



Steering Committee meeting

20th April 2010. Banja Luka

WBC-VMnet Project EU Partner presentation

Tomaž Rodič, University of Ljubljana





Outline

- ❖ **Short presentation of UL-NTF**
- ❖ **Offered training topics**
- ❖ **Proposed terms**
- ❖ **Discussion**
- ❖ **Conclusions**



Offered training topics

- ❖ **Material forming and casting technologies**
- ❖ **Thermomechanical testing of materials**
- ❖ **Microstructural changes**
- ❖ **Superplastic Al alloys**
- ❖ **FGM materials**
- ❖ **Microscopy (SEM, optical)**
- ❖ **Industrial tours**

Univerza v Ljubljani



prof. Tomaž Rodič



Naravoslovnotehniška
fakulteta



prof. Tomaž Rodič

Oddelek za materiale
in metalurgijo



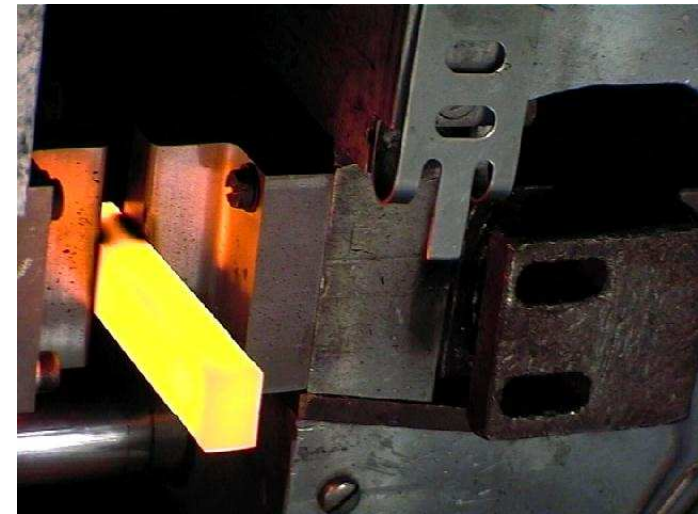


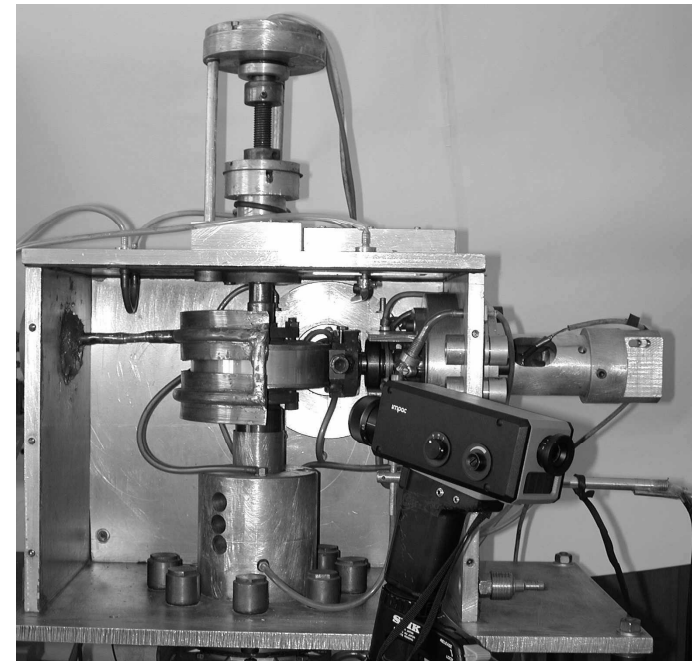
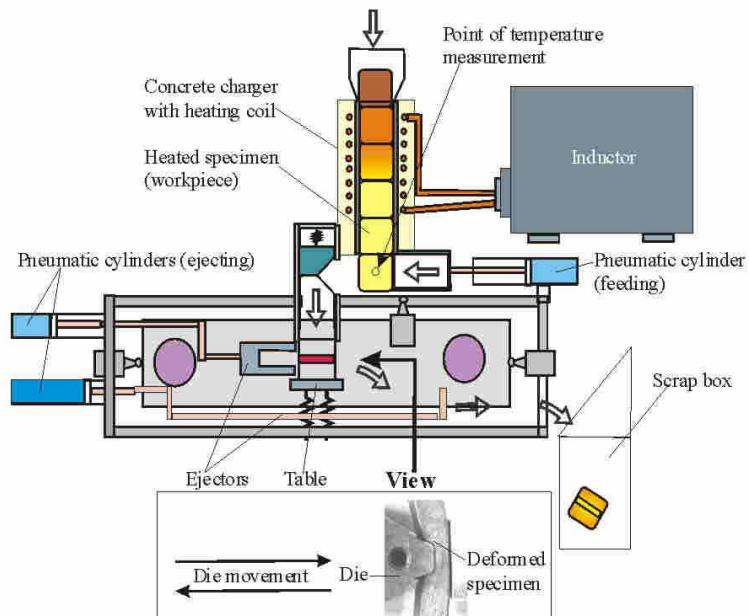
Merilno regulacijski krmilni sistem GLEEBLE 1500

