

**18.4.2019**

**445669**

Customer's order number 010696		Manufacturer's order number 150506 1		
Customer/consignee Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere		Buyer Ovako Metals Oy Ab Tuotekatu 3 33840 Tampere		
Customer reference number 010696-5130/96-721001				
Product Round bar As rolled Hot rolled, cold drawn		Steel grade IMATRA 550		
		Specification IS 2722.01.05		
Charge 36957	Abbreviation U80	Diameter/dimensions 20 mm	Tolerance type h09	Reduction ratio 306,05 :1

CAST ANALYSIS

	C	SI	MN	P	S	CR	NI	MO	
	%	%	%	%	%	%	%	%	
Min					0,020				
Result	0,13	0,30	1,07	0,010	0,033	0,17	0,18	0,04	
Max	0,20	0,55	1,60	0,025	0,040				
	V	TI	CU	ALS	AS	SN	B	CA	
	%	%	%	%	%	%	%	%	
Min								0,0020	
Result	0,05	0,0012	0,23	0,008	0,008	0,010	0,0004	0,0046	
Max	0,09								
	N	NB	CO	PB	W	SB	CEV		
	%	%	%	%	%	%	%		
Min									
Result	0,009	0,002	0,015	0,0008	0,002	0,002	0,39		
Max							0,45		

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

	REH	Rp0.2	Rm	A 5	Z
	MPa	MPa	MPa	%	%
Min		500	550	12	
Result	691	664	691	12	62
Max			750		

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

Kumpulainen Helena  
Authorized Representative