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Dan inovacij ADRIA 2019- SIJ Elektrode introduction

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23 October 2019, Portorož

Agenda

- Company profile
- Production and sales
- Welding consumables
- Raw materials
- Summary

Company Profile

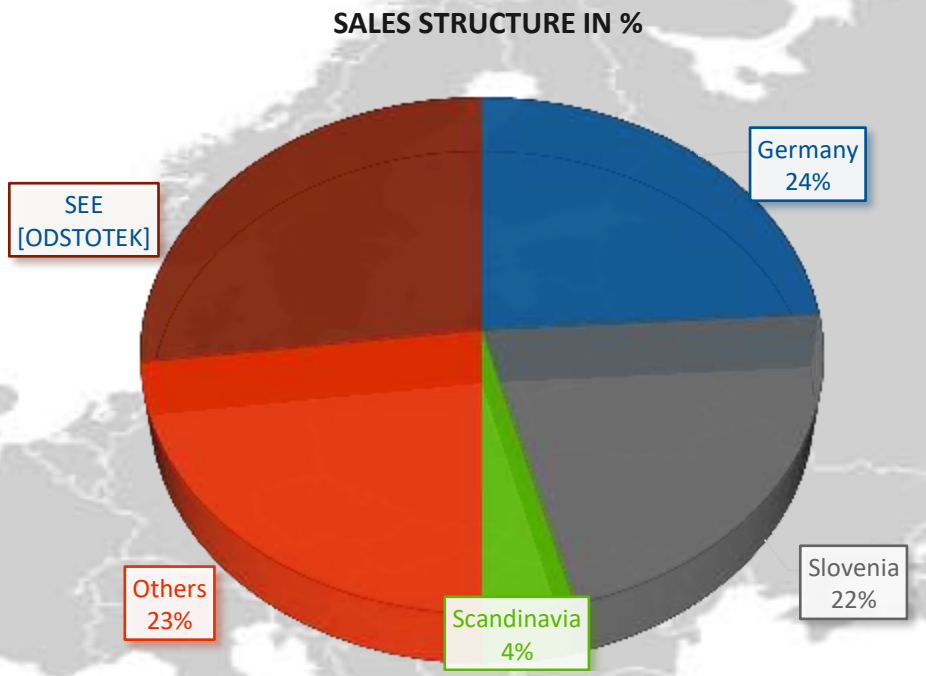
- Company Elektrode Jesenice is the only manufacturer of welding material in Slovenia
- It is a member of Slovenian Steel industry - SIJ Group
- 168 employees
- Yearly production 10.000 tons of value 17 mio EUR
- Since 1939, over 80 years experiences

Production and sales

- We are inside top ten producers in EU with leading market share in Slovenia and South East Europe (SEE)
- Our customer base includes 440 buyers in 34 countries
- We want to expand activities to Scandinavian, USA, Middle East markets

- The main markets:
  - Germany
  - South East Europe
  - Slovenia
  - Scandinavia

- Germany is the most important market



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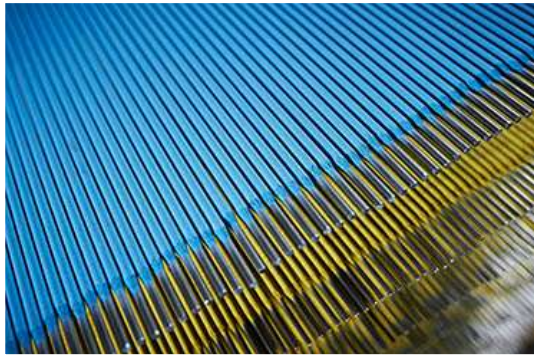
Welding consumables product

MIG/MAG WELDING WIRES	7% /42%
FLUX CORED WIRES FOR MIG/MAG WELDING	1%
WIRE AND WELDING RODS FOR OXYACETYLENE WELDING	1%
COATED ELECTRODES FOR MMAW WELDING	43%
WIRE AND WELDING RODS FOR TIG WELDING	2%
AGGLOMERATED FLUXES AND WIRES FOR SAW	4%



