Three, China with massive induction of foreign technology into its manufacturing system and elaborate overseas marketing arrangement is

causing us great hardship in the expansion of our engineering exports. Further, with fundamental changes in a host of product mechanisms and new raw material substitutes, there is a growing reduction in the purchase of additional engineering components for various uses.

Although, rates of customs duty on various products have been reduced over the years, a number of non-tariff barriers restricting exports of manufactured products emanating from developing countries have emerged. Construction activity in the Gulf region which brought fortunes to exporters for all sorts of engineering products in the wake of oil crisis has come to a grinding halt. Opportunities arising from reconstruction work of post Iran-Iraq war have yet to show up in a real manner. The recent Gulf crisis has added to our payment problems in this region. A number of our bills for execution of projects in Iraq are yet to be settled. African countries which have all along been our major destinations for export of industrial products have drastically curtailed their purchase of engineering goods because of foreign exchange crunch. Time lag between the announcement of policies and their piecemeal implementation also retard the growth of our engineering exports. Other problems of our engineering exports relate to inadequate infrastructural facilities, high cost of industrial inputs, domestic demand pull, outdated methods of working, smaller size of manufacturing units, absence of credibility, lack of export culture and hiccups of the on-going economic reforms in the country.

13.5 EXPORT PROMOTION STRATEGIES

You have learnt the trends, commodities and markets for India's engineering Products. Let us now discuss the strategies to boost the exports of engineering goods.

Integrated Strategy: Viewed against the background of numerous problems and challenges discussed above, it is necessary to evolve an integrated strategy which should aim at enlarging the production base and strengthening marketing effort for generating higher exports. Formulation of such a strategy is important not only for earning additional foreign exchange but also injecting a qualitative change and confidence into this growth area, so that it can successfully sustain itself in the present international environment. The major changes are: closer integration of European community, unification of two Germanys, structural adjustment in erstwhile USSR and mounting protectionism by the developed countries. Establishment of diplomatic relations with Israel and lifting of ban on trade with South Africa, however, provide additional opportunities for export of engineering products. Various steps envisaged under this strategy are outlined in the following paragraphs.

Selectivity Approach: A quantum jump in the export of Indian engineering goods can not be achieved in the present state of our industrial set-up, constituting various sizes of units spread over fairly wide areas. Facing numerous problems on account of raw materials shortages and infrastructural deficiencies, many of these units can hardly match overseas requirements in terms of technology, quality and cost. In view of multiplicity of demands on our scarce resources, selectivity is the only practical solution. Based on this approach, our effort should be made to identify a few potential items and give them the required inputs for expansion of Indian engineering products to specific countries. Such an orientation to our industrial base will give rise to a class of products, which should be vigorously promoted for exports.

Kapoor Committee Report on Perspective Plan and Strategy for Export of Engineering and Capital Goods has very thoughtfully given expression to this idea and identified a number of products for necessary thrust to India's exports. The Govt. of India also accepted this approach and selected 35 items for working out the required policy package. In view of the high growth expected in the case of Indian engineering exports, implementation of this process needs to be expedited.

Technology Upgradation: A number of Indian exporters continue to be at a disadvantage in the international markets vis-a-vis their counterparts in terms of product, design, finish specific features, performance and raw material substitutes. Not only this, even factors like improved production techniques and manufacturing process have adversely affected the prospects for a variety of our engineering exports. It would, therefore, be necessary to

upgrade the technology for manufacturing units with a truly impressive export potential. For technological upgradation, a number of provisions exist in the current Exim policy. Extra benefits are, however, available for the small scale units.

Marketing Re-Orientation: Till the beginning of seventies, India exported over 70 per cent of its engineering products to Asia and Africa for their requirements are simple and the business methods less complicated. Further, Indian goods sold in these markets did not require any major change. Now, with a gradual shift in the markets for engineering goods from Asia and Africa to North America and other developed countries, Indian exporters have not been able to adapt themselves to the demands of new markets in terms of price, quality, delivery schedules and range of products. For instance, the North American and Western markets are used to highly competitive prices and short deliveries. In these two areas, the Indian exporters are, however, unable to outbid their rivals from other countries even if they match the quality requirements. The situation has, however, become more difficult with the unification of European Community where the people are more demanding. With a view to meeting this challenge and exploiting the vast new opportunities emerging from the European unification, Indian exporters should re-orient their marketing methods and product structure through planned modernisation, quality improvement, technological upgradation and competitiveness. Some of the specific measures that need to be taken in this context are:

- i) Establishment of warehouses to ensure off-the-shelf supplies.
- ii) Setting up of joint ventures or acquisition of companies in Europe for manufacturing/distribution.
- iii) Buy-back arrangements through transfer of technology in India.
- iv) Encouraging selected foreign investment and export-oriented industries in India.

