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BRAZIL

Technical report: Second mission*

Prepared for the Government of Brazil
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of Maurice Aspinall
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1.0 INTRODUCTION

During this second mission it has been invigorating to see that many companies have indeed implemented, or are implementing many of the recommendations made during the first mission, with all companies registering either cash savings in terms of dyestuff and chemical costs or reduced energy inputs and/or reduced dye cycle times, there are, however, still many areas for improvement and again this mission, many recommendations have been made to the individual companies and form part of the individual reports of those plants.

2.0 PROBLEMS IDENTIFIED

2.1 Inflexibility in terms of dye systems available

All companies visited have shown interest in becoming less dependent on reactive dyes and for increasing their dyeing flexibility by using other dye types for certain shades in their production, the main reason for this are:

- 2.1.1 The companies now know that there are less expensive dyes available with shorter cycle times and less effluent produced to dye many of their standard shades - the plants have done trials in their own laboratories and seen for themselves the results.
- 2.1.2 As we stated in the report to the first mission, information and more especially technical assistance from the dyestuff manufacturers in Brazil is of very poor quality and much worse than the technical service received by companies in Western Europe and North America.
- 2.1.3 All the companies visited have recently invested or are currently investing in effluent treatment plants in order to comply with tougher regulations imposed at both state and federal level. The textile dyers and printers are confronted with huge investment to treat vast amounts of effluent, up until now, no one has, to any meaningful extent approached the problem from the process optimization side, whereby combining processes and/or better selection of dyeing method used, one can with state-of-art technology reduce the amount of the effluent currently required to be treated by as much as 40%, not only this but also, equally important, energy consumption will also be more or less proportionately reduced.
- 2.1.4 Many of the companies visited have experienced difficulties obtaining some reactive dyes from suppliers, whether because genuine production difficulties occurred with the dye manufacturing, or whether from speculation, is difficult to ascertain.

2.2 Effluent treatment

As referred to in item 2.1.3 above, many companies are now aware of the enormity of the problem currently confronting them, in terms of collection, treatment and disposal of textile effluents. Most managers are very apprehensive about cost of effective treatment and all are worried about the large volumes required to be cleaned-up and the efficacy of the treatments involved.

SENAI-CETIQT's textile effluent group together with process optimization techniques could offer valuable assistance to all the companies visited, indeed all plants indicated that they would be most grateful for any help SENAI-CETIQT could give them in this area.

2.3 High production costs

High costs of production, particularly in relation to dyes, auxiliaries, chemicals, energy coupled with long process times, low productivity and the current economic problems, make it extremely difficult for the textile producers to export, none of the woven goods producers export anything other than small amounts of greige cloth. Even the large knitgoods producers are finding it more difficult to be competitive in the export market. Steps must be taken quickly, within the plants, to bring production costs down and this could be done, in the short-term, by bringing-in outside technical assistance, this need not be expensive, virtually all the companies visited would only require short, sharp inputs of technical assistance, say a few days per month, leaving their technical staff of series of work programmes with specified tasks and completion dates.

We would strongly advise the companies to consider this option.

3.0 BENEFITS RESULTING FROM RECOMMENDATIONS MADE DURING THE FIRST MISSION

All factories visited on this second mission registered reduced production costs in terms of :

- reduced dyestuff/auxiliary/chemical costs
- or - reduced processing time and energy consumption etc.
- or - a combination of the above.

In overall cost terms it is estimated that to date, the companies, as a whole are saving

approximately 10 million Cruzados Novos/year
(calculated on prices current in November 1989)

N.B.: Some of the plants still have on-going trials based on first missions recommendations and final results/benefits are still awaited, we would estimate an overall saving of 2.5 - 3.0 million Cruzados Novos/year, giving an overall reduction in production costs of

approx. 12.5 - 13.0 million Cruzados Novos/year
directly attributable to recommendations made to the various plants during the first mission.

4.0 CONCLUSIONS

This second mission has been extremely well received, not least because of the success of the first mission and the recommendations made in the report to that mission. More recommendations are contained in the individual company reports, which follow. These recommendations are follow-up suggestions in the main to:

- reduce effluent emissions at source by process or dye system modification;
- reduce actual production costs by reducing processing time and thus also energy inputs;
- to try and bring more process flexibility into the plants and reduce their still almost total dependence on reactive dye systems;
- to introduce more "state-of-the-art technology" to the plants with a view to making them more competitive.

Finally, I for my part, like all plant senior management, am more than a little apprehensive with regards to the current state of effluent treatment, in all the plants visited. This is virgin soil for most of them, and they desperately need help, advice and information. Ideally one can envisage, in the near future a more integrated role for the three groups, effluent treatment, colour matching and dyehouse automation together with process optimization, currently being built-up in SENAI-CETIQT.