



WELDING CONSUMABLE CERTIFICATE

Certificate No.: 075277-4145569-001_____

Report No.: KO4145569_____

Port of: KOBE, JAPAN_____

Date: 2 JULY 2020_____

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 21ST DAY OF FEBRUARY, 2020 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 SHIELDED METAL 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>
Z-44	ABS	3	-	All	AC/DCEP	2.6-5.0 mm
LB-7018-1	ABS	4Y400 H10	-	All	DCEP	2.6-5.0
LB-52-18	ABS	3Y H10	-	All	AC/DCEP	2.6-4.0
	ABS	3Y H10	-	F	AC/DCEP	5.0-6.0
LB-52V	ABS	3Y H10	-	F,OH,V-Down	AC/DCEP	3.2-5.0
	ABS	3Y H10	-	F,V-Down	AC/DCEP	5.5
Z-52	ABS	3Y H10	-	All	AC/DCEP	3.2-5.0
	ABS	3Y H10	-	F	AC/DCEP	6.0
CM-A96	AWS A5.5-96	E8016-B2	-	-	-	2.6-6.0
CM-A106	AWS A5.5-96	E9016-B3	-	-	-	2.6-6.0
LB-62L	ABS	5YQ500 H5**	-	All	AC/DCEP	3.2-5.0
** Manufacture's Guarantee: For Hull Structural Thick Plate with min. Y.S. of 460 MPa (H47 Steel Grade)						
LB-62U	ABS	3YQ500 H10	-	F,OH,V-Up	AC/DCEP	2.6-4.0
	ABS	3YQ500 H10	-	H-Fillet	AC/DCEP	2.6-4.0


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, item 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.



Certificate No.: 075277-4145569-002
 Report No.: KO4145569
 Port of: KOBE, JAPAN
 Date: 2 JULY 2020

TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING		CURRENT/ POLARITY	SIZE (mm)
			GAS	POSITION		
LB-67L	ABS	5YQ500 H5	-	All	AC/DCEP	3.2-4.0
	ABS	5YQ500 H5	-	F	AC/DCEP	5.0
	ABS	5YQ500 H5	-	H-Fillet	AC/DCEP	3.2-5.0
LB-70L	ABS	4YQ620 H5	-	All	DCEP	2.6-4.0
	ABS	4YQ620 H5	-	F	DCEP	5.0
	ABS	4YQ620 H5	-	H-Fillet	DCEP	3.2-5.0
	ABS	4YQ620 H5	-	H	DCEP	3.2-4.0
LB-80L	ABS	5YQ690 H5	-	All	DCEP	2.6-5.0
	ABS	5YQ690 H5	-	H-Fillet	DCEP	3.2-4.0
NB-1SJ	ABS	5YQ420 H5	-	All, H-Fillet	AC/DCEP	3.2-5.0
CM-2CW	**	**	-	All**, H-Fillet	AC/DCEP	2.6-5.0
** Characteristics on Usage: Covered electrode for 2.25%Cr-Mo-W-Nb-V Heat Resistant Steel						
** Electrode Size: F & H: 2.6-5.0mm, V-Up & OH 2.6-4.0mm						
CM-9Cb	AWS A5.5-96	E9016-G**	-	All**, H-Fillet	AC/DCEP	2.6-5.0
** Characteristics on Usage: Covered electrode for 9%Cr-1%Mo-Nb-V Heat Resistant Steel						
** Electrode Size: F & H: 2.6-5.0mm, V-Up & OH 2.6-4.0mm						



 T. OKAMOTO, SURVEYOR

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, item 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.