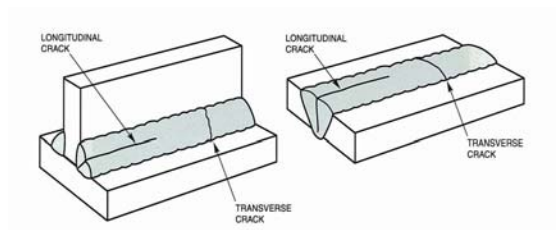
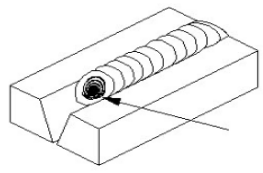
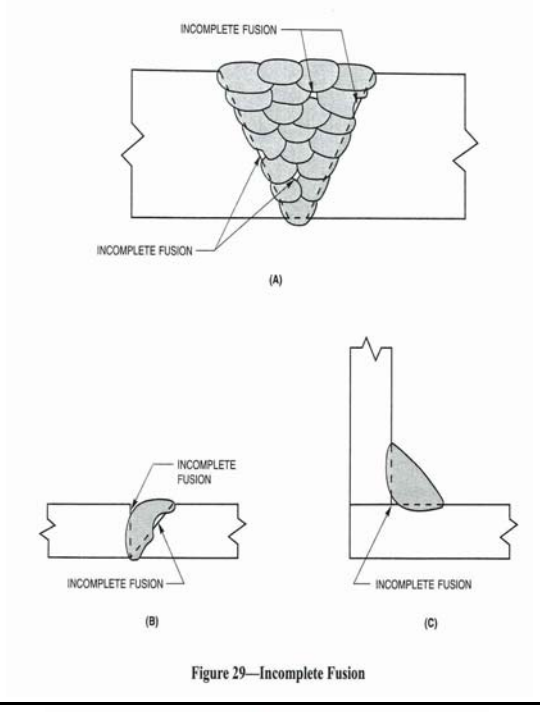
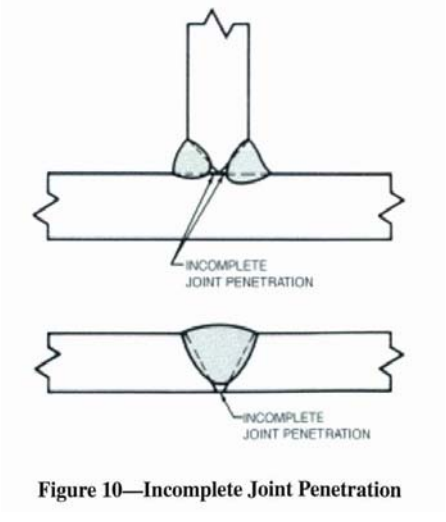
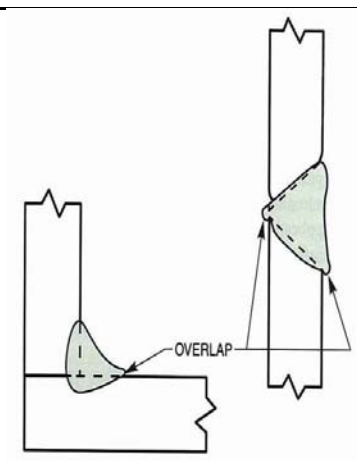
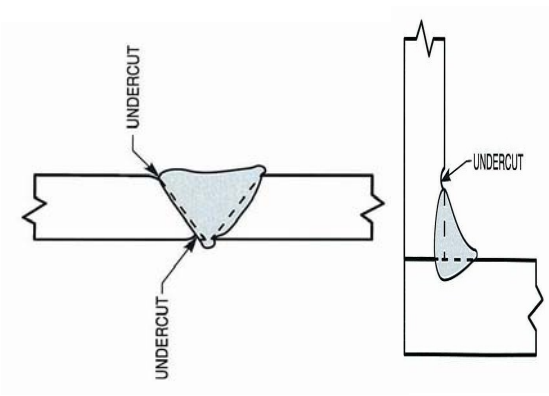
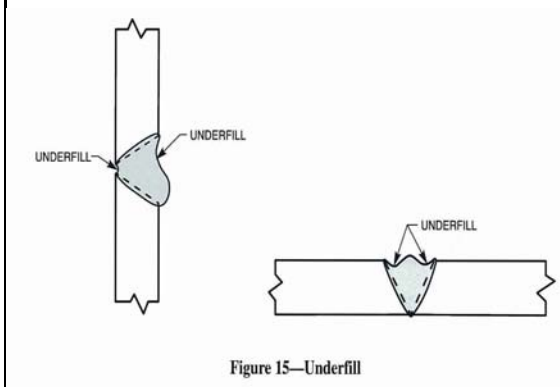
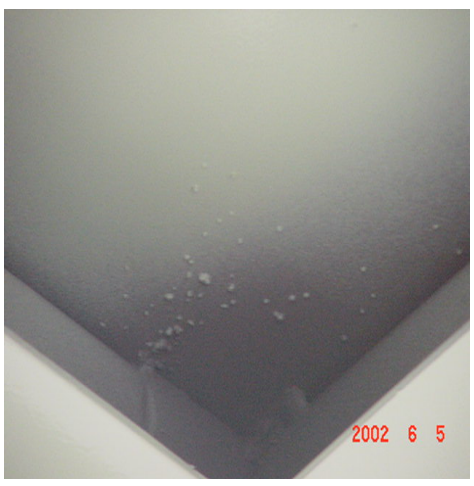
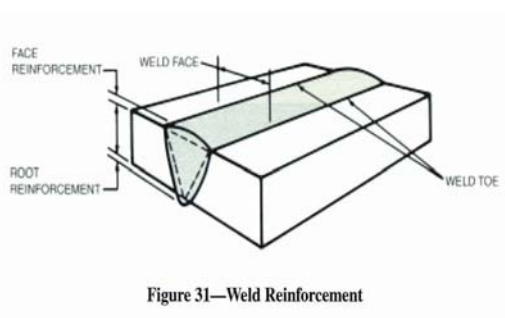
WELD INSPECTION CHECK LIST

