

NIPPON STEEL & SUMITOMO METAL CORPORATION WAKAYAMA WORKS [KAINAN AREA] 260-100, FUNOO, KAINAN, JAPAN

INSPECTION CERTIFICATE

CERTIFICATE NO. : BYZF0971

PAGE: 1/3 DATE: 2015-01-16

CUSTOMER

ORDER NO.

:14-1223

SHIPPER

:SUMITOMO CORPORATION 057 KEN 9156/2 4P10S030701

COMMODITY

:COUPLING WITH VAM TOP HC :API 5CT GROUP2 GR. L80-TYPE 1

STANDARD

SPECIFICATION :TSP-2860RF, TSP-2861R2 MILL WORK NO.

:BYZF0971

0. D.:5-1/2inch W.T.:20.001b/ft QUANTITY:70pcs. MASS:682kg

MATERIAL WORK NO. : BCFF3040

HEAT TREATMENT: QUENCHED & TEMPERED

CHEMICAL COMPOSITION (%)

* 1	1 1	C	Si	Mn	P	S	Cu	Cr	Ni	A1				
	*1				*2	*2				*2				
SPEC. MIN.	R	_		=		-	-	8=	_	12				
MAX.	R	43	45	190	30	30	35	-	25	-				
HEAT NO.														
J4KA663	L	24	35	124	14	4	1	49	2	53				
	P	22	36	126	14	4	2	50	2	51				
	P	22	37	126	14	4	2	50	2	52				
*1 B.I VDIE % DB	ODUCT ANA	LVSTS	1.1	ADLE	ANAI V	212	P · PRO	DUCT	ANAL	PIZZ	*2: ¥1000	OTHER: X100	#	

*1 R:LADLE & PRODUCT ANALYSIS L:LADLE ANALYSIS P:PRODUCT ANALYSIS

TENSILE TEST

			YS *1 *2 *3		YS		TS *3		TS		EL	
		*1 *2			*3				*3		%	
SPEC. MIN.	HEAT-	L B	P	80.0	M	552	P	95.0	M	655	15	
MAX.	LOT NO.	L B	P	95.0	M	655	P	-	M	- #	_	
HEAT NO.												
J4KA663	001	L B	P	89.5	M	617	P	106.3	M	733	28	
	001	L B	P	89.8	M	619	P	106.5	M	734	27	

TYPE OF SPECIMEN: ROUND BAR O. 5in. (12.7mm) DIAMETER *1 SAMPLING DIRECTION L:LONGITUDINAL *2 SAMPLING POSITION B:BASE METAL *3 UNIT P:ksi M:MPa GAUGE LENGTH:2.0in. (50.8mm) KIND OF YS:0.5% EXTENSION UNDER LOAD

IMPACT TEST (+32.0°F +0.0°C 2mm V-Notch 10X10)

		*1	*2	*3	*4				AVG	*3	*4				AVG		
SPEC. MIN.	HEAT-	Т	В	Е	F	*5	20	r.	()—()	E	J	*5	27		-		
MAX.	LOT NO.	T	В	E	F		-		0.00	E	J		1000		-		
	-38.000-37.00-30					[1]	[2]	[3]		247A		[1]	[2]	[3]			
HEAT NO.																	
J4KA663 001	001	T	В	E	F	105	105	109	106	E	J	142	143	148	144		
		*1	*2	*3	*4				AVG								
SPEC. MIN.	HEAT-	T	В	S	%	*6	<u></u>		-								
MAX.	LOT NO.	T	В	S	%		-		::								
						[1]	[2]	[3]									
HEAT NO.													-				
J4KA663	001	T	В	S	%	89	92	89	90								

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

Akihiro Maekawa Reviewed and accepted this document on 23 Jan. 2015 Page 1 of 3

TAKASHI TAKANO

GLOBAL SCS

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[1] [2] [3]: SPECIMEN NO.

ABSORBED ENERGY *5:VALUE OF ONE PIECE AVG:AVERAGE VALUE OF ONE SET(3 PIECES)
SHEAR AREA *6:VALUE OF ONE PIECE AVG:AVERAGE VALUE OF ONE SET(3 PIECES)

*1 SAMPLING DIRECTION T:TRANSVERSE *2 SAMPLING POSITION B:BASE METAL *3 E:ABSORBED ENERGY S:SHEAR AREA

*4 UNIT F:ft·lbf J:Joule %:%

VISUAL & DIMENSIONS: ACCEPTABLE
MAGNETIC PARTICLE EXAMINATION
APPLICABLE STANDARD/REFERENCE STANDARD: API 5CT SEC. 9: ACCEPTABLE
I TIMS CONTRACT NO.
14-MSCT-11-085631

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J. Jakano

TAKASHI TAKANO

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HARDNESS TEST (HRC)

		1	2 *	:3	*4	*5									1000-0-0-0-0				*V. A.
SPEC. MIN.		В	С		-	-													-
MAX.		В			-	23.0													-
are and					AVG.			OUTER	WALL			MID	WALL			INNER	WALL		
	HEAT-			1		QUAD	1	IMPRESSION NO.			IN	MPRESS	ION NO.		IMPRESSION NO.				
HEAT NO.	LOT NO.					-RANT	(1)	(2)	(3)	AVG.	(1)	(2)	(3)	AVG.	(1)	(2)	(3)	AVG.	
J4KA663	001	В	C	T	18. 9	A	18.3	18. 1	18.6	18.3	19.4	19. 4	19.3	19. 4	18.7	19.0	19.1	18.9	1. 1
	001	В	2	В	18.3	Α	18.8	18.3	18.8	18.6	18.9	18.9	18.4	18.7	17.4	17.4	17.4	17.4	1.3
			*AL	L	18.6														

*1 SAMPLING POSITION B:BASE METAL *2 LOCATION C:CROSS SECTION *3 SAMPLING LOCATION T:TOP B:BOTTOM *4 EACH *5 AVERAGE *V. A. : VARIATION AVERAGE MAX. -MIN. * ALL: ALL AVG.

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