

Sn-3.0Ag-0.5Cu



**Significant practical problems in
production wave soldering?**

2. Stainless steel erosion

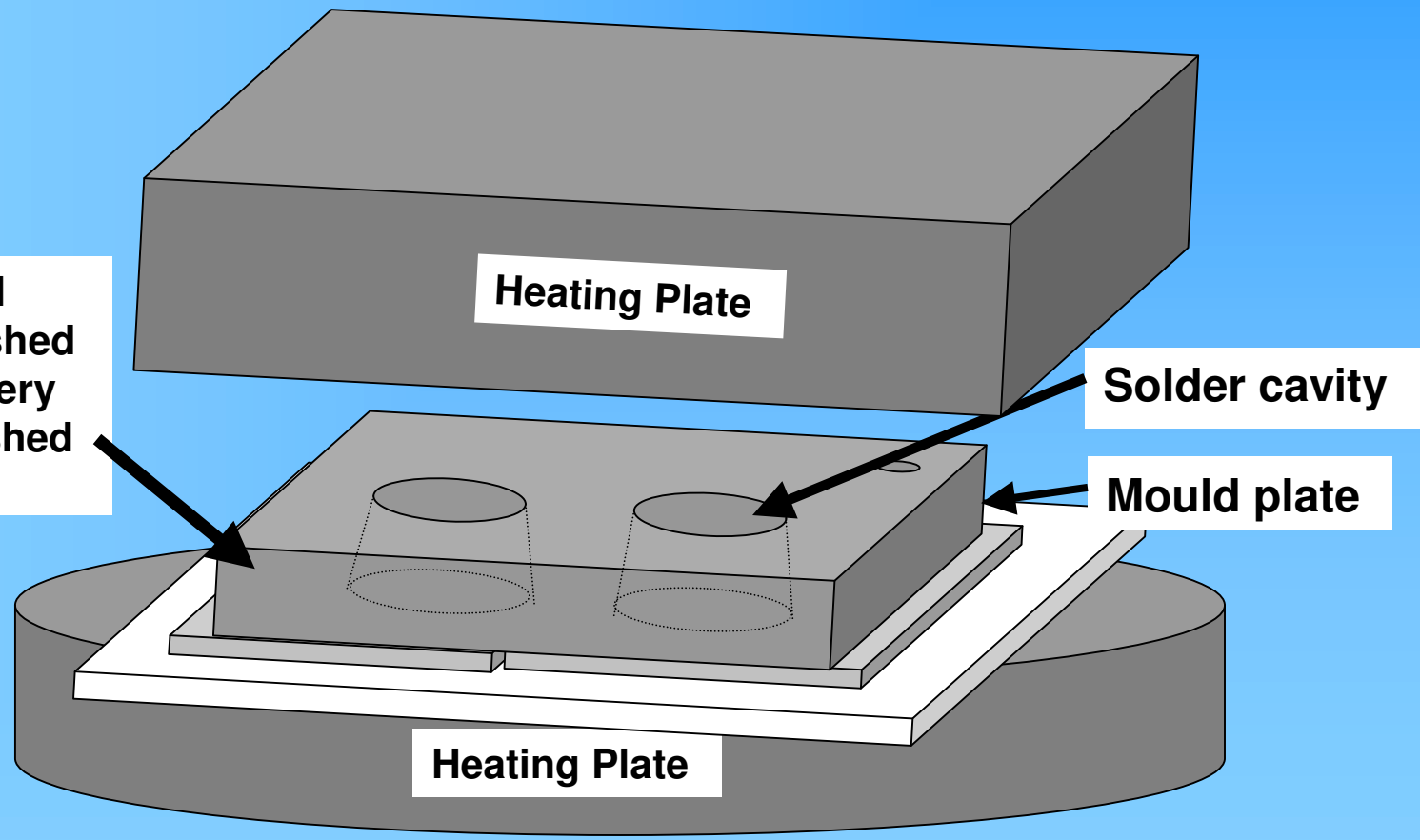
Erosion of Stainless Steel

Stainless Steel is protected by an oxide film and erosion cannot occur until that oxide film has been broken through and the solder brought into contact with the underlying metal.

