

# Adoptability of Indigenous Paper for Graphic Reduction in Printing

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Regarding the printability of paper I heard a caustic remark that the paper manufactured in our country are absolutely useless for good printing. This remark seems to have touched the feeling of a paper manufacturer who retaliated by saying that the printers in our country are incapable of maintaining their printing machines and so they are not able to do good printing. He further said the papers manufactured by them are not only as good as they are made abroad, but also proved to be better in same respects. These contrary arguments are meaningless while discussing our mutual problems technically. In my opinion both the remarks are too extreme accusations.

Definitely our papers are neither so bad nor so good. Even if the papers made are of high quality good printing is a task performance, if the quality of the papers are below a specific standard, the task of printing becomes more laborious. I do agree with what are said of the required features of a paper for good printability, but such an ideal paper is still under research even in the most advanced countries from where the best of prints come. It is also a fact that the type of modern printing machines possessed by many printers in our country to-day are not properly maintainable or efficiently usable for the function of printing while using many of the varieties of paper made in our country. However, tolerably good printing specially for economic utility purpose is done in huge quantities without much difficulty on the indigenous papers. It is not necessary that every kind of paper used for printing has to be ideally suitable for printing. Some of the papers that are not ideally good for printing has to be printed for some other purpose for which they may be very suitable. Also papers that are not suitable for one process of printing may be good enough for a different process. Since papers are made purposely in different varieties, their adoptability to the printing must be judged by the printers. For

this reason the printers too must have a sound technical knowledge of the paper as a product. Every manufacturer must know definitely the raw products he uses. For the paper printers there is no other important, basic raw products than paper.

It is not progressive thinking if paper manufacturers believe that they have already made the best products for the simple reason that there is a huge demand for their product or they have seen a lot of quality printing produced in our country, and a lot of printers have received our State Awards for excellence in printing. If papers are more in demand, it is surely not due to their good quality but of its necessity in the absence of no other alternative. Having participated in judging prints for Awards over the last 10 years, I can postulate the fact that most of the excellent prints that got the top Awards were printed on imported papers and some time, a few of them were purposely given for good printing done on indigenous material though comparatively they are not appealing, or because the design looked attractive, or the process of printing is in the initial stage. Our State Awards are not meant for good typographic printing only, if so all such printing done by many printers, on our papers, are definitely good. The Awards are for "Excellence in Printing, Designing and Publishing". This means good looking prints are those that are well illustrated with designs, paintings or photograph and rich in colour effects and published for prestige. The demand on the printers for such a quality of printing is the one that has made the printing industry progressive in our country. People who buy such printing are prepared to pay a good price provided they can get what they mostly want is that type of printing which comes from the most advanced countries. No printer in our country has fully satisfied such clients by printing on the indigenous paper irrespective of the fact that they have invested a lot of money on the various

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<sup>†</sup>Colourcraft Bombay (Represented All India Federation of Masterprinters). Talk given in IPPTA meeting at Bombay.

modern precious machinery, equipment and technical personnel that are essential for good printing. Some printers at times process the printing at their own cost on few imported papers in order to prove to their clients or for their own satisfaction, that there is nothing wrong with their process, equipments or know-how of doing a good reproduction. Provided such papers are indigenously manufactured, or easily importable they could satisfy most of the clients, instead of the fortunate few who get the imported papers.

In this respect the Letter press printers are the most sufferers because if they have to handle multi-colour or single colour half-tone job, they are unable to get the quality of paper suitable for that purpose. Fine Screen half-tones by Letter Press do require high grade coated paper. Even rough screen half-tone printing by Letter Press is not appealing on the best of our papers, coated or uncoated. They coated ones have no good ink affinity or drying ability, and the uncoated ones are not fluff-free or smooth surfaced, to receive the ink coverage, apart from drying. Under these circumstances the only alternative to the printer is to change the process to Offset lithography which is much more expensive and technically complicated. Principally this process is capable of transferring an inked image in solid or fine line even on rough surfaced papers and also fine half-tone illustrations are reproduceable without any ink drying difficulty. Here again the reproduction of fine half-tone in monochrome, or colour cannot be achieved "true-to-the-original" because the paper indigenously made for this purpose is not only not white enough (apart from other faults), but also variably tinted in blue or violet tones. This colour on paper adds an under-tone to any other colour of ink put on them, thus killing the purity and brilliancy of the coloured inks. The deeper tones in the half-tone illustration deepens in reflective density and the highlights do not brighten up. Moreover the tinted shades of the paper differs from sheet to sheet or ream to ream in a bulk. This makes every printed piece in the same run to look different optically.

I had demonstrated in the gathering two samples of such papers on which I had made the incorporated colouring material to leave its body from one spot by chemical action and it got collected as a strong ring of colour around that spot. One of the sample has an ultra-blue and the other an ultra-violet colour. From where the colour was vacated it is whiter than

the whole paper. From this experiment I understand that in order to give an optical whiteness to the paper which is not well bleached, for reasons best known to the paper technicians, these toners are used as whitening agents. This dhoby-trick is more harmful to colour printing than a helpful remedy to get reflective whiteness.

The next problem is the change of shade of a same colour ink when applied to different varieties of paper. These changes may be due to the natural properties of the various paper, both physically and chemically. Each variety has a different p.H. value and optical whiteness. This has physically and chemically altered the shades. A sample card of a reputed ink maker proving this fact was shown by me to the gathering. This character of printability may not be remediable by the paper manufacturers. It is for the printer to understand while handling specifically different stock of papers their reaction to coloured inks.

In conclusion I said, so long I was under the impression that our paper mills have only mere fabricators of papers and their commercial selling agents, but after being two full days in this seminar, I am fully convinced that our paper mills do have academically well qualified technicians who can perform excellently provided the paper manufacturers entrust them with full responsibility and encourage them to experiment; and our Government help the manufacturers to get proper equipments and chemical supply, and above all give them freedom to act.

In this note I further add that unless the quality of our paper achieves a good standard no printing done on our indigenous paper is worthy of export either as a printed product or as an auxiliary aid to any of our manufactured articles. Paper for purposes other than education and mass communication may be permitted to be produced at higher cost in our country than importing them at the loss of foreign exchange and use them for re-export. I hope our Government will realise this some time or other and pave the way for a future fine tradition in this country is paper making and printing.

Fortunately we have in our country many well established Government Institutes of printing technology and now a paper technological institute is also getting established with highly qualified instructors.

If these institutions are to progress, the industries also must progress without remaining primitive any-more.

It is the responsibility of the paper making and printing industry to guide the Government's technical education department in producing more

of skilled working-technicians practically useful to the industries rather than academic ones to act as pik-ups and amplifiers of printed text-book records, placed in cabins, as administrators. Academical training should be limited to technological research collectively for the industries concerned and not for technical ability.