



WELDING CONSUMABLE CERTIFICATE

Certificate No.: TR1649035-X1

Port of: TRIESTE, ITALY

Date: 10 September 2009

THIS IS TO CERTIFY

THAT THE UNDERSIGNED SURVEYOR TO THIS BUREAU DID, AT THE REQUEST OF AIR LIQUIDE FRANCE (UNDER OERLIKON BRAND), ATTEND THE PLANT AT DUE CARRARE, PADUA, ITALY, ON THE 23TH DAY OF MARCH, 2009 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:

TRADE NAME	SPECIFICATION	GRADE OR CLASS	SHIELDING GAS	POSITION	CURRENT/ POLARITY	SIZE
CROMO E225V	AWS A5.5	E9015-G		ALL	DC	3.25-4-5
Manufacturer's recommended PWHT: 710°C x 8hrs. Manufacturer's minimum guaranteed: CVN 27J at -29°C						
ETC PH 35S (TENAX 35S)		4YH5		ALL	AC/DC	2.5-6.0
ETC PH 35S DRY		3YH5		ALL	AC/DC	2.5-5.0
When packed in Producer's vacuum packing system (VP) Manufacturer's guaranteed diffusible hydrogen content of max 3ml/100g at whole protection opening, max 5ml/100g 12hrs after protection opening. Manufacturer's minimum guaranteed: CVN 70 J at -50 °C						
TENAX 55H		3YH5		ALL	AC/DC	2.5-5.0
TENAX 56S		4YH5		ALL	AC/DC	2.5-5.0
TENAX 56ST		4YH5		ALL	DC	2.5-5.0
TENAX 76S		3YH5		ALL	AC/DC	2.5-5.0
Manufacturer's minimum guaranteed: CVN 60 J at -60 °C. Low alloy electrode (Ni 0.60 – 1.00)						
ETC PH 77		4YH5		ALL	AC/DC	2.5-5.0
TENAX 88S		3YH5		ALL	DC	2.5-5.0
EXTRA		3YH10		ALL	AC/DC	2.5-5.0
FINCITO		3YH10		ALL	AC/DC	2.5-3.25
TENACITO R		4YH5		ALL	DC	2.5-3.25
TENACITO 38R		3Y		ALL	DC	2.5-3.25
Intended to be used with higher strength steel 15Mn, Ni63						
TENACITO 65R	AWS A5.5	E9018-G		F,V,OH,H	DC	2.5-3.25
TENACITO 80	AWS A5.5	E11018-G		F,V,OH,H	AC/DC	2.5-3.25
TENACITO 80CL				ALL	DCEP	2.5-3.2
Manufacturer's guaranteed properties: 690Mpa min. Yield Strength, 770-940 Mpa Tensile Strength, 17% min. Elongation, CVN 55J at -50°C. Recommended by manufacturer for welding High Yield Strength Steel.						

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.

MOLYCORD Kb	AWS A5.5	E7018-A1 H4		F,V,OH,H	AC/DC	2.5-3.25
TENAX 118M	AWS A5.5	E11018-M H4		ALL	DCEP	2.5-5.0
SUPRANOX RS 308L	AWS A5.4	E308L-16		ALL	DCEP	2.5-5.0
SUPRANOX RS 316L	AWS A5.4	E308L-16 E316L-16		ALL	DCEP	2.5-5.0

BASINOX 308LT AWS A5.4 E308L-15* ALL " "
 " 316LT " E316L-15* " " "

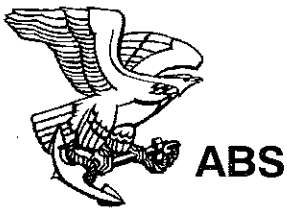
CVN - 136°C; 27J, U.E. 0,38mm minimum



M. Monteverde

M. MONTEVERDE, SURVEYOR

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WELDING CONSUMABLE CERTIFICATE

Certificate No.: VE1824448-X1

Port of: Venice, Italy

Date: 30 AUGUST 2010

THIS IS TO CERTIFY

THAT THE UNDERSIGNED SURVEYOR TO THIS BUREAU DID, AT THE REQUEST OF AIR LIQUIDE WELDING FRANCE (OERLIKON BRAND), ATTEND THE PLANT AT DUE CARRARE, PADUA, ITALY, ON THE 8TH DAY OF APRIL, 2010 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 INITIAL 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>
BASINOX 308 LT Manufacturer's minimum guaranteed at -196 C CVN 27J; Lateral Expansion 0.38 mm	AWS A5.4:	E308L-15		ALL	DC+	2.5-3.2-4 mm
BASINOX 316 LT Manufacturer's minimum guaranteed at -196 C CVN 27J; Lateral Expansion 0.38 mm	AWS A5.4:	E316L-15		ALL	DC+	2.5-3.2-4 mm


Renzo SCARPA, SURVEYOR



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