



# WELDING CONSUMABLE CERTIFICATE

Certificate No.: 075277-5869645-001-R1\_\_\_\_\_

Report No.: 5869645-R1\_\_\_\_\_

Port of: KOBE, JAPAN\_\_\_\_\_

Date: 8 AUGUST 2023\_\_\_\_\_

## THIS IS TO CERTIFY

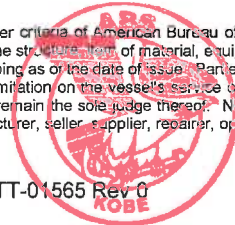
THAT THE UNDERSIGNED SURVEYOR TO THIS BUREAU DID, AT THE REQUEST OF KOBE STEEL, LTD. IBARAKI PLANT, JAPAN, ATTEND THEIR PLANT AT IBARAKI & FUJISAWA, JAPAN, ON THE 1ST DAY OF JUNE, 2023 AND ON SUBSEQUENT DATES, IN ORDER TO CARRY OUT A PLANT SURVEY OF FACILITIES AND ASSOCIATED QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND TO WITNESS AND REPORT ON THE ANNUAL APPROVAL TESTING OF WELDING CONSUMABLES; AND,

THAT THE FACILITY IS CONSIDERED CAPABLE OF PROVIDING AN ACCEPTABLE UNIFORM PRODUCT, AND THAT EACH WELDING CONSUMABLE LISTED BELOW WAS FOUND IN COMPLIANCE WITH THE SPECIFICATION INDICATED AND IS ELIGIBLE TO BE PLACED ON THIS BUREAU'S APPROVED WELDING CONSUMABLES LIST IN THE FLUX CORED ARC WELDING SECTION:

<u>TRADE NAME</u>	<u>SPECIFICATION</u>	<u>GRADE OR CLASS</u>	<u>SHIELDING GAS</u>	<u>POSITION</u>	<u>CURRENT/ POLARITY</u>	<u>SIZE</u>
DW-308 ** Manufacture's Guaranteed min. T.S. 550 MPa, El. 35%	AWS A5.22-2012	E308T0-1 **	C1	F, H, V	DCEP	1.2-1.6 mm
DW-308L ** Manufacture's Guaranteed min. T.S. 520 MPa, El. 35%, CVN29 Joule at minus 196 Cen. Deg., Chem.% C max 0.04, Mn 1.0-2.5, Si max 1.0, P max0.04, S max 0.03, Ni 9.0-11.0, Cr 18.0-21.0		**	C1	F, V	DCEP	1.2-1.6
DW-308LP ** Manufacture's Guaranteed min. T.S. 520 MPa, El. 35%	AWS A5.22-2012	E308LT1-1 **	C1	All	DCEP	1.2
DW-309L ** Manufacture's Guaranteed min. T.S. 520 MPa, El. 30%, Chem.% C max 0.04, Mn 1.0-2.5, Si max 1.0, P max0.04, S max 0.03, Ni 12.0-14.0, Cr 22.0-25.0		**	C1	F, V	DCEP	1.2-1.6
DW-309LP	AWS A5.22-2012	E309LT1-1	CO2	All	DCEP	1.2-1.6
DW-309LP	AWS A5.22-2012	E309LT1-4	M21	All	DCEP	1.2-1.6
DW-309MoL ** Manufacture's Guaranteed min. T.S. 520 MPa, El. 20%, Chem.% C max 0.04, Mn 1.0-2.5, Si max 1.0, P max0.04, S max 0.03, Ni 12.0-14.0, Cr 22.0-25.0, Mo 2.0-3.0		**	C1	F, V	DCEP	1.2-1.6
DW-316L ** Manufacture's Guaranteed min. T.S. 490 MPa, El. 30%, Chem.% C max 0.04, Mn 1.0-2.5, Si max 1.0, P max0.04, S max 0.03, Ni 11.0-14.0, Cr 17.0-20.0, Mo 2.0-3.0		**	C1	F, V	DCEP	1.2-1.6
DW-316LT ** Manufacture's Guaranteed min. T.S. 485 MPa, El. 30%	AWS A5.22-2012	E316LT1-1**	C1	F, V	DCEP	1.2

TO BE CONTINUED

Note: This Certificate evidences compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, form of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a fuller description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.



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TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING GAS	POSITION	CURRENT/ POLARITY	SIZE (mm)
DW-2594	AWS A5.22-2012	E2594T1-1 **	C1	F, H, Vup	DCEP	1.2 mm
** Manufacturer's Guaranteed min. Y.S. 550 MPa, T.S. 800 MPa, El. 15%, CVN min. 40 Joule at minus 20 Cen. Deg.						
DW-329AP	AWS A5.22-2012	E2209T1-1	C1	All	DCEP	1.2
DW-329AP	AWS A5.22-2012	E2209T1-4	M21	All	DCEP	1.2
DW-308LP-XR	AWS A5.22-2012	E308LT1-4	75%Ar-25% CO2	All	DCEP	1.2
DW-309LP-XR	AWS A5.22-2012	E309LT1-4	75%Ar-25% CO2	All	DCEP	1.2
DW-316LP-XR	AWS A5.22-2012	E316LT1-4	75%Ar-25% CO2	All	DCEP	1.2
DW-A80L	**	4YQ690SA H5**	M21	All, HF	DCEP	1.2
** Manufacturer's Guarantees min. properties: CVN 47 Joule at minus 60 Cen. Deg.						

  
  
 T. OKAMOTO, SURVEYOR

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