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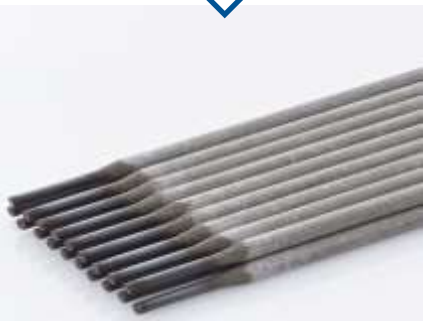
Raw materials (minerals) yearly consumption and purchase

RAW MATERIALS – MINERALS	YEARLY CONSUMPTION 2018 [t/year]	YEARLY PURCHASE 2018 [t/year]
RUTILE	324,86	343,96
CALCITE	167,76	187,20
FLOURITE	145,46	146,00
QUARTZ	69,20	64,63
BAUXITE	46,57	45,72
DOLOMITE	29,64	24,00
WOLLASTONIT	24,60	22,00
MAGNESITE	16,61	15,25



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Supplier and source of raw material - minerals

RAW MATERIALS – MINERALS	SUPPLIERS	LOCATION OF THE COMPANY	SOURCE OF RAW MATERIAL
RUTILE	Derby, UK	UK	**Mozambique**
	RMB - Richards bay minerals	South Africa	**South Africa**
CALCITE	Omya International	Austria	**Austria**
FLOURITE	Kovintrade, CZ	Czech Republic	**China**
QUARTZ	Temmes, IT	Germany	**Germany**
BAUXITE fini BAUXITE grobi	Euromark	Slovenia	**Guyana** **China**
DOLOMITE	Samoborka, HR	Croatia	**Croatia**
WOLLASTONIT	Ema, PL	Poland	**Poland**
MAGNESITE	Kovintrade, CZ	Czech Republic	**China**

BAUXITE MINE

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Raw materials (ferroalloys) yearly consumption and purchase

RAW MATERIALS – FERROALLOYS	YEARLY CONSUMPTION 2018 [t/year]	YEARLY PURCHASE 2018 [t/year]
FeMn mleti	95,417	88,355
FeSi 45%	40,948	40,169
FeCr carb. 4-6% C	14,87	14,10
FeMo	2,457	2,400
FeTi 40%	0,895	0,500
FeNb	0,245	0,250
FeV	0,274	0,150

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Supplier and source of raw material - ferroalloys