Team Work: Team work is another important consideration for raising exports of Indian engineering products. This is particularly relevant in the case of turnkey projects, where too many functions are involved and it is difficult for a single agency to execute the job single-handed. For instance, for the execution of a complete sugar plant, one would need to care for:

- i) Supply of plant and machinery.
- ii) Civil engineering for factory and office buildings, machinery foundation, housing, roads and railways etc.
- iii) Supply of agricultural machinery and transport and planning and development of agricultural estates for cane growing.
- iv) Commissioning of the plant.
- v) Training of personnel to run the plant.

A single agency acting as the principal contractor, can at best undertake to supply the plant and machinery and render some consultancy work, but it can not perform the functions of civil engineering, planning, development and training. With a view to successfully completing the entire job, it would be desirable for various Indian units specialising in different activities to come together and form a consortium. No doubt this bristles with problems of leadership and coordination, but unless we shed our inhibition, success will remain elusive.

The question of consortia is all the more relevant to export products manufactured by small scale units, because they have an inadequate capital base and limited production capacity. Various engineering items suggested for formation of export consortia among small scale units include: builders' hardware, cycle parts, hand tools, industrial machinery and parts, machine tools and accessories, scientific and surgical instruments, steel furniture, sewing machines and parts, industrial fasteners, electrical instruments, electrical light fittings and accessories and electronics.

Multilateral Funded Projects: Compared with massive industrial strength, India's share in Multilateral Funded Projects is just peanuts. Projects financed by multilateral agencies are attractive, offering as they do substantial export opportunities. In order to improve the situation, Indian exporters of projects and consultancy services should concentrate more on

bidding for these projects. Further, most of the areas covered by these projects require technology, which is abundantly available in India. A delegation of the Confederation of Indian Industry to the headquarters of the Asian Developing Bank (ADB) highlighted the following factors for India's low share of such projects:

- i) Inadequate knowledge of India's industrial capabilities in ADB.
- ii) Inadequate interaction with ADB at corporate level.
- iii) Lack of close follow-up at conceptual, appraisal/approval stages of the funded projects.
- iv) Absence of follow-up with the executing agencies in the borrowing countries to develop country preference.
- v) Inadequate number of biddings.
- vi) Non-compliance with the procedures and specifications of tenders.
- vii) Delays in project execution and consequent loss of credibility.
- viii) Quality and technological deficiencies of Indian offers as against offers from the developed countries.

Greater interaction between Indian exporters and international funding agencies coupled with better appreciation of some of these problems, would help generate higher exports of Indian exports and consultancy services.

Project Diversification: Project and market diversification is another important factor for raising exports of Indian engineering goods and services. In the wake of the sudden deceleration of overseas projects business, particularly in the Gulf region, we have concentrated on all these years, it will not be possible for us to make a quantum jump in this sector.

In such a situation, while basically aiming at their continued presence in this region, Indian exporters should diversify their activities by gradually moving into some other markets of more interest to them. Commercial information required for this is available in various published documents like Development Forum (Business Edition), Press Releases/Technical Data Sheets and Monthly Operation Summary of ADB/World Bank. Details regarding scope, cost estimates and implementation schedules of the likely projects can also be had from the Appraisal Reports of different countries. In order to get a true picture of the opportunities available abroad, it would be desirable to conduct a market survey of project requirements in select countries of Asia, Africa and Gulf Region.

Third World Ties: In the wake of restrictive trade practices adopted by developed countries to protect their domestic economies, there is little scope for further concessions by way of tariff reduction and liberalisation of other regulations. With the emergence of trading blocs and unilateral and arbitrary actions in settling trade disputes, protectionist tendencies among the developed countries have accentuated. This necessitates strong economic and trade ties among the Third World countries. We should encourage, therefore - much more than ever - trade promotion among developing countries. This would help generate higher exports of engineering products from India. A real breakthrough in this regard is possible through intensive trade talks, exchange of trade delegations, identification of products with trade potential and imaginative but determined marketing.

Public Sector: Public sector is yet another area, which has not been adequately exploited for generating larger engineering exports. Barring state undertaking engaged in defence supplies and other infrastructural facilities, units in this sector produce a wide variety of services and engineering products required both within the country and abroad. Compared to massive capital investment and technical marketing facilities available to the public sector units, their contribution to engineering exports is negligible. With a view to improving their export performance, it would be necessary to involve selected public sector units more in this activity.

Such an effort on the part of these units would require strengthening of their export cells, improvement in marketing services, including after-sales service, upgradation of technology,

adoption of consortium approach in collaboration with other exporters and higher productivity and quality. The Kapoor Committee has duly emphasised public sector exports and advocated that public sector units should draw up long-term export plan. All this is, however, possible if some of these units are privatised.

