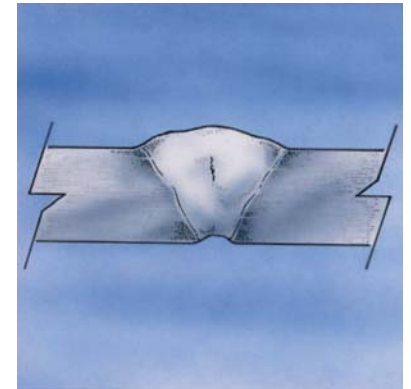




Advanced Flaw Evaluation

Standard Flawed Specimens are designed and manufactured to meet the requirements of all known internationally recognized Qualification Programs.

- **Advanced training and practice prior to qualifications on:**
 - Flaw detection
 - Flaw sizing
 - Flaw interpretation
- **Realistic size welds**
- **Common weld geometries**



For Level II training, practice and qualification ie ACCP, ASNT-TC-IA, PCN, EN473, API and others

Sonaspection flawed specimens are available either individually or in sets.

Individual specimens

Contain three different flaws and are:




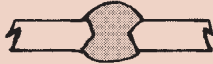
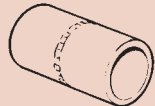
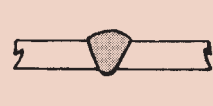
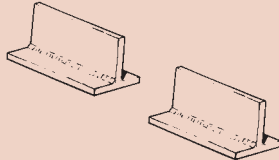
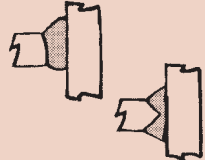

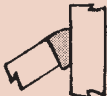
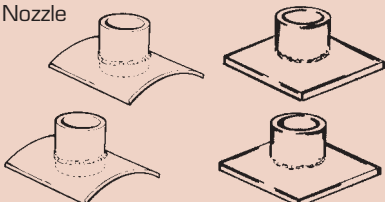



- All different
- Uniquely numbered
- Supplied with NDE reports
- Supplied with acceptance / rejection criteria

Recommended sets


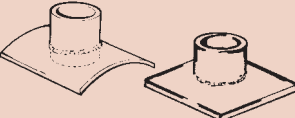
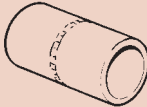


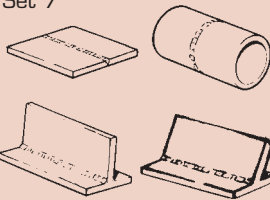
- Contain a selection of individual specimens as above, with an average of three flaws per specimen
- Contain at least one example of each flaw type listed in the flaw table
- Contain a minimum total weld length of 360cm (144")

Custom sets Are manufactured specifically for recognised qualification schemes - for example ASNT ACCP (see page 10) and API (see page 11)










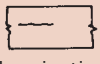


INDIVIDUAL SPECIMENS

Item No	Specimen Type	Weld Preparation Type	Approx Dimensions: cm (inch) (or nearest commercial size)			Approx Weight kg (lb)
			Diameter	Thickness	Size	
14	Plate 		N/A	0.6 (1/4)	30x30 (12x12)	3 (7)
15			N/A	1.2 (1/2)	30x30 (12x12)	6 (13)
16			N/A	2.5 (1)	30x40 (12x16)	20 (44)
17	Plate 		N/A	2 (3/4)	30x30 (12x12)	10 (22)
18			N/A	2.5 (1)	30x40 (12x16)	20 (44)
19			N/A	3 (1 3/4)	30x44 (12x17 1/4)	25 (55)
20	Pipe 		8 (3)	1.2 (1/2)	30 (12) long	5 (11)
21			15 (6)	1.2 (1/2)	30 (12) long	10 (22)
22			15 (6)	2.5 (1)	30 (12) long	20 (44)
23			20 (8)	1.2 (1/2)	30 (12) long	15 (33)
24			20 (8)	2.5 (1)	30 (12) long	30 (66)
25			30 (12)	1.2 (1/2)	30 (12) long	25 (55)
26			30 (12)	2.5 (1)	30 (12) long	50 (110)
27	Tee 		N/A	2 (3/4)	15x15x30 (6x6x12)	10 (22)
28			N/A	2.5 (1)	20x20x30 (8x8x12)	20 (44)
29			N/A	2.5 (1)	20x20x30 (8x8x12)	20 (44)
30			N/A	3 (1 1/4)	22x22x30 (9x9x12)	25 (55)
31	Y 		N/A	2.5 (1)	20x20x30 (6x6x12)	20 (44)
32			N/A	3 (1 1/4)	22x22x30 (9x9x12)	20 (55)
33	Nozzle 		Penetration Dia. x Thick		Carrier Plate Dimensions L x W x Thickness	35 (77)
34			10x1.2 (4x1/2)	50x50x2.5 (20x20x1)		
35			20x1.2 (8x1/2)	50x50x2.5 (20x20x1)	35 (77)	
36			20x1.2 (8x1/2)	50x50x2.5 (20x20x1)		50 (110)
37	Node 		Stub Dia. x Thick		Carrier Plate Dimensions L x W x Thickness	40 (88)
38			20x2 (8x3/4)	50x50x2.5 (20x20x1)		