Note: SQE must review the GE Acceptance Criteria for the part while filling out this Inspection Checklist

Defect Type	Defect Description/ Visual Appearance	Was this type of Defect Found during the Audit?	# of Defects Found or Total Defective Length of Weld in (in/mm)	Sketch/Photo	Typical Causes	NCO's
Cracks (Longitudinal or Transverse)	Cracks are defined as fracture-type discontinuies characterized by a sharp tip and high ratio of length and width displacement. They can occur in weld metal or heat affected zone (HAZ)			 Figure 21—Longitudinal vs. Transverse Cracks	Current Too High. Travel Speed too Low. Combination of high current and low travel speed	
Crater Cracks	Occur in the crater of the weld when welding in improperly terminated. Crater Cracks are found in the starts or stops of the weld metal				Improper Electrode manipulation. Improper parameter tapering at the weld stop	
Unconsumed Weld Wire	Weld Wire sticking out of the weld metal				poor workmanship	
Incomplete Fusion	Failure of the weld metal to fuse completely at some portion of the weld zone or adjacent base metal. This includes incomplete fusion of consumable inserts			 Figure 29—Incomplete Fusion	Improper weld joint preparation. Improper electrode manipulation. Current too low. Travel speed too high	
Incomplete Joint Penetration	A joint root condition in a groove weld in which weld metal does not extend through the joint thickness			 Figure 10—Incomplete Joint Penetration	Improper weld joint preparation. Improper electrode manipulation. Current too low. Voltage too high. Travel speed too high	
Irregular bead profile	Underfill, valleys, sharp notches at root face, undercuts and surface ripples			**See Figure #1 below**	Poor weld bead spacing. Poor wettability due to incorrect weld parameters, such as low voltage or high travel speed	