Erosion of Stainless Steel

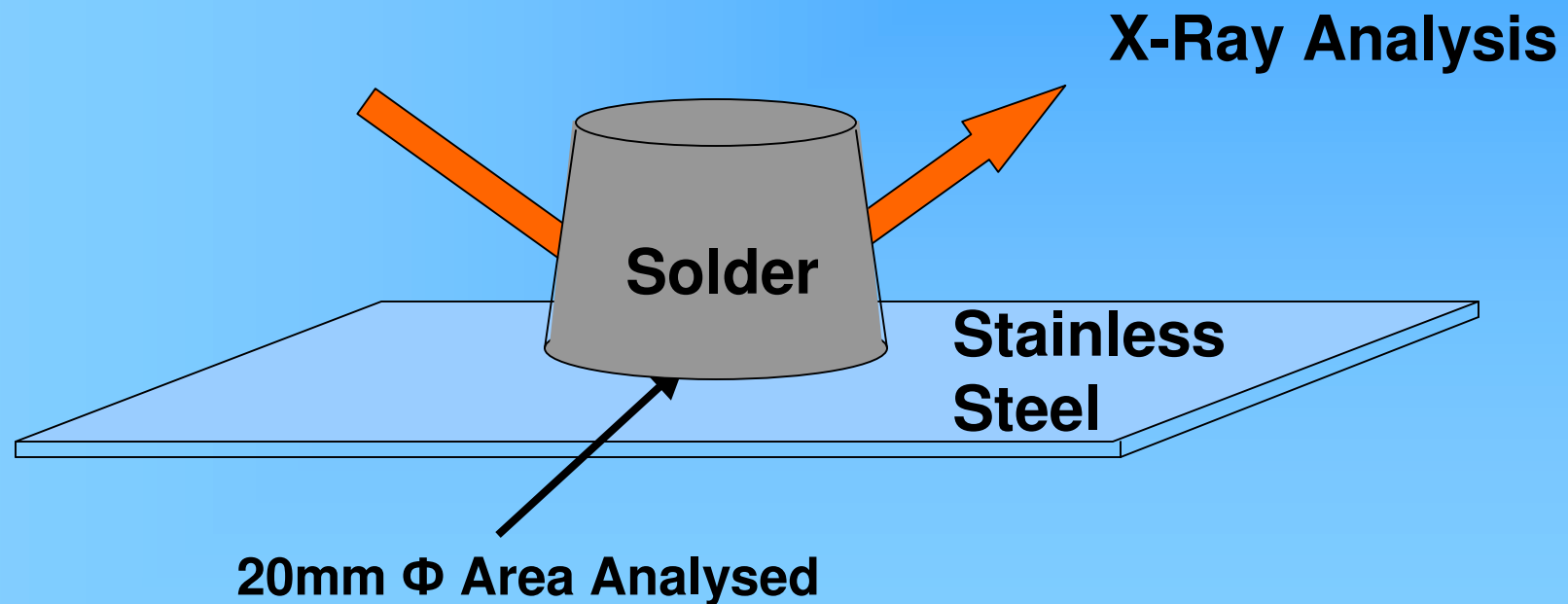
Study of Stainless Steel Wetting

Stainless Steel
Coupons Polished
with 1500# emery
paper and washed
in acetone

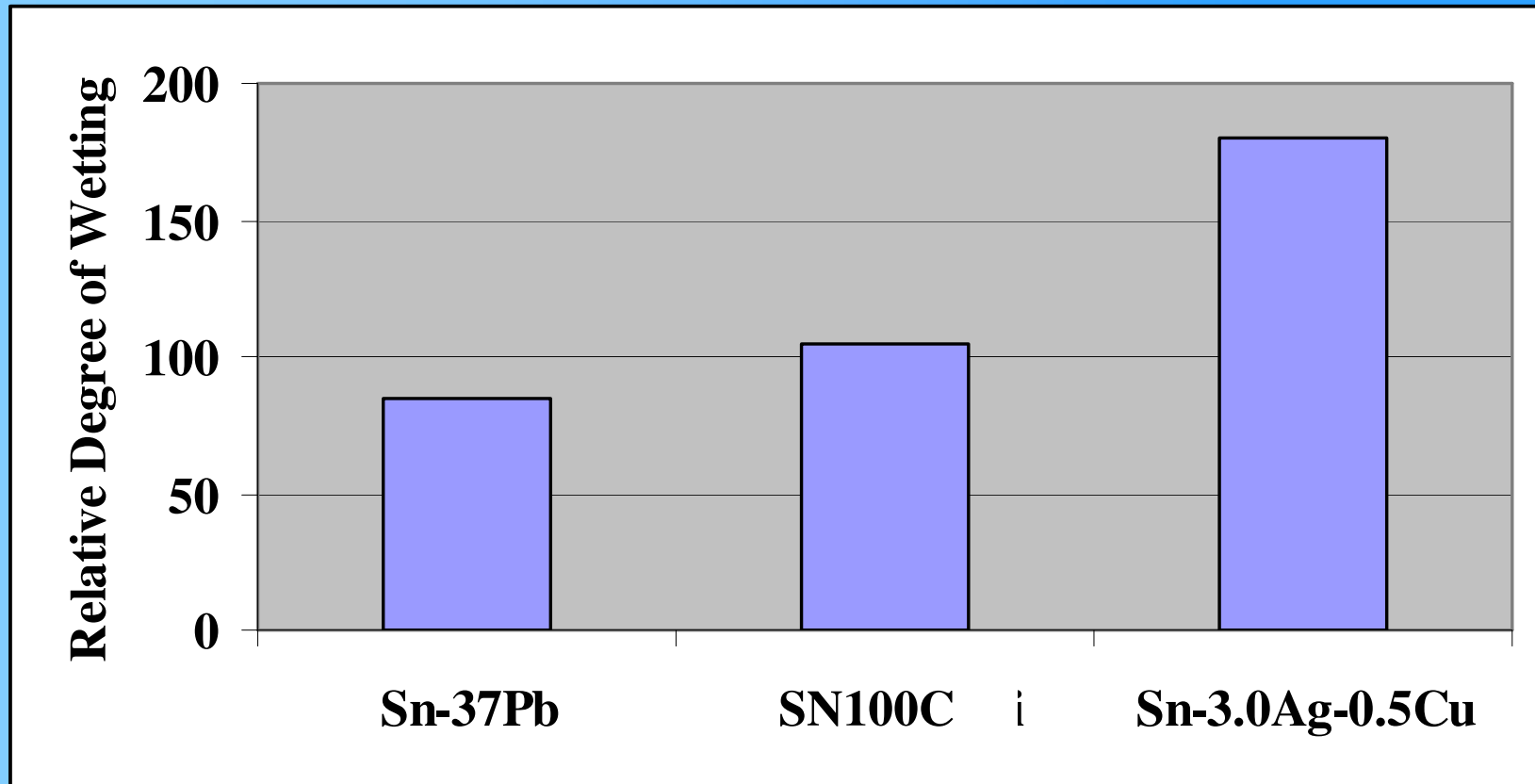


Erosion of Stainless Steel

Study of Stainless Steel Wetting



Relative aggressiveness of lead free solders towards type 304 stainless steel.



Increasing tendency to wet stainless steel

Sn-3.0Ag-0.5Cu+100ppm P

P added for dross control

A factor
~15

Sn-3.0Ag-0.5Cu

Sn-0.7Cu

SN100C

Sn-37Pb

Erosion of stainless steel component of wave solder machine by Sn-3.0Ag-0.5Cu alloy