RECOMMENDED SETS

Item No	Specimen Types	Contents	Approx Weight kg (lb)	Item No	Specimen Types	Contents	Approx Weight kg (lb)
39	Set 2 	3 ea. Item 15 1 ea. Item 16 3 ea. Item 17 2 ea. Item 18 3 ea. Item 19	183 (400)	42	Set 5 	2 ea. Item 33 2 ea. Item 34 2 ea. Item 35 2 ea. Item 36	255 (562)
40	Set 3 	2 ea. Item 20 1 ea. Item 21 1 ea. Item 22 1 ea. Item 23 1 ea. Item 24 1 ea. Item 25 1 ea. Item 26	265 (584)	43	Set 6 	2 ea. Item 37 2 ea. Item 38	270 (595)
41	Set 4 	4 ea. Item 27 2 ea. Item 28 2 ea. Item 29 2 ea. Item 30	220 (485)	44	Set 7 	1 ea. Item 16 1 ea. Item 19 1 ea. Item 24 1 ea. Item 25 1 ea. Item 26 1 ea. Item 27 1 ea. Item 30 1 ea. Item 31	265 (584)

FLAW TABLE

					
Toe crack	Root crack	Side-wall crack	Centre-line crack	Transverse crack	Incomplete penetration (SV)
					
Incomplete penetration (DV)	Porosity	Lack of root fusion	Lamination	Lack of side-wall fusion	Slag

STANDARD SPECIMEN SPECIFICATIONS

TYPES/RANGE

The range of flaws available depends on the type of testing being used. See appropriate Flaw Table for full details

FLAW SIZE RANGE

Flaw length from 1cm (3/8") to 4.5cm (3/4")
 Flaw through wall height 0.3cm (1/8") to 0.6cm (1/4")

TOLERANCES

Flaw length $\pm 0.3\text{cm}$ (1/8")
 Flaw height $\pm 0.2\text{cm}$ (5/64")
 Distance from datum $\pm 0.3\text{cm}$ (1/8")
 Depth from surface $\pm 0.2\text{cm}$ (5/64")

MATERIAL TYPES

All standard-size specimens are manufactured from carbon steel. For plate, tee and Y specimens material is to BS 4360 Grade 43A or equivalent and for pipe specimens is to ASTM, ANSI, API or similar
 (Nozzles and nodes are a combination of both)
 All pipe sizes are measured outside diameter

INSPECTION

All materials are subject to 100% visual and Non Destructive Examination to ensure that they are free from flaws which may interfere with product performance.

TOLERANCES

Weld length for plates, tees and Ys, all 30cm (12") $\pm 5\%$.
 Weld length for pipes, nozzles and nodes, all as per diameter
 Thickness $\pm 10\%$
 Diameters $\pm 10\%$

SURFACE FINISH

Parent material adjacent to weld will be a suitable finish for testing the weld profile, either 'as-welded' or ground flush

FINAL INSPECTION

All specimens are subject to in-house Visual and Non Destructive Examination. This work is carried out by experienced and approved technicians

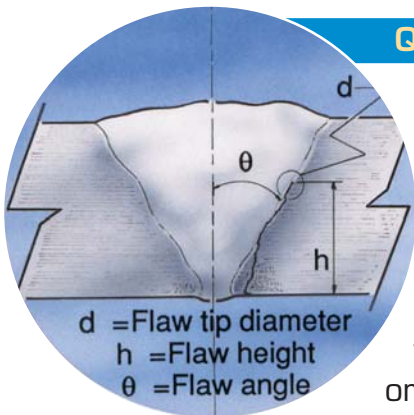
CORROSION PROTECTION

All specimens are coated with a clear corrosion-resistant material before leaving the factory

PACKING

All export orders are packed in wooden crates

Sonaspection reserves the right to alter specifications without notice



Quality Flaws Assured

The high quality of our flaws is achieved by a combination of first class workmanship a unique blend of welding and non-destructive testing skills plus a full understanding of the product.

Sonaspection adopt a policy of setting new standards and developing new techniques to improve quality and reliability in order to assure the quality of our flaws.