This project has been funded with support from the European Commission



European Commission
TEMPUS

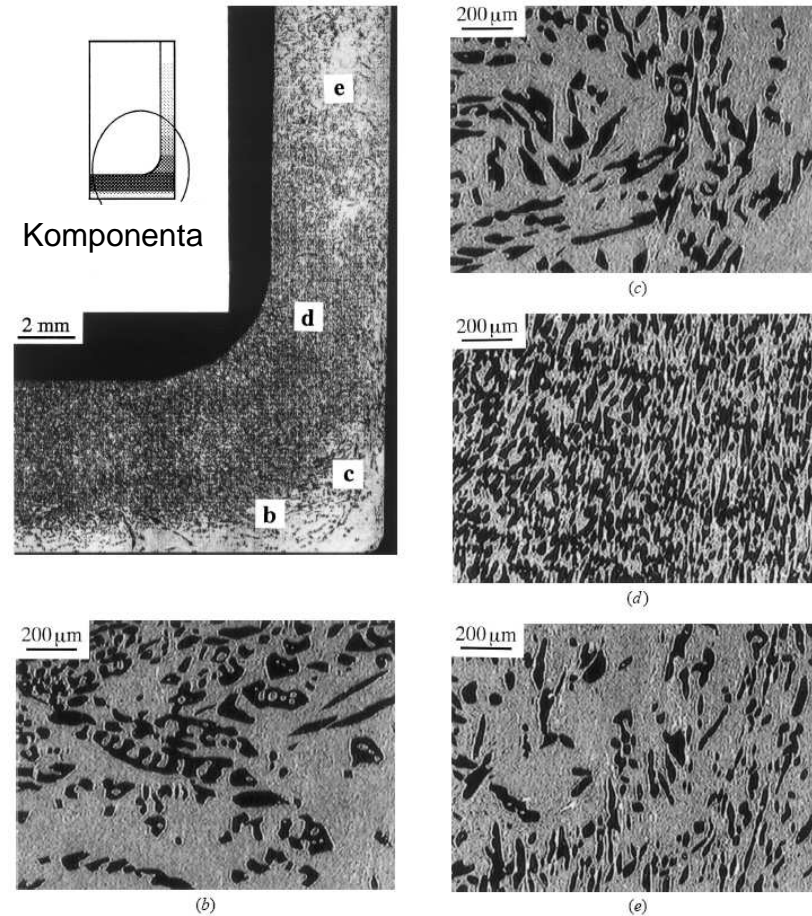
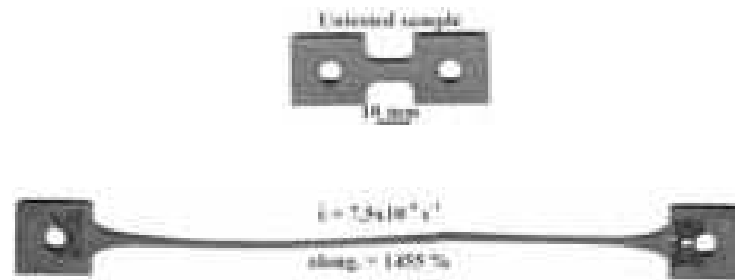


