

NDE EDUCATIONAL KITS

TECHNICAL INFORMATION



NDE Educational Kits are available in the following testing disciplines : Ultrasonic, Radiographic, Visual, Magnetic Particule, Penetrant and Demonstration.

Nde educational kits are a powerful and convenient training aid providing valuable information about typical flaw types and how they can be recognized and interpreted from their NDE responses. The kits provide valuable hands on experience allowing students to compare flaw responses from the miniature plates to the macros and photoradiographs provided.

The use of kits can reduce training time yet greatly improve the understanding of flaws leading ultimately to more reliable flaw interpretation. The kits are designed for and have been successfully integrated into many of the internationally recognised NDE training schemes including PCN, ASNT, DGZfP, Nortest, EN473 and many more.

USE :

- Flaw Familiarization
- Flaw identification
- Basic Flaw Sizing

BENEFIT:

- Better understanding of flaws
- Improve reliability of flaw interpretation
- Reduce training time

Kits are now available in Carbon Steel, Stainless Steel or Aluminium.

EACH KIT CONTAINS :

- 1- A set of ten convenient to handle miniature carbon-steel specimens, each with a different of specific Type, size and location. All are coated with clear lacquer to prevent corrosion.
- 2- A macro section of each flaw coated with tough transparent adhesive film to prevent corrosion. Note: All macros are carbon steel.
- 3- A Photo-radiograph (when applicable) for each flaw Type. UT, MT, PT, VT and Demonstration Kits contain example photo-radiographs and RT Kits contain real radiographs taken from each plate.
Note: All original radiographs were taken from carbon steel plates.
- 4- Flaw location details i.e. flaw type and approximate size and location.
- 5- Testing and acceptance criteria.
- 6- Certificate of Conformance giving details of the test criteria used (for comparison purposes)
- 7- Magnifying glass.

The kits are presented in an attractive light grey durable polypropylene case with high density black moulded inserts.

External Dimensions: 42 x 37 x12 cm (18 '' x 14 ''x 5 ½ ''

Weight : 12 kg (26 lbs)

PRODUCT RANGE

MAGNETIC PARTICLE & PENETRANT KIT (MT/PT)

The 3 tee and 7 plate specimens contain a selection of commonly occurring surface breaking flaws. These provide an opportunity for understanding and recognising flaw types and compare with the macro sections and photo-radiographs provided. In addition basic techniques for detecting and interpretation of surface –breaking indications can be developed.

Material: Carbon Steel.

VISUAL KIT (VT)

The 1 tee and 9 plate specimens contain a selection of commonly occurring visual welding flaws and irregularities. These provide an opportunity for understanding and recognising flaw types and compare with the macro sections and photo-radiographs provided. In addition basic inspection and interpretation skills can be developed.

Material: Carbon Steel.

ULTRASONIC KIT(UT)

The 1 tee and 9 plate specimens contain a selection of commonly occurring surface-breaking and weld-body flaws. These provide an opportunity for understanding and recognising flaw types and interpreting their ultrasonic responses and to compare with the macro sections and photo-radiographs provided. In addition basic techniques for ultrasonic detection and sizing can be developed.

Material: Carbon Steel, stainless steel or aluminium.

Valise RADIOGRAPHIE (RT)

The 1 tee and 9 plate specimens contain a selection of commonly occurring surface-breaking and weld-body flaws. These provide an opportunity for understanding and recognising flaw types and their radiographic images and to compare with the macro sections and photo-radiographs provided. In addition basic techniques for radiographic detection and interpretation can be developed.

Material: Carbon Steel or aluminium.

DEMONSTRATION KIT (DM)

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. In addition the kits can be used to demonstrate the advantages of each NDE technique.

Material: Carbon Steel .

<p>NOTE : All photo- radiographs are reproductions from real radiographs, they are therefore only representative of the flaws contained within the miniature specimen.</p>

MINIATURE PLATES SUMMARY OF FLAW TYPES							
Défect							
1	Toe Crack	MT	PT		DM	UT	
1A	Toe Crack	MT	PT				
1B	Toe Crack	MT	PT				
1C	Toe Crack (Ful Pen)					UT	
2	Root Crack	MT	PT		DM	UT	RT
3	Side Wall crack						
4	Centre Line Crack Surface	MT	PT				
5	Central Line Crack Weld Body					UT	
6	Porosity Weld Body				DM	UT	RT
6A	Porosity Surface Breaking	MT	PT	VT			
7	Slag				DM	UT	RT
8	Lack of Side Wall Fusion				DM	UT	
9	Lack of Root Fusion	MT	PT				RT
10	Root Concavity			VT	DM		RT
11	Incomplete Root Penetration SV			VT		UT	RT
12	Over Penetration			VT			RT
13	Incomplete Root Penetration DV					UT	
14	Lamination	MT	PT				
14A	Lamination Weld Preparartion	MT	PT				
14B	Lamination					UT	
15	Irregular Root Penetration			VT	DM		RT
16	Wels Splatter			VT			RT
17	Undercut			VT			
18	Excess Cap			VT	DM		RT
21	Crack Subsurface Weld Cap Removed	MT	PT		DM		
22	Concave Cap			VT			
23	Uneven leg Lengths			VT	DM		
Macro sections for UT, RT, VT, PT and MT to correspond with abone list Presentation/ Demonstration to be defects 1 to 14 from above list (The right is reserved to vary specifications without prior notice							

MT= Magnetic particle
DM = Démonstration

PT= Penetrant
UT= Ultrasonic

VT=Visual
RT= Radiography