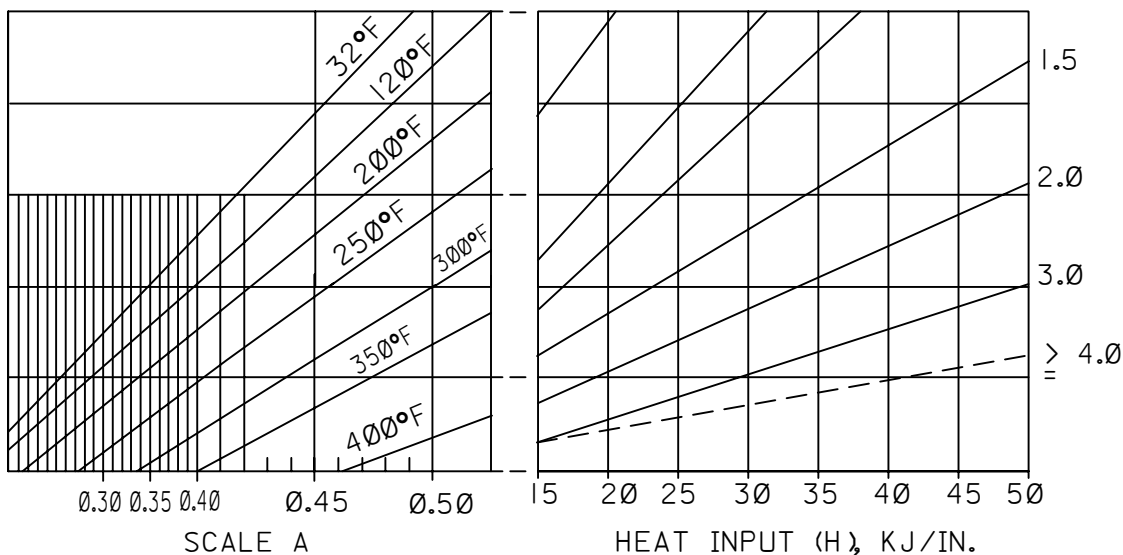


SAUDI ARABIAN OIL COMPANY

COMBINED THICKNESS (C.T.), INCHES

PREHEAT TEMPERATURE

0.5 0.75 1.0

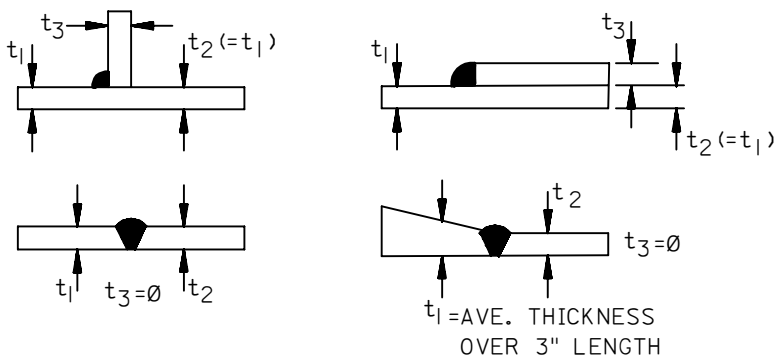


$$H(KJ/IN.) = \frac{E(VOLTS) \times I(AMPS) \times 60}{S(SPEED, IN./MIN) \times 1000}$$

$$C.E. = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$$

USE SCALE "A" FOR CELLULOSIC ELECTRODES
 USE SCALE "B" FOR SUBMERGED-ARC WELDING
 USE SCALE "C" FOR LOW HYDROGEN ELECTRODES
 USE SCALE "D" FOR M.I.G. & T.I.G. PROCESS

CARBON EQUIVALENT (C.E.)



NOTES:

1. CARBON EQUIVALENT VALUE FOR USE WHEN ACTUAL VALUES ARE NOT KNOWN OR SPECIFIED.
- PIPE: $CE=0.42$
- PLATE: USE MAXIMUM CHEMISTRY OF GRADE.
- IF UNKNOWN, USE $CE=0.50$.

DETERMINING THE COMBINED THICKNESS PARAMETER (C.T.)

FOR VARIOUS JOINT GEOMETRIES: IN ALL CASES, $C.T. = t + \frac{t}{2} + \frac{t}{2}$

APPD.			
CERT.			
CHKD.			
DESCRIPTION	REVISED SCALE BARS. GENERAL REVISION AND CONSOLIDATE SHTS. 1-4 TO SHT. 001. DELETED SHTS. 2-4.		
JO/EWO			
BY	ESSD	RCR	RL0
DATE	DEC'95	05-12-90	
NO.	04	03	
REVISIONS			
DRAWN BY _____			
DATE - - -			
CHKD. BY _____			
OPRG. DEPT.			
BY _____			
DATE - - -			
ENG. DEPT.			
BY _____			
DATE - - -			
APP'D. FOR CONSTR.			
BY _____			
DATE - - -			
CERTIFIED			
BY _____			
DATE - - -			
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED.			

DRAWING TITLE	PLANT NO.	INDEX	DRAWING NO.	SHT. NO.	REV. NO.
PREHEAT LEVELS FOR WELDING CARBON STEELS	990	W	AE-036451	001	04
STD. DWG.	JO/EWO-				

ENGLISH