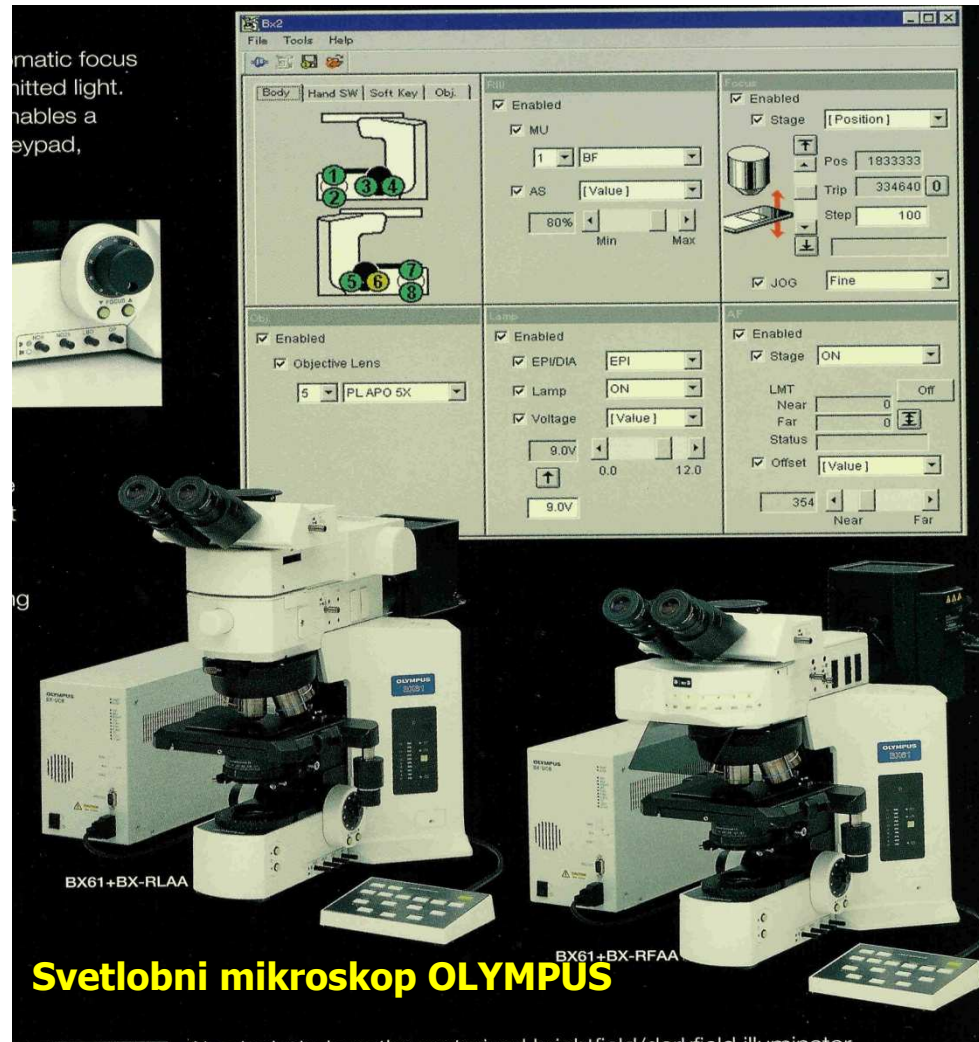


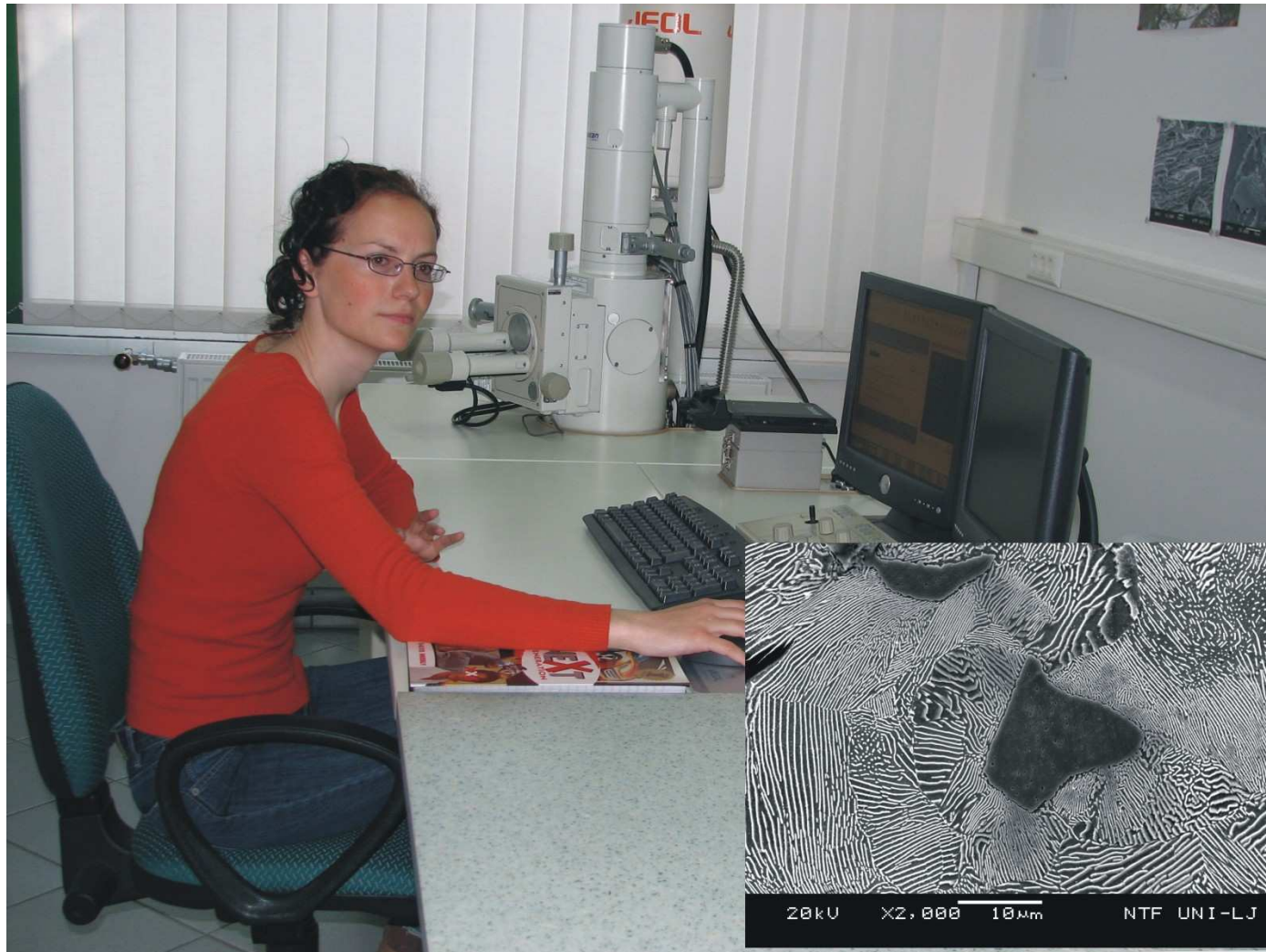
FGM materials

Functionally graded materials (Materiali z zvezno porazdeljenimi prostorskimi variacijami kemične sestave, mikrostrukture, teksture, porazdelitve faz, vsebnosti izločkov, itd)

