



WELDING CONSUMABLE CERTIFICATE

Certificate No.: 848327-6456027-001 _____

Report No.: 6456027 _____

Port of: KOBE, JAPAN _____

Date: 19 SEPTEMBER 2024 _____

THIS IS TO CERTIFY

THAT THE UNDERSIGNED SURVEYOR TO THIS BUREAU DID, AT THE REQUEST OF KOBE STEEL, LTD., ATTEND THEIR PLANT AT FUKUCHIYAMA & FUJISAWA, JAPAN, ON THE 18TH DAY OF JUNE, 2024 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 GAS METAL ARC WELDING INCLUDING MIG/TIG WELDING SECTION:

TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING GAS	POSITION	CURRENT/POLARITY	SIZE
MG-50D	ABS	3YSA, 4Y400	C1	All, V-Down	DCEP	1.2 - 1.4 mm
MG-50D	ABS	3YSA, 4Y400	C1	Flat	DCEP	1.6 mm
MG-S50LT	ABS	3YSA**	M21	Flat, H, V-Up	DCEP	1.2 mm
**Manufacturer's guaranteed: Min. CVN 34 J at minus 60 Cen. Deg.						
MG-60	ABS	3YQ500	C1	Flat, H, V-Up, HF	DCEP	1.2 - 1.6 mm
MG-S1CM	ABS	MG	M21	All	DCEP	0.8 - 1.6 mm
**Manufacturer's guaranteed properties: Min. T.S. 550 MPa, Min. Y.S. 470 MPa, Min. El. 19 %, PWHT 620 +/-15 Cen. Deg., x1 Hr						
MG-1CM	AWS A5.28	ER80S-G	C1	All	DCEP	1.2 - 1.6 mm
MG-SM	AWS A5.28	ER80S-G**	M21	Flat	DCEP	1.0 - 1.6 mm
**Manufacturer's Guarantee: Min. Y.S 400 N/mm2, Min. T.S: 550 N/mm2, Min. El. 25 %, Min. CVN 34 J at 0 Cen. Deg., And Chemical Composition of Wire (%): C 0.15 max., Mn 0.60-1.60, Si 0.30-0.90, S 0.025 max., P 0.025 max., Mo 0.40-0.65, Cu 0.40 max., Heat Treatment SR 620 Cen. Deg. for 1 Hr suitable for welding 0.5 % Mo steel by spray transfer arc.						
MG-2CM	AWS A5.28	ER90S-G	C1	All	DCEP	1.2 - 1.6 mm
MG-S50	ABS	3YSA	M21	Flat, V-Up, H, OH	DCEP	1.2 - 1.6 mm

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.


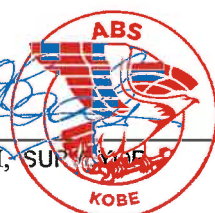
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Port of Kobe, Japan

Date: 19 September 2024

TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING GAS	POSITION	CURRENT/ POLARITY	SIZE
TG-S1CM	ABS	MG	Ar	All	DCEN	0.8 - 3.2 mm
**TIG welding for 1.25 Cr/0.50 Mo steel; Properties under stress relieved condition, Min. T.S. 520 N/mm ² , Min. Y.P. 315 N/mm ² and Min. El. 22 %						
TG-S2CM	ABS	MG	Ar	All	DCEN	0.8 - 3.2 mm
**TIG welding for 2.25 Cr/1.0 Mo steel; Properties under stress relieved condition, Min. T.S. 520 N/mm ² , Min. Y.P. 315 N/mm ² and Min. El. 18 %						
TG-SM	ABS	MG	Ar	All	DCEN	1.6 - 3.2 mm
**Manufacturer's Guarantee: Min. Y.S 400 N/mm ² , Min. T.S. 550 N/mm ² , Min. El. 25 %, Min. CVN 34 J at 0 Cen. Deg., And Chemical Composition of Wire (%): C 0.05-0.12, Mn 1.50 max., Si 0.80 max., S 0.025 max., P 0.025 max., Mo 0.40-0.65, Ni 0.20 max., Cu 0.40 max., Heat Treatment SR 620 Cen. Deg. for 1 Hr suitable for welding 0.5 % Mo steel by spray transfer arc.						
TG-S60A	ABS	5YQ460SA	Ar	All	DCEN	1.2 2.4 mm
NO13924	ABS	MG	Ar	Flat	DCEN	2.4 - 3.2 mm
**Manufacturer's Guarantee: Min. Y.S 370 N/mm ² , T.S. 550-650 N/mm ² , Min. El. 19 %, Min. Impact Test Avg. 25 J at 0 Cen. Deg., Heat Treatment SR (720 Cen. Deg. x 38 Hr)						
TG-S51T	ABS	3Y	Ar	Flat, V-Up, H, OH	DCEN	1.6 - 3.2 mm


OKADA, SHIGETOSHI, SUP


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