



CERTIFICATE OF WELDING CONSUMABLES

(43,Goedong-ro,Nam-gu,Pohang-si,Gyeongsangbuk-do,KOREA / TEL:054-289-8230 / FAX:054-285-8543)

P . O No. :

Certificate No. : **CS-2404-0004**

CUSTOMER : CHOSUN VINA CO., LTD.

DATE : APR. 03, 2024

Brand Name	Classification	Diameter (mm)	Lot No.	Weight (kg)	Remark
TGC-90G	AWS ER90S-G/ AWS ER62S-G	2.4	DC13232	500	-

1. APPLIED CODE : AWS A5.28/A5.28M:2022 , EN 10204 3.1

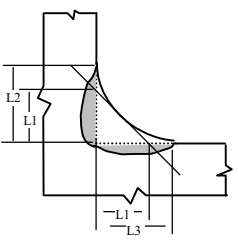
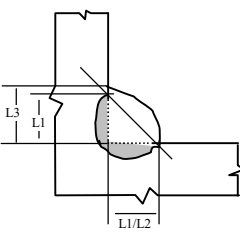
2. MECHANICAL PROPERTIES OF WELD METAL					3. RADIOGRAPHIC TEST	4. HEAT TREATMENT	
Item	Tension Test				Charpy Absorbed Energy (J) (at °C)	Fig. 4	-
	Y . S (MPa)	T . S (MPa)	Elon. (%)	R . A (%)			
Spec. (min.)	-	620	-	-	Not required		
Result	572	645	31.0	-	Blank	Accept.	

5. CHEMICAL COMPOSITION (Weld Metal Filler Metal) (unit : %)

Elements	C	Mn	Si	P	S	Ni*	Cr*	Mo*	
Spec. (max.)				Not Specified					
Result	0.08	1.29	0.50	0.003	0.002	0.92	0.01	0.28	

* the electrode must have a minimum of one or more of the following: 0.50% Nickel, 0.30% Chromium, or 0.20% Molybdenum

6. FILLET WELD TEST (unit : mm)

Welding Position	Item	Fillet Weld Size	Fillet Weld Leg		Difference Between Length of fillet legs	Convexity	Dimension of Fillet Weld	
		L1	L2	L3				
H	Spec.		Not required				 Concave fillet	 Convex fillet
	Result		Not required					
OH	Spec.		Not required					
	Result		Not required					
V	Spec.		Not required					
	Result		Not required					

7. THE OTHER TESTS

Item	Moisture Test		Hydrogen Test		Bend Test		Remark
	max.	(%)	max.	(ml/100g)	Crack : max.	mm	
Result	NR		NR		Result	NR	-

We hereby certify that the above materials are satisfactory in compliance with the requirement specified in the contract. Our quality system is certified in accordance with **ISO9001:2015** by DNV Business Assurance B.V., Netherlands

M. H. Jeong

Manager of Quality Assurance Department