Overlap (Roll Over/Cold Roll)	The protrusion of weld metal beyond the weld toe or weld root			 Figure 17—Overlap	Travel speed too slow. Welding electrodes too large for the parameters or position	
Slag Inclusion	A discontinuity consisting of slag entrapped in weld metal or at the weld interface			 Figure 30—Slag Inclusions	Welds in joint too narrow a joint angle or initial joint gap. In multipass welds, improper bead spacing can result in a valley , between beads with too narrow a gap or side walls with too narrow a joint angle	
Surface Porosity	Gas bubbles frozen in the solidified weld metal			 Figure 1—Scattered Porosity	Typically caused by contamination on the base metal or filler metal. Too high a weld travel speed, loss of shielding, arc length too long	
Undercut	Is a groove melted into the base metal adjacent to the weld toe or weld root and left unfilled by weld metals				Current too high. Voltage too high. Travel speed too high. Combination of these variables	
Underfill	Is a condition in which the weld face or root surface of a groove weld extends below the adjacent surface of the base metal			 Figure 15—Underfill	Travel speed to high. Poor electrode manipulation. Current too low	
Spatter	Globular drops of weld metal that are deposited on the weld or base material during welding, which do not form part of the weld				Arc Blow. Incorrect parameters such as current too high, voltage to high or both.	
Excessive weld Reinforcement	In groove welds, weld reinforcement is weld metal in excess of the quantity required to fill a joint			 Figure 31—Weld Reinforcement	Welder applied more weld metal then what was required	

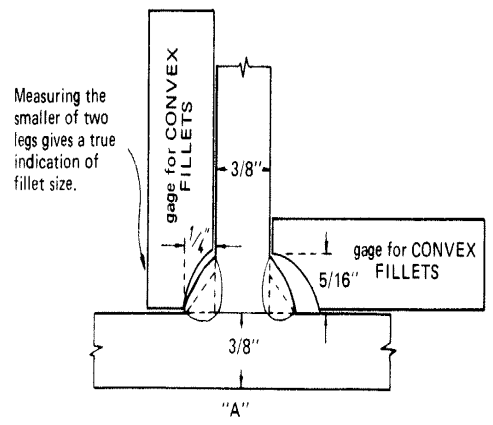
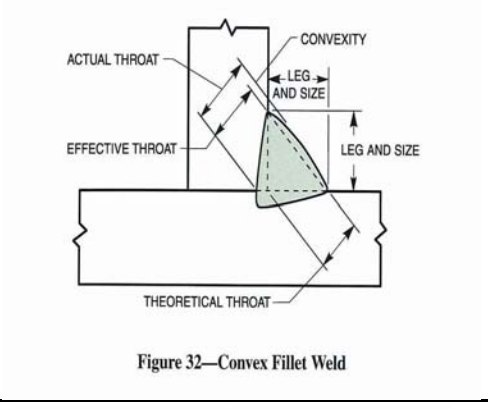
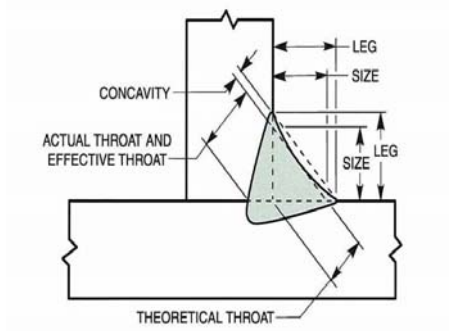
Fillet Weld Leg is Undersized	Weld leg is not the correct height or width , not in complaince with drawing, or weld legs are unequal				Welder did not apply enough weld metal per the requirement	
Fillet Welds too Convex	Weld is convex in nature has overfill or excessive weld appearance			 Figure 32—Convex Fillet Weld	Welder applied more weld metal then what was required	
Fillet Welds too Concave	Weld is concave in nature has sunken in or underfill weld appearance			 Figure 34—Concave Fillet Weld	Welder did not apply enough weld metal per the requirement	
Total Number of Defects			0	**SQE NAME: _____ DATE:_____**		
SUPPLIER NAME: _____				**GE PO #: _____ UNIT # _____**		**MLI #:_____**

Figure #1