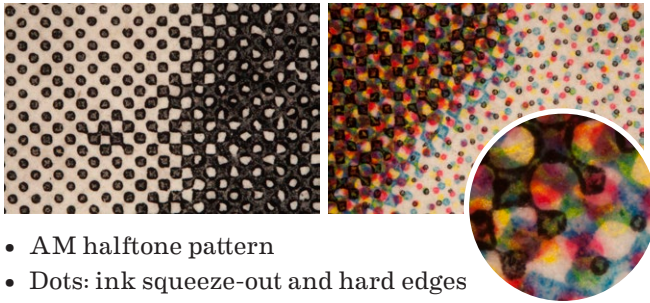


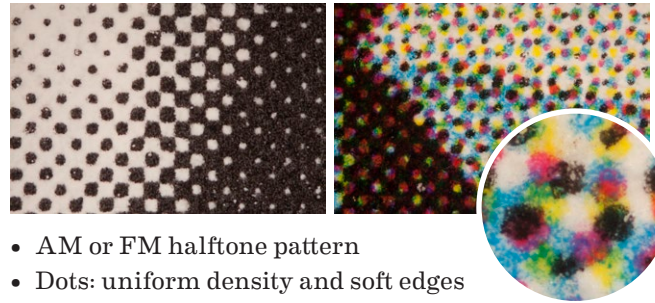
# Process ID Chart: **Photomechanical Prints**

## **LETTERPRESS HALFTONE** (1885–1970s)



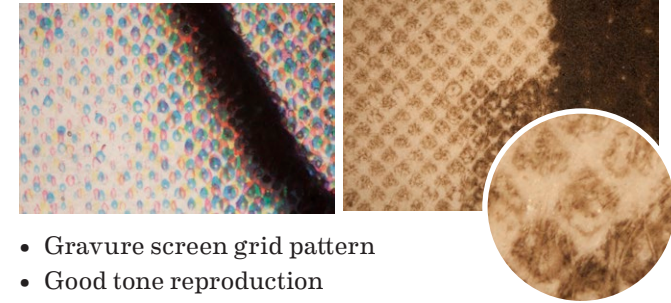
- AM halftone pattern
- Dots: ink squeeze-out and hard edges
- Lacks fine image detail

## **OFFSET LITHOGRAPHY** (1890s–Present)



- AM or FM halftone pattern
- Dots: uniform density and soft edges

## **ROTOGRAVURE** (1890s–Present)



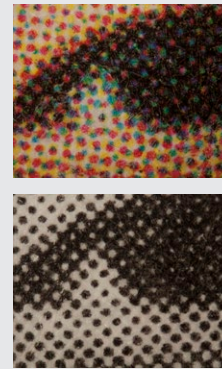
- Gravure screen grid pattern
- Good tone reproduction
- Very large print runs

## **Patterns**

Magnification is critical to accurate photomechanical process ID. Continuous tone photographic images must be divided into patterns in order to emulate the original silver image with printing ink. The AM halftone is the most common pattern, but FM halftone, reticulation, aquatint, and the gravure screen grid are also commonly found.

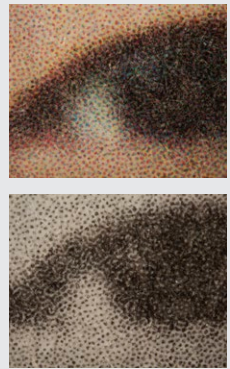
### **AM HALFTONE (Amplitude Modulation)**

In an AM halftone, the size (amplitude) of the individual dots in the halftone pattern are varied (modulated) in order to simulate the densities of the original photograph. The AM halftone is made by exposing a high contrast negative through a crossline screen. This mechanical method of breaking down an image into dots became popular with the commercialization of the technique in the 1880s.

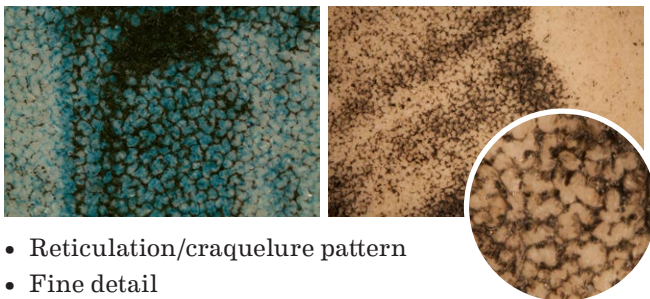


### **FM HALFTONE (Frequency Modulation)**

FM halftone changes the spatial frequency (the distance between the dots). The size of the dots may or may not change as well. Also referred to as a stochastic screen, FM halftone cannot be done mechanically, but rather requires a computer to decide where each dot should be placed. The higher image quality has led to its use since the 1990s in coffee table picture books and other applications where image quality is paramount.

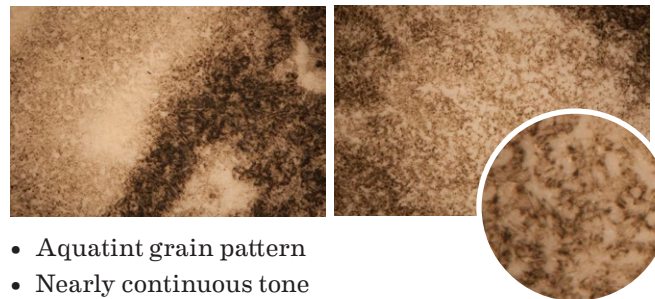


## **COLLOTYPE** (1860s–1930s)



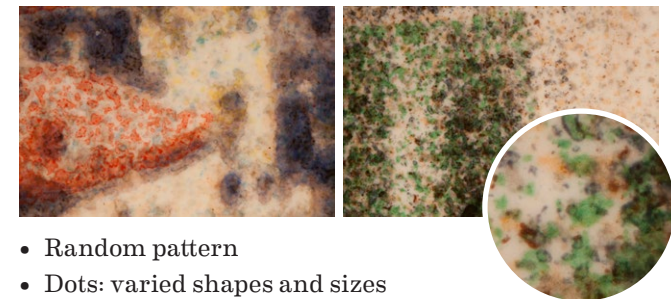
- Reticulation/craquelure pattern
- Fine detail
- Good tone reproduction

## **PHOTOGRAVURE** (1880–Present)



- Aquatint grain pattern
- Nearly continuous tone
- Good tone reproduction
- Small editions, hand pulled

## **PHOTOCHROM** (1888–1920s)



- Random pattern
- Dots: varied shapes and sizes
- Printed as late as 1970