

PALM-BASED BLANKET AND ROLLER WASH FOR OFFSET PRINTERS

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JUNE 1999

19

PORIM TT No. 76

PORIM INFORMATION SERIES

ISSN 1511-7871

The lithographic printing process is very versatile and used to produce a wide range of printed matter. The bulk of this falls into two main categories (i) publication and (ii) packaging. In commercial practice, most lithographic printing is accomplished by an offset process, that is by transferring the image from the plate to an intermediate roller or blanket and then to the substrate being printed. The basic principle of offset lithography involves mechanical damping of a printing plate which consists of an oleophilic

image area and hydrophilic non-image area. The plate is then inked and brought into contact with a rubber *offset* blanket which under pressure, transfers the image to the required substrate (*Figure 1*).

In this offset printing, cleansing agents are required to clean the printing cylinders, rollers, blankets, plates and other parts of the printing machines and presses in order to remove ink residues, paper dust and other impurities from the rollers or blankets. Conventionally, the

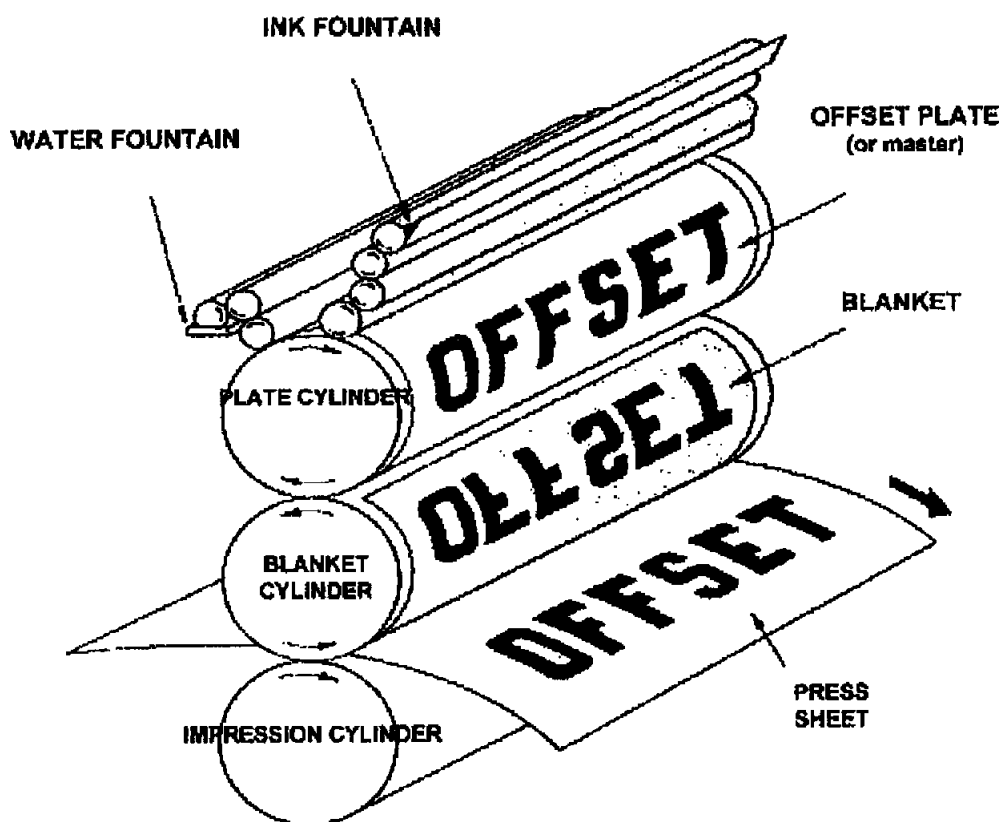


Figure 1. Basic schematic drawing of an offset press.

ISSN 1511-7871



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traditional solvents which are used for the cleansing purposes are derived from petroleum sources and they possess several drawbacks such as inconsistency in quality, their flammability, toxicity and limited biodegradability. They are also aromatic and halogenated compounds having strong odour, are costly and non-renewable. In view of these drawbacks a palm-based blanket and roller wash has been developed which possesses many advantages as compared with the traditional petroleum-based blanket and roller wash. The main advantages

are that it has high flash point, contains no aromatic compounds, has low odour / low VOC, high ink solvency, is biodegradable, renewable, and is versatile and cost effective. It is superior, particularly from the fire, health and environmental aspects and is considered to be an ideal choice for cleansing in the printing industry.

The technology has been transferred exclusively to TCI (M) Sdn Bhd under consultancy service from PORIM.

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