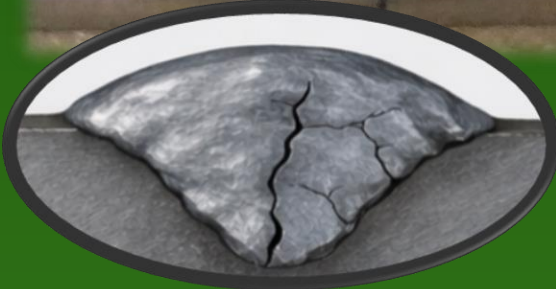
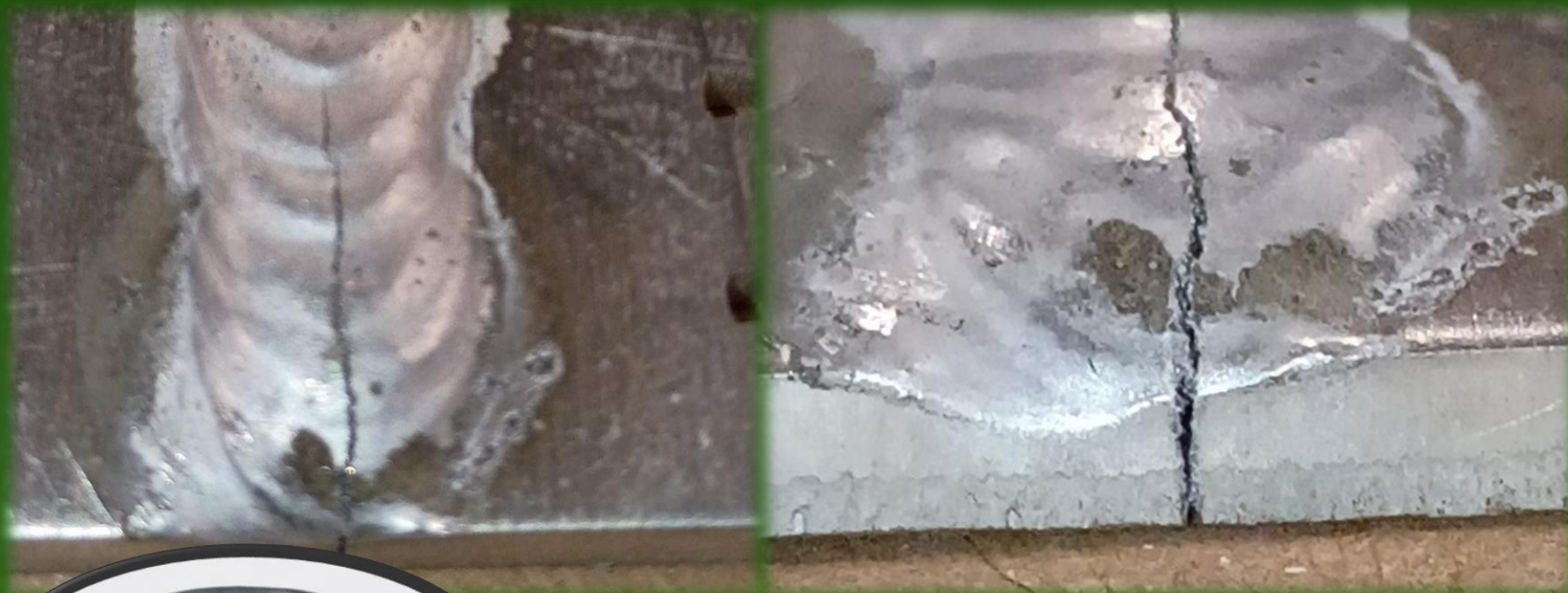


Common Weld Defects

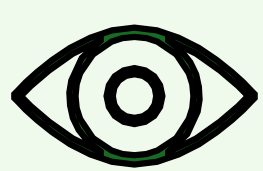
PROBLEM

Weld defects negatively impact weld quality, strength, and safety. Poor consistency, process variations, and increased rework reduce efficiency, while stress points, weak joints, and sudden failure compromise structural integrity. These issues can lead to injury, structural failure, and equipment damage, making defect control critical in welding operations.

CRACKING

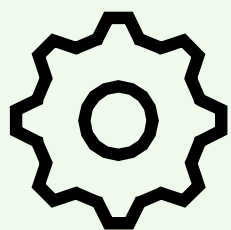


WHAT IT LOOKS LIKE:



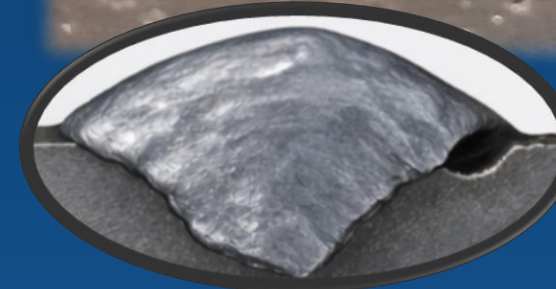
Thin, sharp cracks that can appear in the weld metal, HAZ, or base metal.

COMMON CAUSES:

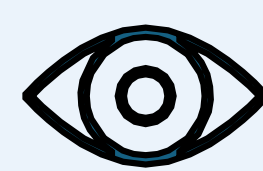


- High residual stresses from rapid cooling
- Hydrogen in the weld
- Poor weld joint fit

UNDERCUT

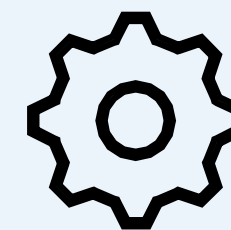


WHAT IT LOOKS LIKE:



A groove melted into the base metal along the weld toe.

COMMON CAUSES:

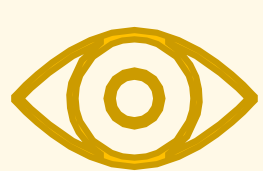


- Excessive welding current or voltage
- Improper technique
- Travel speed

POROSITY

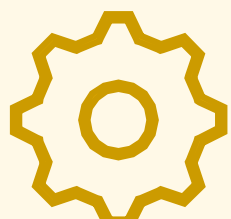


WHAT IT LOOKS LIKE:



Small round holes or voids trapped within the weld metal.

COMMON CAUSES:

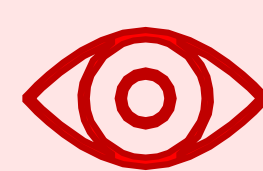


- Contamination (moisture, oil, rust)
- Inadequate or no shielding gas

LACK OF FUSION

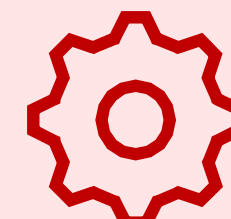


WHAT IT LOOKS LIKE:



Weld metal fails to bond with the base metal.

COMMON CAUSES:



- Insufficient heat input
- Slag / Dirty surface
- Improper technique

Weld defects like porosity, undercut, lack of fusion, and cracking can reduce the strength and integrity of welded joints. Understanding their causes and effects is essential for prevention. Applying proper techniques, parameter control, and inspection methods improves weld quality, enhances safety and reliability, and reduces rework.