Metalock Engineering UK

**Press Information**

# METALOCK IN-SITU DRYING ROLL REGRINDING SAVES VALUABLE TIME FOR CURTIS FINE PAPERS

Metalock Engineering has enabled Curtis Fine Papers to put their machines back into production in quick-time and resume production of high quality uncoated printing, writing and security papers with minimum downtime. This has been achieved by regrinding paper drying rolls in-situ in less than 30 per cent of the time of a traditional strip down and regrind

Most drying rolls used in the paper industry are steam heated nodular cast iron hollow cylinders with a mirror finish. To ensure they remain clean during normal 24 hours a day, 7 days a week production, there is a doctor blade in contact with the roll. However, over a long period it is possible for debris to lodge between the blade and the roll. This can damage or score a roll which in turn cause corresponding marks on the running paper web, particularly on some of the smooth papers that Curtis produce. These imperfections lead to rejects and paper loss.

To remove these imperfections a damaged roll has to be lightly ground but as a paper machine may have as many 30 interlinked gear-driven rollers of varying sizes in two banks, a particular roll may be extremely difficult to remove without a complete machine strip-down. To strip down a machine, remove a roll, transport it off.site for regrind and then reassemble on its return could take 7 days.

Over recent years Metalock has reground seven drying rolls for Curtis Fine Papers. These have ranged from 1.22m diameter, 2.5m long to 1.32m diameter by 2.8m long. Using its own purpose- designed in-situ drying-roll grinding machine, the operation can be carried out enabling the mill to be ready to run in two days.

Metalock's purpose-designed tooling comprises a hollow mandrel that attaches at each end to the dryer's roll mountings. The grinding machine is mounted on this mandrel and as well as traversing to and fro along the mandrel, allowing the complete drying cylinder length to be covered, it can also be rotated through 360 degrees. During set-up the grinding head is positioned radially and locked to ensure that contact is only made with the cylinder to be reground. Once in position, the head is locked, the grinding belt tensioned and put in light contact with the cylinder. The drying machine is started up, to revolve the damaged cylinder and grinding proceeds until the surface is cleaned up along its full length with the final cut providing the mirror finish necessary to produce fine papers.

As drying cylinders are regarded by the insurers as pressure vessels, following a regrind they are re- assessed before the machine is put back into service.

*Metalock's special purpose grinding machine mounts on a mandrel extending the length of the cylinders. The head is positioned radially and locked to ensure that contact is only made with the cylinder to be reground.*

**Metalock Engineering UK**
Unit H 5
Pilgrims Walk
Prologis Park
Coventry
CV6 4QG
England
Phone: +44 (0) 24 7636 0084
Fax: +44 (0) 24 7636 0190
E-mail: sales@metalock.co.uk
www.metalock.co.uk

REG IN ENGLANDNO:469627
VAT. No. GB 646 9227 09