

Chemical Leasing in Printing Sector

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NCPC- Sri Lanka

- *NCPC is a project (Component 4A) of UNIDO Integrated Industrial Development Support Program, established under the Ministry of Industry & Commerce*
- *Funded by Norwegian Government*
- *Commenced in 2002 May*
- *Completed 10 Years in May 2012 and is a matured Centre in UNIDO/UNEP global RECP-Net.*
- *A successful public private partnership where Ministry of Industrial Development and Federation of Chambers of Commerce and Industry of Sri Lanka (FCCIISL) worked closely establish the center*

Projects in Printing Sector

- *News Paper Printing*
- *Cement Bag Printing*
- *Print on Polythine bag*

Specific Objectives of the ChL project

- *Identify and agree on the key requirements of Ink for Optimum print quality and reduction of losses*
- *Enhancing the quality of Ink to meet the above requirements*
- *Active cooperation between the Supplier and User through Knowledge sharing*
- *Make the payments to ink supplier based on final output (functional value instead of product value)*

News Paper Printing Project

Supplier : General Ink Ltd

User : Wijeya Newspapers Ltd

Printing Ink wastages



Type of waste

Evaporation of Ink (Solvent) during printing process

Ink waste in duct

Ink waste in storage



Estimate after CHL

During the printing process a large amount of inks (solvent) are evaporated (about 10% of total ink usage) and wasted. The total loss of ink is estimated to be between 17% to 20% of input

With Chemical Leasing – to reduce 12 % ink usage (3 year target)

Ink Saving per annum: 14976 kg per annum

Possible cost saving per annum by the user : 14976×3

Added value 44,928 USD

Savings to the Supplier

The amount of Ink produced- 109824 kgs

New Revenue- 329472 USD

Reduced Production cost by the supplier through savings of raw materials and use of energy :

*109,824*2.1 =230,630 USD*

New Tax payment = 51,068.16USD

Fixed cost = 21,600 USD

Net income =40,320.64 USD

Added Value 7632.64USD

Issues in Ink usage

- *High Loss caused by Evaporation, Spills, Process Deficiencies and Poor House Keeping*
- *Variations in the print content, colours, depth and impressions*
- *Variation of the quality of ink in batches*
- *Variation in Ink absorption into news print paper*

Benefits

Economic benefits

*Direct cost saving approximately 50,000 USD
per annum*

Ink production cost (energy, raw material)

Transport cost

Environmental Benefits:

Health and safety, reduce air pollution

Challenges and Enabling measures

Quantification of the news print into square meters.

(Use of the counters)

The variety of the newspapers printed and the variety in the prints and colours.

(Develop indicators)

Measurement of the wastes accurately, especially through evaporation.

(Conducting Accurate Material Balance)

Non availability of a printing expert (news paper printing) in the country for advice.

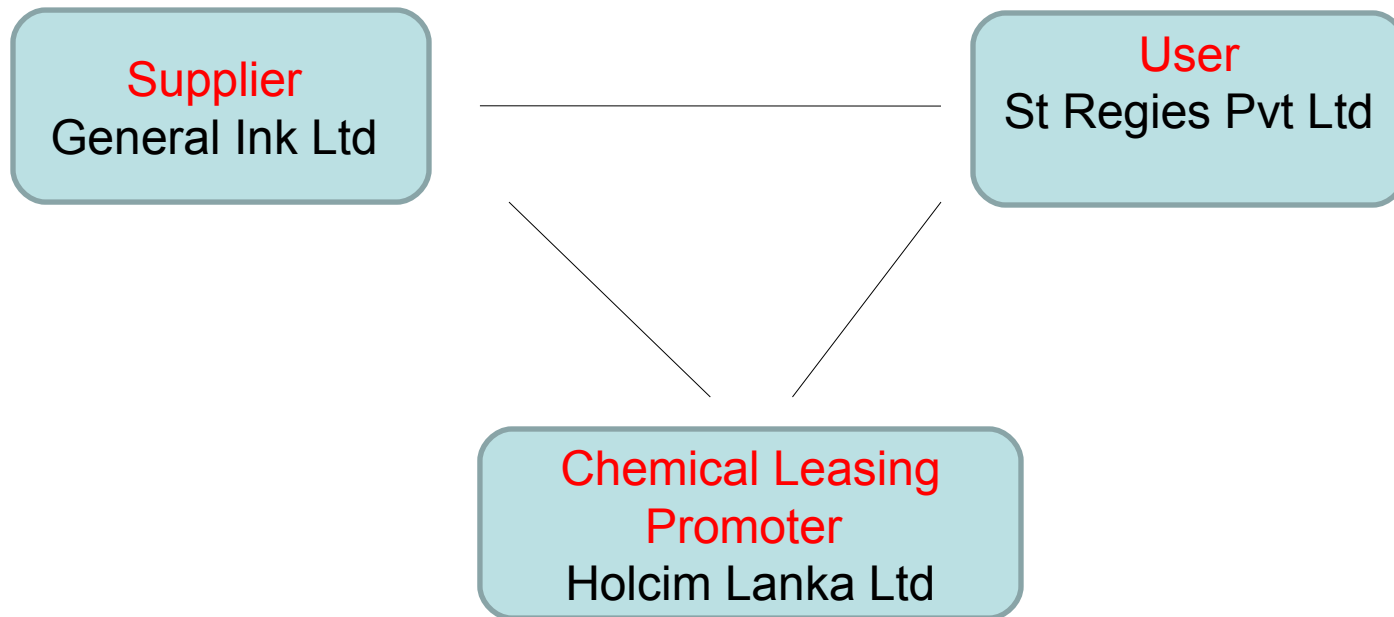
(Developing local expertise)

Variations observed in the paper quality used for printing

(Develop criteria for procurement of paper)

Cement Bag Printing Project

Working Model



Cement Bag Printing Project



Preliminary Calculation (Currently 2g/bag)

Ink usage per month = 8000kg
Cost for Ink = 8000 x 3 USD
= 24,000 USD/ month

When optimize 1.85g/bag

Ink usage per month = 7400kg
Cost for Ink = 7400 X 3
= 22,200 USD/month

Ink Saving = 7200kg /annum

Cost saving = 21,600 USD /annum

Total saving: 21,600 USD + Reduction of Raw material cost (7200kg)
+Production Cost (7200kg)

Print on Polythine bag

*Around 25 % ink waste due to Evaporation,
Handling and Remains in containers*

Under the chemical leasing

Target to reduce up to 10%

The potential saving 8000kg per annum

Cost savings = 32000 USD

Thank You