

# CERTIFIED MATERIAL REPORT

CMR No. : 1406093500019

Date of Issue : 2014-06-09

Customer		M.BINDT TRADING							
Trade Name		S-309MoL16			Size		3.2mm*350mm		
Lot No.		25502			Purchaser's Order No.		-		
Applicable Specification		AWS A5.4 E309LMo-16 EN ISO 3581-A E 23 12 2 L R							
Welding Current	AC	Shielding Gas	-			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.
		-	656	34.4		-	-	-	-
Spec.		-	≥517	≥30	-				

**Chemical Composition (%)**

	C	Si	Mn	P	S	Cu	Ni	Cr	Mo		
(Weld Metal)	0.02	0.53	0.91	0.024	0.011	0.05	12.49	22.31	2.44		
Spec.	≤0.04	≤1.00	0.5 ~2.5	≤0.04	≤0.03	≤0.75	12.0 ~14.0	22.0 ~25.0	2.0 ~3.0		

**Others**

\* According to EN 10204-2004 : 3.1(Chemical), 2.2(Mechanical)

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.

Approved by

ORIGINAL

*Sang Hoo 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