Enlarging Buyers' Credit: Owing to debt problems and the ubiquitous foreign exchange shortages, a number of developing countries in both Asia and Africa have curtailed considerably their overseas purchases of industrial products. A major part of the meagre imports into these countries is supplied either under funds from Multilateral agencies or credits extended by exporters from Japan and Western countries. India has also exported some engineering products to selected markets in these regions under credit line provided by the EXIM Bank for maintaining the traditional markets for our engineering exports. The volume of both the Government and EXIM Bank credits to these countries should be enlarged. It will also be desirable for Indian exporters to enter into countertrade deals with importers abroad, where necessary.

Educating Buyers Abroad: Communication gap continues to be another major problem in the export of Indian engineering products. In several markets abroad, India is still known as a supplier of traditional items like tea, jute, textiles and spices. This image of India is more pronounced in developed countries, where we have yet to make a meaningful dent in the export of engineering goods. Apart from inadequate projection, such a situation is attributed to irresponsible execution of orders by some of our exporters interested in one-shot deals only. These unscrupulous exporters have done incalculable damage to India's name in export markets. Although ultimate success will depend upon the actual performance of Indian exporters, yet education of our potential buyers abroad will go a long way in improving our export prospects.

Market Intelligence: Market intelligence is yet another weak link in the export promotion of Indian engineering goods. At present there are a number of agencies like the Engineering Export Promotion Council, Indian Investment Centre, Indian Institute of Foreign Trade and Confederation of Indian Industry, which provide marketing information to individual exporters. Some of these organisations have overseas offices as well. With a view to giving a big push to the export of Indian engineering products, the system of disseminating overseas commercial information needs to be centralised. The changes necessary in the present set-up are: manning commercial divisions of Indian embassies abroad with professionals, pooling marketing information available with various overseas offices of Indian export promotion agencies, and creating a centralised marketing intelligence service. It is hoped that with the establishment of Information and Computer Centre at ITPO will solve the problem to a considerable extent.

Delivery Schedules: Strict adherence to agreed delivery schedules is another crucial factor for raising Indian engineering exports. No explanation, however genuine, can be a credible substitute for timely despatch of goods. This is the key factor in international trading. There could be instances, when delivery schedules are upset owing to disrupted sailings, power cuts or industrial strikes/lockouts, but the overseas buyer who has option to procure his requirements from anywhere in the world is hardly concerned about our problems.

After-Sales Service: Scant regard for after-sales service also affects exports of Indian engineering goods. It is accentuated by our protected domestic market. It emanates basically from the absence of customer orientation in our marketing system, which has seldom gone beyond the production disposal operation. This serious lacuna has spoiled in many cases the image of our engineering exports. With suitable incentives offered to overseas collaborators, after-sales service could be depended upon for a sizeable boost to our engineering exports.

Check Your Progress B

- 1) Enumerate two problems of India's engineering goods export.

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- 2) Enumerate four strategies for boosting India's engineering goods export.

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- 3) State whether following statements are **True** or **False**.

- i) Indian engineering exports witnessed stagnation during 1982-83 and 1986-87.
- ii) China is not India's competitor of engineering exports.
- iii) African countries have not curtailed the purchase of India's engineering goods.
- iv) Selectivity is the practical solution for India's engineering exports.
- v) India's share in Multilateral funded projects is substantial.

13.6 LET US SUM UP

Indian engineering industry has maintained high level of growth. The major industry under this sector are: automobile industry, auto components, agricultural machinery, earth moving and construction machinery, diesel engines, machine tools, electrical industry, transmission line towers and other items. The engineering goods have registered a spectacular growth on the export front. The share of engineering goods in all India exports is about 10%. The major commodities for exports of engineering goods include: capital goods, prime iron and steel ferrous allows, Iron and Steel Products (manufactured), consumer durables and management & technical services. The major markets are: USA, UK, UAE, Germany, Singapore, Italy, Sri Lanka, Malaysia, etc.

The engineering exports are facing the problems of infrastructural aspects, technology and competition with several other countries. The strategies to boost the exports are: integrated approach, selectivity approach, technology upgradation, marketing re-orientation, team work, multilateral funded projects, Project diversification, third world ties, Public sector, enlarging buyer's credit, educating buyers abroad, market intelligence, delivery schedules and after-sales service.

13.7 ANSWERS TO CHECK YOUR PROGRESS

A 4 i) False ii) True iii) False iv) True v) True

B 3 i) True ii) False iii) False iv) True v) False

13.8 TERMINAL QUESTIONS

1. Describe various segments of Indian engineering industry.
2. Explain various products and markets for India's engineering goods export. Do you think that the exports of engineering goods have been increasing. Discuss.
3. Enumerate the problems faced by engineering industry in India. Suggest the strategies to promote the exports of engineering goods from India.