



## Streaking and Irregularities in Printed Areas

Offset printing is the most widely used process in the printing industry. Its principal characteristic is its ability to cleanly reproduce solid and halftone areas as well as fine tonal gradations. This positive feature of the process works against it when the printing process is disrupted. A printing fault caused by vibrations in the press unit becomes apparent through the formation of streaks running at right angles to the direction of printing. In a uniform printed area such streaks appear as brighter or darker areas than their surroundings. If such streaks are apparent in a printed image, the product is frequently unsaleable

The reason for the appearance of such streaks is well known. The press unit of a conventionally built sheet-fed offset press has three cylinders the plate cylinder, blanket cylinder and impression cylinder. Between four and six forme or damper rollers make contact with the plate cylinder and during printing all the cylinders or rollers of the press unit rotate against each other under pressure. In conventionally designed presses two of these cylinders have cylinder gaps at right angles to the direction of printing that are used to secure the plate or blanket. When the cylinder gaps rotate past each other there is a sudden change in load, since the pressure applied over the printing area is completely removed. The sudden removal of the load causes vibrations in the press units. The ink layer in the area of contact between the cylinders or rollers is only a few micrometres thick and is distorted by such vibrations.

The changes in thickness of the ink layer become visible in the form of corresponding streaks of differing intensity.