

Kowotest Koworase X Eraser System

Erase Burn-In Artifacts

The Koworase X erases burn-in artifacts (i.e. x-ray exposures) from Computed Radiography (CR) phosphor plates with UV radiation. The Koworase X has been tested and proven effective for erasure per ASTM E 07 on Carestream, DURR NDT and GE phosphor imaging plates.



Erasure Process

1. UV light exposes IPs
2. White and Red (and Green) LEDs erase IP signal
3. Burn-In by high contrast X-Ray exposures are overlaid by a flat high dose UV-C exposure (1 minute)
4. Burn-In of X-Ray shadows are reduced
5. Burn-In will not return after several exposures with X-rays or UV-C

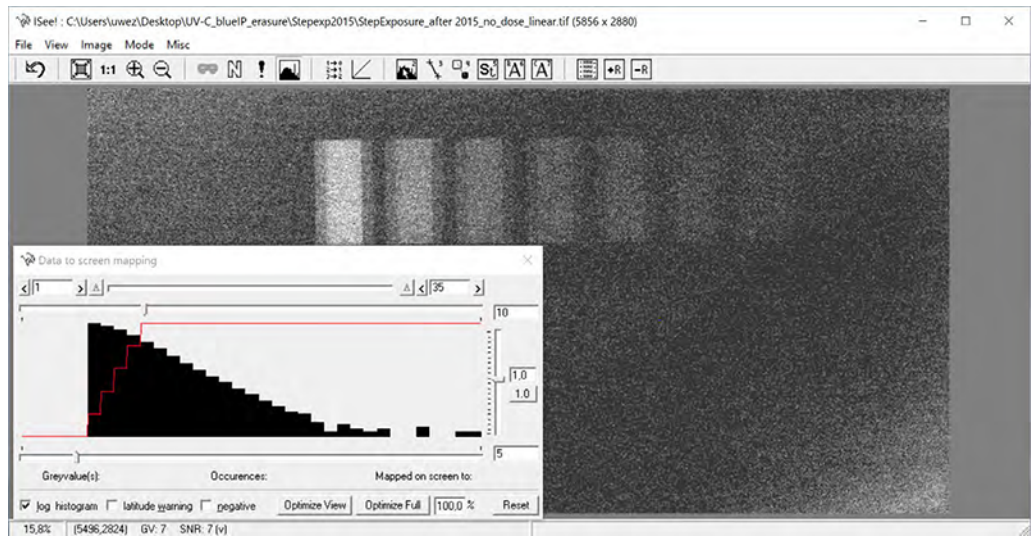
Dimensions

20" x 14.5" (500 x 370 mm)

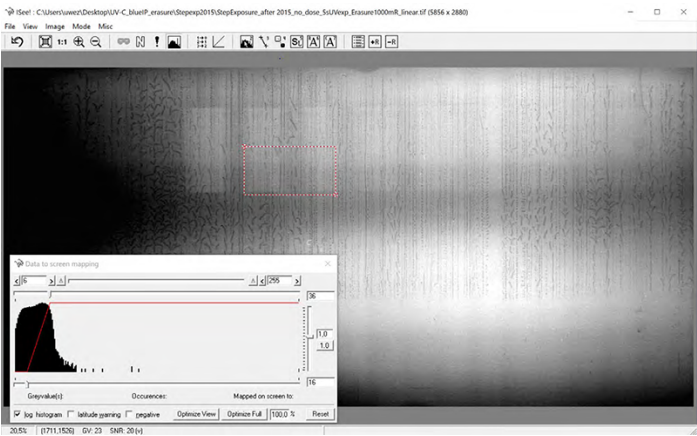
Case Study

Problem:

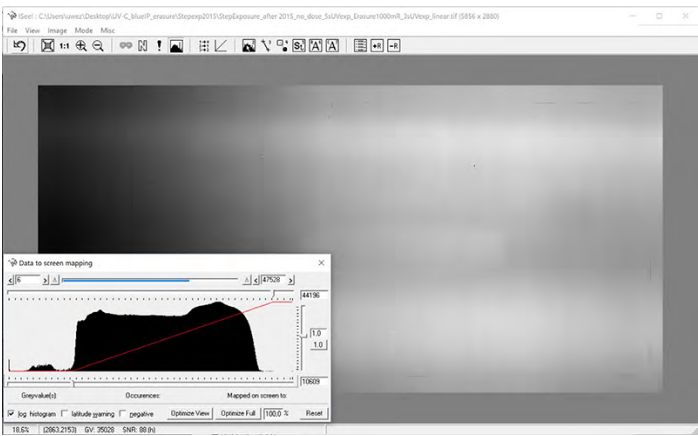
Burn-In of high dosage exposures results in background noise



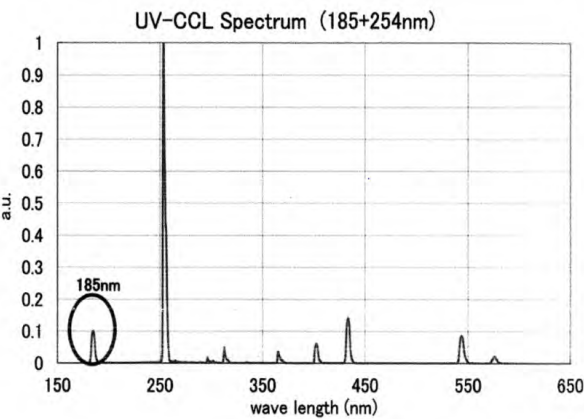
After incomplete erasure
(1000mR in CRxFlex) with white LEDs:



UV-C exposure after erasure:



First trials with 365nm (UV-A) were unsuccessful.
Second trial with UV-CCFL spectrum - 254nm (UV-C) worked surprisingly well.



Final Test Results

The final test results summarized using the example of an IPU film:

According to the standard, the gray value difference may be 1%. In the most unfavorable point (with the greatest penetration) 0.5% was measured, machining with one minute at level 1 and 5 minutes at level 2.

Another test showed that the properties of the film (sensitivity) were not influenced by the erasure process.