

CERTIFIED MATERIAL REPORT

CMR No. : OL3111352308

Date of Issue 2013/12/31

Customer	M.BINDT TRADING		
Trade Name	SM-70 eco	Size	0.8 mm * 15 kg
Lot No.	839559	Purchaser's Order No.	-

Applicable Specification	AWS A5.18 ER70S-6 EN ISO 14341-A 3Si1	* According to EN10204 3.1 : 2004
--------------------------	--	-----------------------------------

Welding Current	DCEP	Shielding Gas	ISO 14175 M21	Post Weld Heat Treatment (°C × hr.)	AS WELDED
-----------------	------	---------------	---------------	-------------------------------------	-----------

Mechanical Properties	Tensile Test			Impact Test (CVN - Joule)				
	YS (MPa)	TS (MPa)	EL (%)	Temp.(°C)	X1	X2	X3	Avg.
	427	539	28.0	-40	102	98	107	102
Spec.	≥400	≥482	≥22	-				

Chemical Composition (%)											
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	
(WIRE)	0.09	0.92	1.52	0.008	0.009	0.27	0.08	0.06	0.01	0.01	
Spec.	~0.15	~1.15	~1.85	≤0.025	≤0.035	≤0.50	≤0.15	≤0.15	≤0.15	≤0.03	

Others
* Q'ty : 4,320kg

We hereby certifies that the material covered by this report has been inspected in accordance with and been found to meet the applicable requirements of specification and customer's requirements.

ORIGINAL

Approved by

Sang Hee Lee

QA Manager Lee, S. H.



HYUNDAI WELDING CO., LTD.

Head Office 157-37, Samsung-dong, Gangnam-gu, Seoul, Republic of Korea
Pohang Plant 90-5, Jangheung-dong, Nam-gu, Pohang-si, Republic of Korea