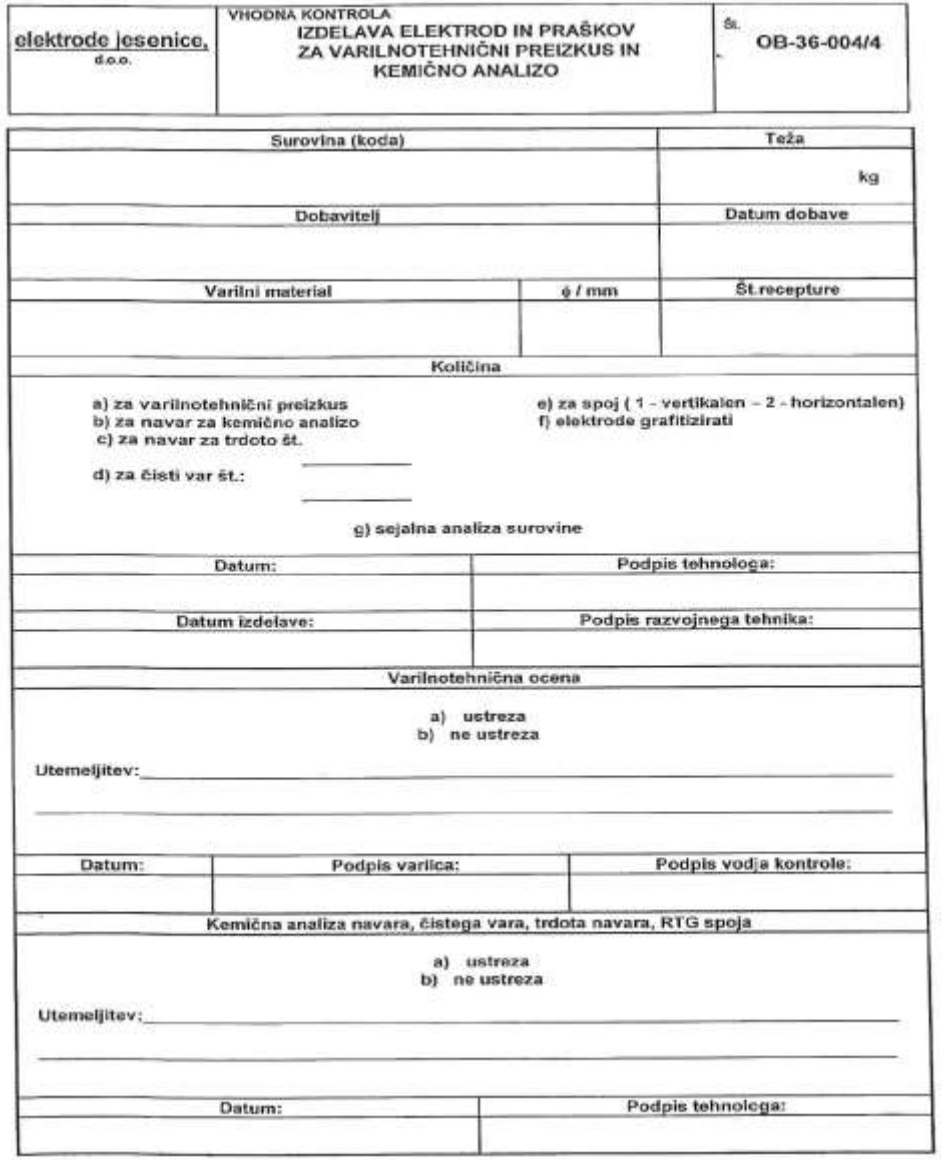
RAW MATERIALS – FERROALLOYS	SUPPLIERS	LOCATION OF THE COMPANY	SOURCE OF RAW MATERIAL
FeMn mleti	C.D.M.A., NL	Netherlands	**Mexico**
FeSi 45%	Kovintrade, CZ	Czech Republic	**Slovakia**
FeCr carb. 4-6% C	Mlr, DE	Germany	**EU**
FeMo	Cronimet, DE; Mpt SE	Germany	
FeTi 40%	AMG, UK	UK	
FeNb	Cronimet, DE; GFE-Varomet	Germany	
FeV	Cronimet, DE; GFE-Varomet;	Germany	

Input control of raw materials

Input control of raw materials covers:

- **Granulation analysis**
- **Controlling of Welding properties**
- **chemical analysis**

Input control form in company SIJ Elektrode Jesenice



elektrode jesenice, d.o.o.	VHODNA KONTROLA IZDELAVA ELEKTROD IN PRAŠKOV ZA VARILNOTEHNIČNI PREIZKUS IN KEMIČNO ANALIZO	št. OB-36-004/4

Surovina (koda)		Teža
		kg
Dobavitelj		Datum dobave
Varilni material	ϕ / mm	Št.recepture

Količina

a) za varilnotehnični preizkus
b) za navar za kemično analizo
c) za navar za trdoto št.
d) za čisti var št.: _____
_____
e) za spoj (1 - vertikalen – 2 - horizontalen)
f) elektrode grafitizirati
g) sejalna analiza surovine

Datum:	Podpis tehnologa:
Datum izdelave:	Podpis razvojnega tehnika:

Varilnotehnična ocena

a) ustreza
b) ne ustreza

Utemeljitev: _____
_____

Datum:	Podpis varilca:	Podpis vodja kontrole:

Kemična analiza navara, čistega vara, trdota navara, RTG spoja

a) ustreza
b) ne ustreza

Utemeljitev: _____
_____

Datum:	Podpis tehnologa:

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Summary

The use of a large number of different minerals in the production of welding electrodes creates many problems in finding a suitable supplier, but on the other hand opens up great prospects for finding new suppliers and new ways of processing and reusing various raw materials and minerals.

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Thank you for your kind attention