

PREMA[®] Case Study for PIDA^{*}

Company: Apollo Print Media, Cairo

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Measure:

Adjust film developer machines to reduce developer consumption

*PIDA is the Egyptian Printing Industry's Development Association

In Brief

Apollo Print Media is specialised in pre-press services for the printing industry. One branch was assessed with the aim to reduce material consumption in various processes. The PREMA programme raised awareness of the technical staff and facilitated the identification of various measures. The participating engineer discussed the concept with the production staff in order to assess and benchmark all film developer machines. The goal was a reduction in developer consumption. The benchmarking (comparison of technical performance) resulted in a general adjustment of all machines and a significant reduction of material input.

Information on the Enterprise

Apollo Print Media was established in 1988. Apollo is specialised in pre-press services for the printing industry. Apollo processes digital print data and produce films for the development of offset printing plates in two branches of the company. It was the first company to receive its ISO 9001 certificate in quality in 1998. It was also the first company to receive the national award of excellence certificate in the field of colour separation. Apollo Print Media currently employs 30 people.

Application of PREMA[®] (GHK and EoCM)

During the Good Housekeeping (GHK) workshop within the PREMA programme, the participants visited all involved companies, including Apollo Print Media. As all participants are working in the same sector, the visited companies benefited from the participants' expertise. The company assessment of the participants was structured according to the provided checklists for all aspects within the printing sector. Problems within Apollo were identified in electricity management, the inefficient use of films and the consumption of film developer chemicals. The Network Meetings and the Environmental oriented Cost Management (EoCM) helped to refine the financial calculation and support the implementation of the measures.

The Problem and its Causes

The consumption of film developer chemicals seemed to be very high during a first assessment. However, there was no frequent monitoring of developer consumption and no clear technical instructions for the workers how to adjust the machines in order to run them efficiently. The participants of Apollo decided to monitor the developer consumption in all film developer machines in order to benchmark the different machines and reduce the consumption if possible.



Empty containers pile up in the small office



containers for fresh and used fixer (or developer) need to be frequently refilled.

Actions taken in the Enterprise

- Technical staff of both branches is informed about the aim of PREMA measures.
- The chemical consumption of all developer machines is monitored and compared. For this, constant monitoring is introduced and a person is assigned for frequent recording, including recording the quantity taken from store every month.
- New indicators are established (e.g. developer consumption/ film).
- Machines with high developer consumption are newly adjusted.
- Workers are instructed on how much developer is required in order to run the process efficiently.

Economic Benefits

The benchmark test resulted in the adjustment of several machines. This adjustment reduces the developer consumption by 50 %. As film developer is a valuable chemical product, the reduction results in significant cost reduction of 52 000 LE/year.

Investment Costs	0 LE	
Annual Savings	52 000 LE	on reduced consumption of film developer
Annual Costs	100 LE	on frequent training of operators
Payback Period	immediate	

1 LE = 0.1341 Euro (27.2.2007)

Environmental Benefits

The developer is a chemical product, which in general requires special treatment after use. The PREMA measure results in a significant reduction of developer chemicals consumption, which also reduces the burden to the environment due to the high content of Sodium hydroxide-Hydroquinone-Dihydroxybenzol which is harmful for the environment, especially concerning water pollution. Furthermore, the reduced consumption also saves precious resources and energy in the production process of the developer chemicals.

Organisational Benefits

Less space for storage is needed for fresh or used developer. The operators are more aware of the efficient use of developer in the machine. Frequent monitoring allows quick response on technical problems. The reduced consumption results in extended operation periods of the machines and less down time during refilling.

Improvements in the Field of Health and Workplace Safety

The frequency for developer refilling or emptying the machines is extended. Therefore, operators benefit from the reduced frequency of handling the heavy containers and the chemicals. Less empty containers need to be stored and more space is available.

For further Information

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