

PREMA[®] Case Study for PIDA^{*}

Company: Nubar Printing House

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Measure:

Reduction of sheet allowance for make-ready of prints

*PIDA is the Egyptian Printing Industry's Development Association

In Brief

Nubar Printing House is an Offset Printing House with three locations in Cairo: two in Shubra, and one in El Obour City. Though the company is one of the most innovative ones in Cairo, offering a broad range of products, many internal production processes have not been changed for years. In the course of the PREMA Workshop, several problems and their causes have been identified. The main problems are the high rate of material and particularly paper consumption, the damage of semi-products and a lack of quality control. This case study presents the measure **reduction of sheet allowance for make-ready of prints in order to reduce paper consumption**. Currently the printers have an allowance of 400 extra sheets per four colour print job for make-ready of prints and adjustments.

Information on the Enterprise

Nubar Printing House is an Offset Printing House with currently three locations in Cairo: two in Shubra, and one in El Obour City. The company is one of the most innovative printers in Cairo, offering a broad range of products for national and international customers. It currently employs 150 people.

Application of PREMA[®] (GHK and EoCM)

During the Good Housekeeping (GHK) workshop within the PREMA programme, the participants visited all involved companies, including Nubar Printing House. 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. Several problems and causes could be identified and measures formulated. Most important for Nubar were the material handling and waste issues. 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

According to the accounts, the printing house has a paper consumption of approximately 15 t/ day or 4500 t/ year. Due to the current paper handling and allowance policy, Nubar produces approximately 0.8 ton paper waste per day which will sum up to nearly 300 t/year. This means a waste rate of 6.7 %, based on the total amount of processed paper. Paper waste is caused by inappropriate storage, wrong handling of semi-products, high sheet allowances for printers and rejects due to lacking quality control. This case study presents the measure **reduction of sheet allowance for make-ready & adjustments of prints in order to reduce paper consumption**. Traditionally printers at Nubar have a sheet allowance for test prints of 400 extra sheets per print job for test prints and adjustments. Compared to international standards, this amount is very high and could be reduced in order to significantly reduce paper waste and hence reducing paper cost per job (50-70 % of costs are paper costs).



Each printer receives 400 allowance sheets for test prints and adjustment per job. This significantly contributes to the high paper consumption and waste generation.

Actions taken in the Enterprise

- The printers were asked about the required allowance sheets for each job. They agreed that the amount can be reduced from 400 to 350 sheets per job in most cases.
- The measure was implemented immediately after the GHK workshop.
- Cost savings are calculated on basis of new allowance sheet regulation.

Economic Benefits

The paper used in the production (4500 t/year) has a value of approximately 27 Mio. LE/year. The annual waste generation amounts to 300 t/ year, which equals 1.8 Mio. LE/ year. As parts of the paper is sold to recyclers 180 000 LE can be currently recovered.

Reducing the number of allowance sheets leads to a decrease in overall consumption of paper by nearly 0.33 %, which results in savings of 90 000 L.E. on paper costs per year, as paper is the most expensive cost item. Since most of the paper is actually procured by the customers, the savings are realised partially directly by them. This means that Nubar itself does not have the full savings, but can make use of a competitive advantage.

Since the reduction of allowance sheets means reducing the number of unnecessary products, it also reduces the costs for all other input materials, including labour and machine running times. As highlighted above, these costs account for approx. 30-50% of the overall process costs per job. These cost savings can be fully reaped by Nubar.

Investment Costs	0	
Annual Savings	90 000 LE	on paper, equalling 70% of production costs for the final product
	38 500 LE	For all other production costs, assuming the lower share of 30% for non-paper costs.
Annual Costs	Negligible	losses from less sale of recycling paper
Payback Period	Immediate	

1 LE = 0.1341 Euro (27.2.2007)

Environmental Benefits

Paper is a material which is produced with high water and energy input: on average approx. 50 cubic meters of water, 4000 kWh of electricity and 2.5 tons of wood are required to produce one ton of virgin paper. A reduction of paper input by 15 tons leads to a reduction of 22.5 tons of wood, 750 cubic meters of water and more than 60'000 kWh electricity which equals approx. 46 tons of the greenhouse gas carbon dioxide and 1.4 tons of sulphur dioxide which causes acid rain formation.

In addition, the waste is reduced, leading to less waste disposal requirements. Furthermore, the reduction of other production material and also of energy for the machines is a positive environmental effect from this measure.

Organisational Benefits

After the information and discussion with the staff, the printers are more conscious about paper consumption and take more attention to the quick adjustment of the prints. Indirectly, the likeliness of rejects is reduced as printers pay more attention to the production process.

Improvements in the Field of Health and Workplace Safety

There is no direct influence on the health of workers or workplace safety.

For further Information

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