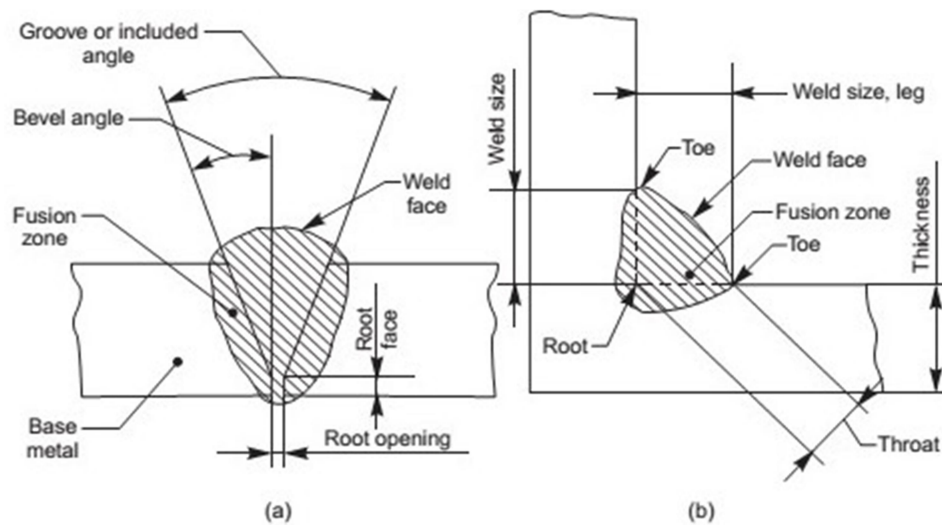


Welded joint

Welding is an effective method of making permanent joint between two or more metal part. When compared to riveting , welding is cheaper ,stronger and simpler to execute at site with considerable freedom in design.



Welding joint and symbols.

Butt-Joint can be welded with the square groove, V-groove, bevel groove, U-groove and J-groove.



















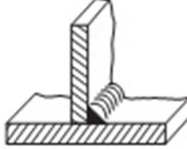



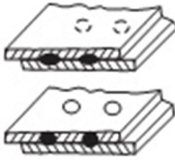

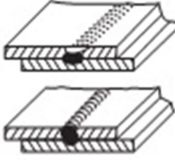

Corner-Joint can be welded with the square groove, V-groove, bevel groove, U-groove, J-groove and the Fillet.

Lap-Joint can be welded with the bevel groove, J-groove, fillet, slot, plug, spot, projection and seam.



Edge-Joint can be welded with the V-, U-, J-groove, Bevel, Square groove, fillet, slot, plug, spot, projection and seam.

Tee-Joint can be welded with the J-groove (both sides), bevel groove (one or both sides) and fillet (both sides).









Elementary Welding Symbols

No.	Designation	Illustration	Symbol
1.	Butt weld between plates with raised edges (the raised edges being melted down completely)		
2.	Square butt weld		
3.	Single-V butt weld		
4.	Single-bevel butt weld		
5.	Single-V butt weld with broad root face		
6.	Single-bevel butt weld with broad root face		
7.	Single-U butt weld (parallel or sloping sides)		
8.	Single-U butt weld		
9.	Backing run; back or backing weld		
10.	Fillet weld		
11.	Plug weld; plug or slot weld		
12.	Spot weld		
13.	Seam weld		

Supplementary Welding Symbols

<i>Shape of weld surface</i>	<i>Symbol</i>
(a) Flat (usually finished flush)	—
(b) Convex	
(c) Concave	

Combination of Elementary and Supplementary Symbols

<i>Designation</i>	<i>Illustration</i>	<i>Symbol</i>
Flat (flush) single-V butt weld		
Convex double-V butt weld		
Concave fillet weld		
Flat (flush) single-V butt weld with flat (flush) backing run		

Combination of elementary symbols (contd.)

No.	Designation symbol (For number refer to Table 11.1)	Illustration	Representation	Symbolization	
				either	or
1.	Square butt weld 2 welded from both sides 2-2				
2.	Single-V butt weld ∇ 3				
3.	and backing run ∩ 9 3-9				
4.	Double-V butt weld ∇ 3 (X weld) 3-3				
5.	Double bevel butt weld ∇ 4				
6.	(K weld) 4-4				
7.	Double-U butt weld ∪ 7 7-7				
8.	Fillet weld △ 10 and fillet weld				
9.	△ 10 10-10				