

EXECUTIVE SUMMARY

Printing ink is a mixture of colouring matter dispersed or dissolved in a vehicle or carrier, to form a fluid or paste which is used for printing on a substrate and then dried. Depending on the process and end use, inks are classified into letterpress, lithographic, flexographic, rotogravure, and others. Although most of the raw materials used in ink manufacture are available in India, a large percentage is imported due to vast demand.

The analysis made in the report is based on desk research, field survey and information provided by manufacturers, users, R&D personnel and other experts.

STRUCTURE AND STATUS OF THE INDIAN INDUSTRY

The growth of the printing ink sector has been very fast. The production of printing ink had increased from around 7300 tonnes in the beginning of 1980s to nearly 20,000 tonnes in the beginning of 1990s. The capacity utilisation of 25% of the units surveyed is 100%, while 40% of the units surveyed utilise 60-70% of the installed capacity. Adequate quality control through research and development can help the industry in meeting future requirements. For increased qualitative and quantitative production, absorption of imported technology and its upgradation through R&D efforts is essential. Many manufacturers do not follow standard tests and procedures as in developed countries, and such practices lead to production of poor quality inks. Except in the case of a few units, quality control is carried out based on judgement. (Very few Indian units have foreign collaboration).

Printing Ink contains certain toxic ingredients which are to be eliminated to control pollution. The use of enviro-friendly inks reduces and controls pollution to a great extent. Research efforts in India, on this aspect, have just been initiated.

INTERNATIONAL SCENARIO

The world wide market for printing ink in 1991 was estimated at US \$ 9.25 billion, at a volume of 1.69 million metric tonnes. The market leaders in printing ink manufacture are USA, Europe and Japan. The demand for

printing inks is expected to show an annual growth of 2-3% in Western Europe, North America and Japan. The world market trend points towards enviro-friendly inks. Majority of the countries are concentrating on water based and UV-cured inks.

RESEARCH AND DEVELOPMENT TRENDS

Very few small scale industries are capable of incorporating technological advancements in this manufacturing process. The requirements of printing inks of the future are, features like high gloss, instant setting, high speed, quick drying, etc. Development work towards modification of resins, structural vehicles, water based inks, enviro-friendly inks, etc. need to be undertaken vigorously. Substantial investment should be made in R&D equipment to attain this. Quality control of the product is an area which needs special attention. The R&D of printing ink encompasses several fields which includes chemistry, production technology and product range. The majority of the large units have in-house R&D facilities. There is scope for improving the future of the printing ink industry through proper efforts in research and development.

CONCLUSIONS

Even though many of the printers have adapted themselves to the ever changing scenario in the printing ink sector through changes in printing techniques, the printing ink manufacturers do not seem to be concerned about the quality of ink manufactured. Most of the printing ink manufacturers do not pay much regard to quality control, testing and Research & Development. At times, the in-house R&D facilities of the units are either under utilised or ill equipped. Most of the companies do not have appropriate machinery for improving productivity.

There has been a tremendous increase in the production of printing ink in the country. A large percentage of raw material required are imported. There are hardly any pollution control facilities or energy management systems in most units.

RECOMMENDATIONS

1. Indigenous development of raw materials which are currently being imported, can help the printing ink industry to forge ahead.

2. Most of the SSI units face stiff competition from large scale units. This can be reduced to some extent through the development of speciality inks by the SSI units to cater to the market demand.
3. Formulation and implementation of standards could yield better results.
4. Journals and publications showing new techniques and market trends should be published by the Association and should be made available to assist printing ink manufacturers, especially those in the small scale sector.
5. Short term courses and workshops on printing ink technology to educate industrialists on new methods and inventions should be organised.
6. Since the cost of production in India is comparatively low, the manufacturers should explore the possibility of export to other developing nations.
7. Upgradation of technology either through foreign collaboration or appropriate Research and Development measures are essential to enable the industry face the future optimistically.