

10.4.2018

428941

Customer's order number 006634		Manufacturer's order number 143993 1		
Customer/consignee Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere		Buyer Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere		
Customer reference number 006634-5130/96-720006				
Product Round bar As rolled Hot rolled, reeled		Steel grade Imatra 520/S355J2		
		Specification IS 2721.04.15/EN 10025-2:2004		
Charge 33038	Abbreviation P5J	Diameter/dimensions 45 mm	Tolerance type N	Reduction ratio 72,16 :1

CAST ANALYSIS

	C	SI	MN	P	S	CR	NI	MO
	%	%	%	%	%	%	%	%
Min			1,00		0,020			
Result	0,15	0,28	1,08	0,008	0,033	0,20	0,13	0,05
Max	0,20	0,50	1,50	0,025	0,040			
	V	TI	CU	ALS	AS	SN	B	CA
	%	%	%	%	%	%	%	%
Min	0,03							0,0020
Result	0,05	0,0008	0,19	0,009	0,007	0,010	0,0001	0,0038
Max	0,10		0,55					
	N	NB	CO	PB	W	SB	CEV	
	%	%	%	%	%	%	%	
Min								
Result	0,013	0,002	0,012	0,0010	0,005	0,002	0,41	
Max							0,47	

CHARPY V2/-20 C EN ISO 148-1

	KV1	KV2	KV3	KV AVER
	J	J	J	J
Min				40
Result	164	168	152	161
Max				

TENSILE TEST FROM 1/3 RADIUS EN ISO 6892-1

	REH	Rp0.2	Rm	A 5	Z
	MPa	MPa	MPa	%	%
Min		390	520	22,0	
Result		553	553	23,0	58
Max			630		

This order fulfills the requirements of IMATRA 520 including the improved machinability (M-treatment)

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Steel production process: Electric Arc Furnace, Vacuum Degassing and Continuous Casting

Country of origin: Finland

The products supplied are in compliance with the requirements of the order

This certificate is issued electronically and is valid without a signature

Karhula Matti

Authorized Representative