

MATERIAL TEST & INSPECTION CERTIFICATE

SUNGKWANG BEND CO., LTD.(SKB)
172il, Songjeong-Dong, Gangseo-Ku, Buisan, Korea

CUSTOMER:
PROJECT NAME: N/A

According to
DIN 50049 3.1 / EN 10204 3.1 / ISO 10474 3.1

TEL : 82-051-3300-450
FAX : 82-051-3300-335
http://www.skbend.com

PURCHASE ORDER NO.	SKI210H	SPEC. FOR MATERIAL	ASTM/ASME A542/24WPS-S 07/10ED
PJT NO.	N/A	SPEC. FOR INSPECTION	ASME B16.9
STARTING MATERIAL	STEEL PLATE	SKB NO.	2010122117
CERTIFICATE NO.	COLP2013090376	DATE OF ISSUE	2013.02.26
VISUAL & DIMENSION		SATISFACTORY	

NO.	SEQUENCE/ITEM NO	DESCRIPTION	QTY	HEAT NO.	MFG ID NO.	PORCOBETA6 NO
14		CAP STD 22" BWSMLS Black	4	SU03676	SU03676	

HEAT NO.	SPEC.	C	SI	Mn	P	S	NI	Cr	MO	CU	V	NB	N	AL	B	Zr	Fe	Ti	C.E	TENSILE TEST					
																				Y.S 0.2% offset	T.S	EL	RA		
SU03676	MIN	0.10	0.29	1.05	0.058	0.038	0.40	0.40	0.15	0.40	0.08										KSI	36.0	60.0	30.0	
	MAX	0.25		1.35	0.012	0.002	Tr	0.02	Tr	0.01	0.003										KSI	95.0	97.1	99.0	
	L	0.14	0.24																						
	P																								
	L																								

IMPACT TEST	HEAT NO.	TEST TEMP.	SIZE OF SPECIMEN(mm)	ABSORBED ENERGY			LATERAL EXPANSION			PERCENT SHEAR			HARDNESS HB		HEAT TREATMENT	NORMALIZED: 900°C, 30Min, 74"
				STD. / VALUE	AVE.	STD. / VALUE	AVE.	STD. / VALUE	AVE.	MIN	HB					
	SU03676												197	FLATTENING TEST	N/A	
													147	BENDING TEST	N/A	
														HYDROSTATIC TEST	N/A	
														CORROSION TEST	N/A	
														GRAIN SIZE TEST	N/A	
														HIC TEST	N/A	

WE CERTIFY THIS MATERIAL HAS BEEN MANUFACTURED AND EXAMINED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION AND THE RESULTS OF ALL EXAMINATION ARE ACCEPTABLE.

REVIEWED BY : *[Signature]*
WITNESSED BY : *[Signature]*

QM DIV. SENIOR MANAGING DIRECTOR