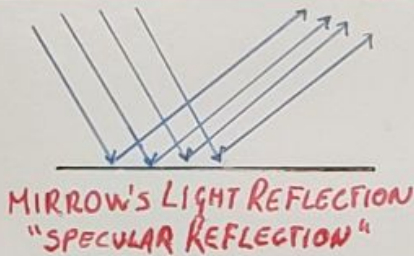




# OPTICAL HAZING, SHADOWING, SEALER MARKS



MICRO CRACKS  
PORES  
TRAPPED MINERALS  
CAUSES OF  
"CLOUDIER"  
LIGHT REFLECTION



POLISHED PORCELAIN LIGHT REFLECTION  
"DIFFUSE REFLECTION"

- 1) LIGHT REFLECTION OF A MIRROR IS DIFFERENT FROM A POLISHED PORCELAIN ONE
- 2) IN SOME PARTICULAR NATURAL LIGHT CONDITIONS, POLISHED PORCELAIN LIGHT REFLECTION IS CLOUDIER (EXP. DAWN, DUSK, LARGE WINDOW DOORS)
- 3) VALUE POLISHED PORCELAINS (MORE PORES, CRACKS, SEALERS) SHOW MORE OPTICAL HAZING
- 4) PREMIUM POLISHED PORCELAINS (LESS PORES, CRACKS, SEALERS) SHOW MINIMAL OPTICAL HAZING



Photo No. 2. Note the shadow line on the left becomes hazy about half way down. This localized loss of reflectivity is being called optical hazing in the tile industry.



Photo No. 5. Shows shadows that appear to be consistent with Sousa's static head polishing time modelling.

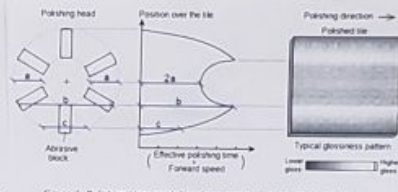


Figure 1. Polishing time modelling for a static head polishing machine.

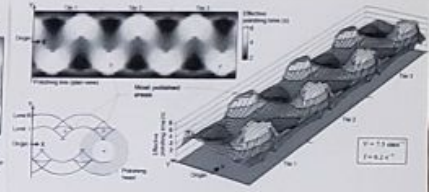


Figure 2. Polishing time modelling from a sliding head polishing machine.

- 5) STATIC POLISHING LINES PROCESS CAN ALSO CREATE LINEAR SHADOWING
- 6) SLIDING HEADS POLISHING LINES REDUCE SHADOWING VISIBILITY
- 7) VALUE POLISHED PORCELAINS HAVE MORE OPTICAL HAZING & SHADOWING
- 8) PREMIUM POLISHED PORCELAINS HAVE MINIMAL OPTICAL HAZING & NO SHADOWING

## SEALER MARKS IN VALUE POLISH. PORCELAINS



Photo No. 6. Shows typical factory applied sealer marks in the central shadow beside the reflected natural light.

DIGITAL POL. PORC. SHOW MORE WAVINESS THAN TECHNICAL POL. PORC., LIGHTER POLISHING PROCESS

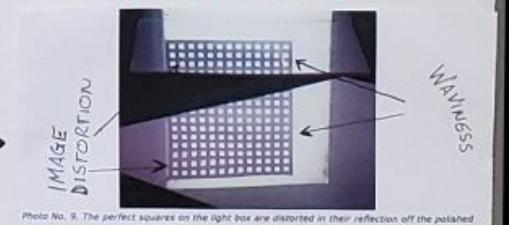


Photo No. 9. The perfect squares on the light box are distorted in their reflection off the polished tiles showing the surface of the tiles is not flat.