AMPT24 OFFSET TECHNOLOGY-II

UNIT-1 INTRODUCTION, OVERVIEW

1.1 General terminology-web offset, direct lithography, folder,sheeter,gusset wrinkle, rewinder, gear side, operator side, printing couple, printing unit,

1.2 Perfecting, non-perfecting, inline, horizontal presses, vertical presses-I-C presses.

1.3 Blanket to Blanket presses-Introduction, plate cylinder, Blanket cylinder, cylinder pressure & timing, Arithmetic oh packing.

1.4 Packaging gauge, bench micrometer. Inking system –Introduction, functions of Inking system, construction of Inking system, roller setting methods, washup machines.

UNIT-2 DAMPENING SYSTEMS

2.1 Introduction, pH and conductivity, fountain solution ingredients, parts of dampen system, conventional dampening system, dampening roller coverings, water stop for regulating water flow.

2.2 Types of dampening systems –levy flap dampening systems, continuous flow dampening systems, brush dampening using flick blades,

2.3 Clare brush dampening systems, gross brush dampening systems.

2.4 Alcohol in fountain solution. Continuous flow dampening systems- inker feed systems;

2.5 Dahlgreen dampening systems-Miehle- matic- roland- matic- Harris duotrol- Epic litho/ dampener plate feed systems. Combination continuous –flow systems.

2.6 Critical metering nip. Reverse slips nip-Smith dampening systems. Spray-bar dampening systems.

UNIT-3 ROLL STAND

3.1 Single- roll stand, multiple roll stand, dancer roller, Lug air shaft, continuous roll feeding devices Flying Pasters-splicing sequence on flying paster.

3.2 Zero speed splicer-splicing sequence on a zero speed paster.

3.3 Preparing a splice. Splice template, infeed operation.Dryers-introduction, function, setting of quick set ink, setting of heat set ink.

3.4 Types of dryers, removal of solvent-lader air from web, putting a controlled ripple in the web. Chill rolls-Introduction, function, types of roll system.

3.5 The evolution of chill roll design, chill roll plumbing, Average web temperature after chilling, side-to-side temperature variation after chilling.

3.6 Folders- Introduction, folding principles, parts of folder, combination folder, ribbon folder, double-former folder, and the mechanics oh folding process of jaw fold, chopper fold mechanisms.

3.7 Operation of collect cylinder, press folders, double former pre folder, flow folders, insert folders.

UNIT-4 INLINE FINISHING

4.1 Introduction, gluers, paster wheels, demonstrable pattern gluers, segmented gluers, envelope pattern gluers, backbone gluers.

4.2 Pattern perforating and numbering units sheeters, variable rotary cutters, auxillary equipments-

4.3 Remote control console ,plate scanners, scanning densitometer, close- loop system, web preconditioners, sheet cleaners ,ink agitators, water coded ink oscillators,

4.4 Fountain solution recirculation systems, fountain solution mixers ,refrigerating fountain solution ,automatic blanket washers, side lay sensors, web break defectors, liquid applicator systems, roller applicator systems, antistatic devices,

4.5 Imprinters,Perfectors,cut off controls, stroboscope, synchroscope, counters – Dentex laser counter, stobb counter.

4.6 Web control factors, measuring tension, setting tensions a press, paper behaviour a press. Image control- registration, register marks backup, colour register, relative print width, relative print lengths, and controlling fan out.

4.7 Web control-side lay, box tilt, cut off, no slip cut off, web to web and ribbon to ribbon. Make ready-make readyinfeed, makeready printing units,

4.8 Makeready dryer and chill rolls make ready folder, running makeready.Press room safety.

Reference Books:

1. Web offset press operating-David B.Crouse
2. Offset M/C II-C.S.Mishra
3. Manual for Lithography press operator- A.S .Porter.