

D.C.W. STANDARDS

TAILS ARE USED ON D.C.W. VARANASI WELDING SYMBOLS FOR INDICATING TYPES OF WELDS ETC.

(SEE EXAMPLE AT BOTTOM OF THIS SHEET.)

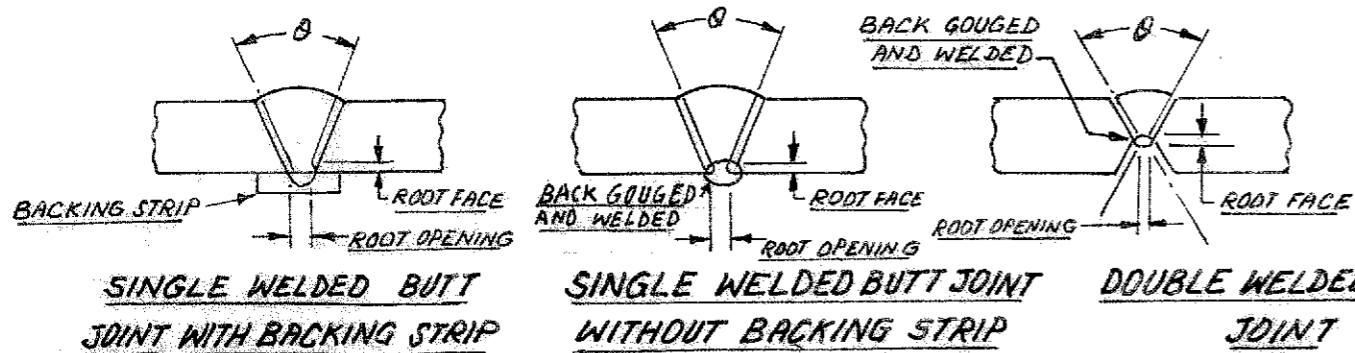
WHEN A FILLET WELDS IS AT ANY OTHER ANGLE THAN 45° (UNEQUAL LEG SIZE) INDICATE BY SHAPE OF SYMBOLS AND DIMENSION OF SHORTER LEG (SEE MIDDLE ILLUSTRATION AT BOTTOM OF THIS SHEET) SYMBOLS TO BE READ FROM BOTTOM AND RIGHT HAND OF DRG. AS WITH ORDINARY DIMENSIONS. DIMENSIONS FOR INTERMITTENT WELDS INDICATES THE LENGTH OF WELD AND THE PITCH MEASURED BETWEEN CENTERS OF WELD INCREMENTS ON ONE SIDE OF THE MEMBERS.

BOTH ENDS OF LENGTH GOVERNED BY AN INTERMITTENT WELD SYMBOL ARE ASSUMED TO HAVE WELD INCREMENTS. (NOT SPACERS)

DEFINITIONS OF TYPES INTO WHICH ALL WELDS SHALL BE CLASSIFIED.

TYPE-1 (SYMBOL T1) REGARDLESS OF THE WELDING PROCESS EMPLOYED THESE WELDS MUST EXHIBIT FULL PENETRATION AND ARE SUBJECT TO POSSIBLE X-RAY EXAMINATIONS TO THE ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII (OR EQUIVALENT STANDARD) DOUBLE WELDED BUTT JOINTS OR SINGLE WELDED BUTT JOINTS WITHOUT A NON-CONSUMABLE BACKING STRIP MUST BE BACK CHIPPED OR FLAME OR CARBON ARC GOUGED ON THE BACK SIDE TO CLEAN SOUND METAL PRIOR TO WELDING. (SEE DIAGRAM BELOW.)

ALTHOUGH SINGLE WELDED BUTT JOINTS UTILIZING A NON-CONSUMABLE PACKING STRIP WITH FILLER METAL ADDED FROM ONE SIDE CAN NOT BE BACK GOUGED. THEY ARE CONSIDERED EQUIVALENT TO A DOUBLE WELDED BUTT JOINT WHEN AND IF MEANS ARE PROVIDED FOR ACCOMPLISHING COMPLETE PENETRATION AND REINFORCEMENT ON BOTH SIDES OF THE JOINTS. (SEE DIAGRAM BELOW)



