



## Introduction to Flaws

*A set of miniature welds, macro sections and photo-radiographs to demonstrate the principles of flaw detection, flaw interpretation and basic sizing.*

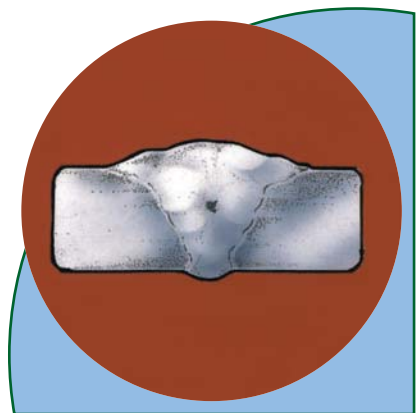
- **Introduction to weld flaws**
- **Demonstrate principles of flaw detection**
- **Demonstrate typical NDE flaw responses**
- **Demonstrate principles of flaw interpretation**
- **Basic flaw sizing**

### **Kit contents**

- 10 miniature flawed specimens
- Flaw location details
- Testing and acceptance criteria
- Photo-radiographs (where applicable) for each specimen
- 10 Macro sections
- Magnifying glass
- Certificate of conformance
- Kits are presented in a durable polypropylene case with high density black moulded inserts

Kits are available in UT, RT, MT, PT and VT methods plus a there is a demonstration kit which covers a little of each NDE method.

**For Level I training and qualification ie ASNT-TC-IA, PCN, EN473 and others**



# Kit types and contents



### Visual Kit

The 1 tee and 9 plate specimens contain a selection of commonly occurring visual welding flaws and irregularities



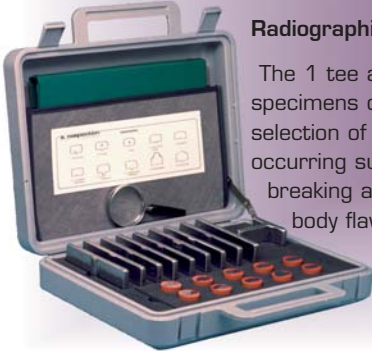
### Demonstration Kit

The 1 tee and 9 plate specimens are a variety of pieces carefully selected from each of the other kits in order to provide an overview of flaw types and their detection using various NDE techniques.



### Magnetic Particle & Penetrant Kit

The 3 tee and 7 plate specimens contain a selection of commonly occurring surface-breaking flaws.



### Radiographic Kit

The 1 tee and 9 plate specimens contain a selection of commonly occurring surface-breaking and weld-body flaws



### Ultrasonic Kit

The 1 tee and 9 plate specimens contain a selection of commonly occurring surface-breaking and weld-body flaws

## Each kit contains these flaws

				MT Kit	PT Kit	VT Kit	Demo Kit	UT Kit	RT Kit
Def 1		Toe Crack		MT	PT		DM	UT	
Def 1A		Toe Crack		MT	PT				
Def 1B		Toe Crack		MT	PT				
Def 1C		Toe Crack (Full Pen)						UT	
Def 2		Root Crack		MT	PT		DM	UT	RT
Def 3		Side Wall Crack							
Def 4		Centre Line Crack Surface		MT	PT				
Def 5		Centre Line Crack Weld Body						UT	
Def 6		Porosity Weld Body					DM	UT	RT
Def 6A		Porosity Surface Breaking		MT	PT	VT			
Def 7		Slag					DM	UT	RT
Def 8		Lack of Side Wall Fusion					DM	UT	
Def 9		Lack of Root Fusion		MT	PT				RT
Def 10		Root Concavity				VT	DM		RT
Def 11		Incomplete Root Penetration SV				VT		UT	RT
Def 12		Over Penetration				VT			RT
Def 13		Incomplete Root Penetration DV						UT	
Def 14		Lamination		MT	PT				
Def 14A		Lamination Weld Preparation		MT	PT				
Def 14B		Lamination						UT	
Def 15		Irregular Root Penetration				VT	DM		RT
Def 16		Weld Spatter				VT			RT
Def 17		Undercut				VT			
Def 18		Excess Cap				VT	DM		RT
Def 21		Crack Subsurface Weld Cap Removed		MT	PT		DM		
Def 22		Concave Cap				VT			
Def 23		Uneven Leg Lengths				VT	DM		

Macro Sections for UT, RT,VT,PT and MT to correspond with above list  
Presentation/Demonstration to be defects 1 to 14 from above list.