TYPE-2 (SYMBOL T2) :-

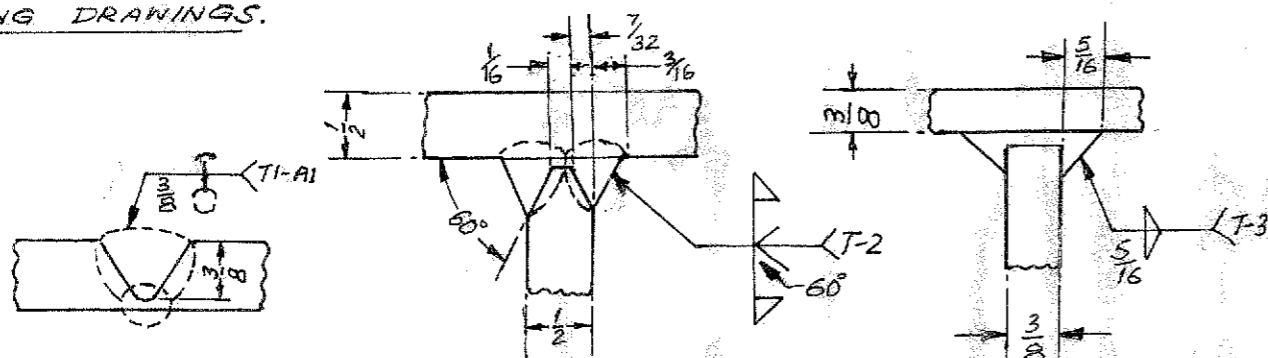
THIS TYPE IS INTENDED TO EXHIBIT FULL PENETRATION, BUT IS NOT SUBJECT TO REGULAR X-RAY EXAMINATION EXCEPT TO ESTABLISH SUITABILITY OF WELDING PROCEDURES AND QUALITY CONTROL NO CHIPPING OR FLAME GOUGING OF THE BACK SIDE REQUIRED WHEN THE EDGE PREPARATION ON PIECES AS FITTED CORRESPONDES TO DESIGN DRAWINGS, IN THIS CASE PENETRATION IS USUALLY OBTAINED ONLY BY EDGE PREPARATION AND THE FORCE OF THE ARC.

TYPE-3 (SYMBOL T3) :- WELDS OF THIS TYPE, SUCH AS ORDINARY DOUBLE FILLET 'T' WELDS ARE NOT REQUIRED BY DESIGN CONSIDERATION TO EXHIBIT PENETRATION OF OPPOSING WELDS INTO EACH OTHER.

ALL TYPES :-

SYMBOL AL IS TO BE USED ON DRAWING FOR JOINTS WHERE GOUGING AT ASSEMBLY IS USED INSTEAD OF PRELIMINARY MACHINING OR FLAME BEVELING THIS MAY BE USED IN ADDITION TO TYPE SYMBOLS.

AS A GUIDE TO INSPECTION AND SHOP PERSONNEL, ONE OF THE ABOVE SYMBOLS SHOULD BE INCORPORATED IN THE TAIL OF EVERY WELDING SYMBOL APPEARING ON WELDING DRAWINGS.



EXAMPLES OF USE OF ALCO PRODUCTS INC. TYPE SYMBOLS.

STANDARS ENGINEERING PRACTICE

(FUSION WELDING SYMBOL & WELD CLASSIFICATION)

**DIESEL COMPONENT WORKS
PATIALA**

INDEX	WELDING
NUMBER	02P4300
SHEET	A
APP.	26.11.96
CHD.	AGB
DRN.	25.7.95

TYPE OF WELD							WELD ALL AROUND	CONTOUR	
BEAD	FILLET	PLUG OR SLOT	GROOVE					FLUSH	CONVEX

ARROW SIDE	OTHER SIDE		BOTH SIDES	
WELD ALL ROUND 	LENGTH OF INCREMENT 	MINIMUM ROOT OPENING 	PITCH OF INCREMENT 	FINISH FLUSH
MIN. ROOT OPENING 	MIN. INCLUDED ANGLE 	CONVEX FINISH 	GROOVE DEPTHS (SIZES) 	
GROOVE DEPTH (SIZE) 	SEE DETAIL WHEN NOT STANDARD 	FINISH FLUSH 		
PITCH OF PLUGS ROOT DIA. (PLUG) 	BUILT UP SURFACE 	MINIMUM PAD THICKNESS 	SEE NOTES 	
EXTENT OF WELDS 	GROOVE WELDS WITH SPECIFIED ADDED ROOT PENETRATION 		SEE NOTE-5 	

NOTES :-

1. THE SIDE OF THE JOINT TO WHICH THE ARROW POINTS IS THE "ARROW SIDE" AND THE OPPOSITE SIDE OF THE JOINT IS THE "OTHER SIDE" WELDS ON THE ARROW SIDE OF THE JOINT ARE SHOWN BY PLACING THE WELD SYMBOL ON THE SIDE OF THE REFERENCE LINE TOWARD THE READERS.
2. ALL WELDS ARE CONTINUOUS AND OF STANDARD PROPORTIONS UNLESS OTHERWISE SHOWN.
3. WELDS ARE OF SAME SIZE FOR THE 'ARROW' AND 'OTHER' SIDES UNLESS OTHERWISE SHOWN.
4. EXCEPT WHERE 'ALL ROUND' SYMBOL IS USED. SYMBOLS APPLY BETWEEN ABRUPT CHANGES IN DIRECTION OF JOINT OR AS DIMENSIONED.
5. WHEN ONE MEMBER ONLY IS TO BE GROOVED ARROW POINTS TO THAT MEMBER.
6. TAIL OF ARROW IS USED FOR SPECIFICATION REFERENCE.
7. U & J GROOVES WILL BE ACCORDING TO ALCO STANDARD PRACTICE 1P4309. UNLESS DIMENSIONED OTHERWISE.

02P4300

RETRACED ON 26.11.96 VIDE DLW DT. 22.4.93