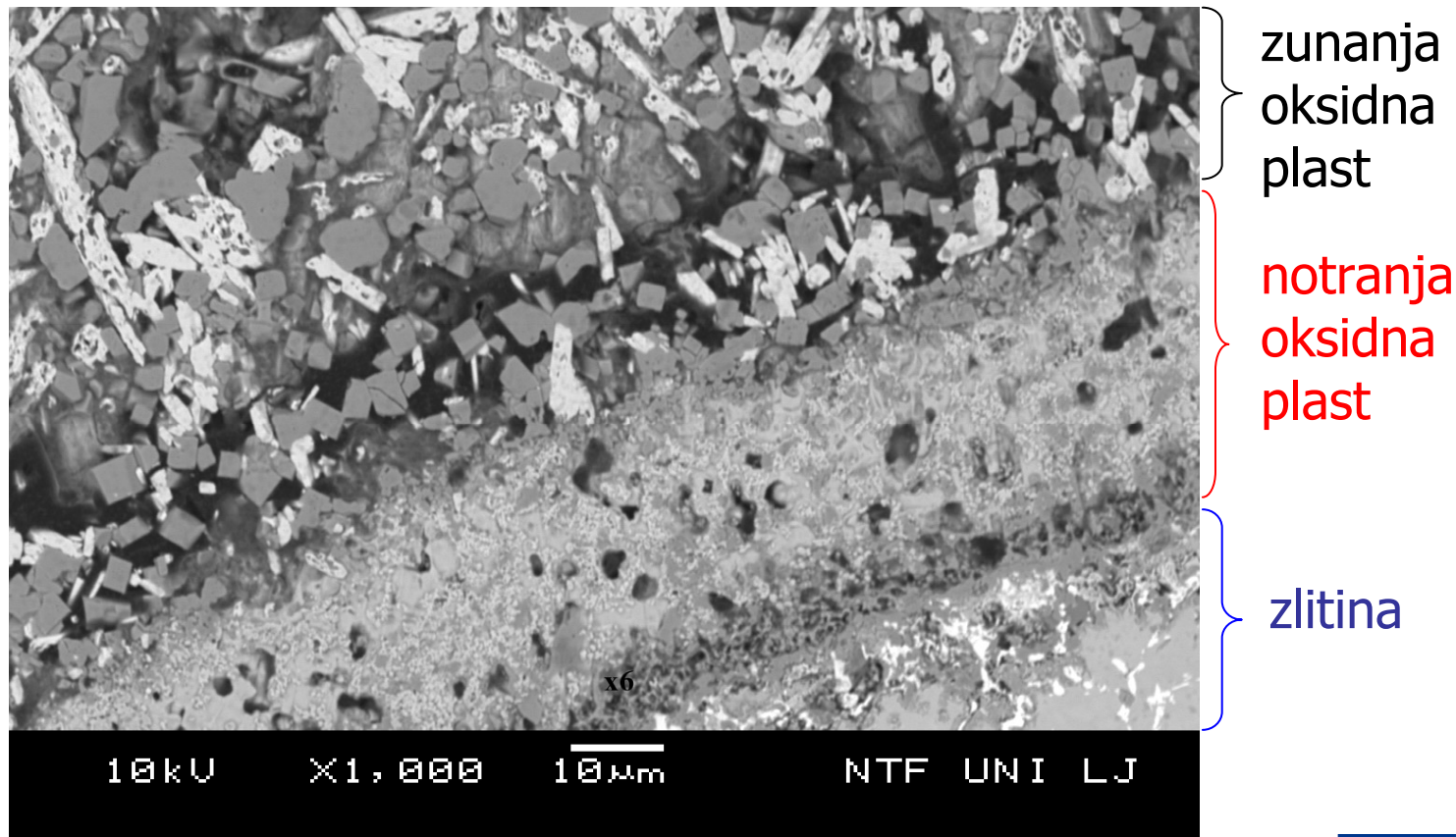
Superplastic Al alloys



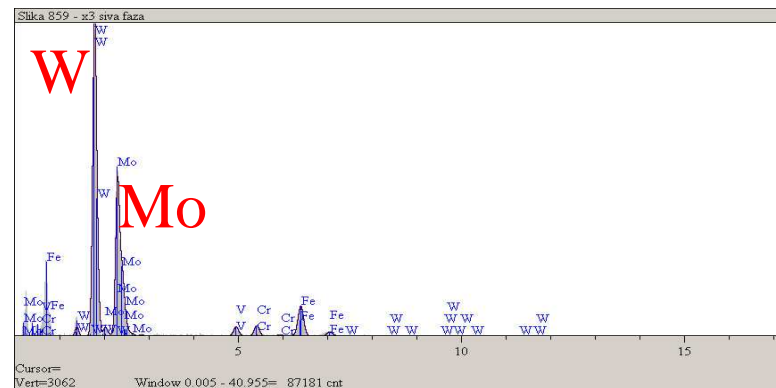
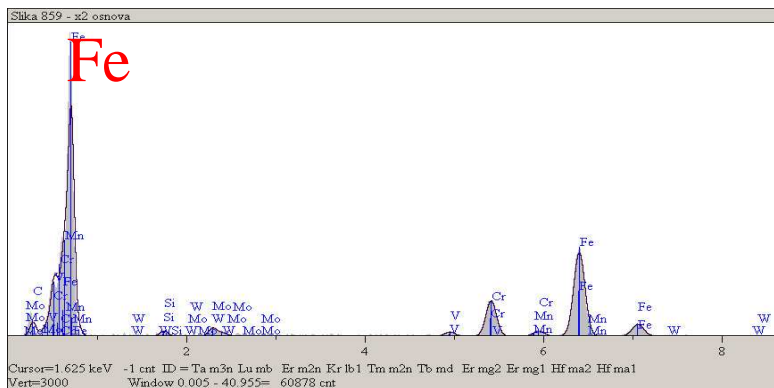
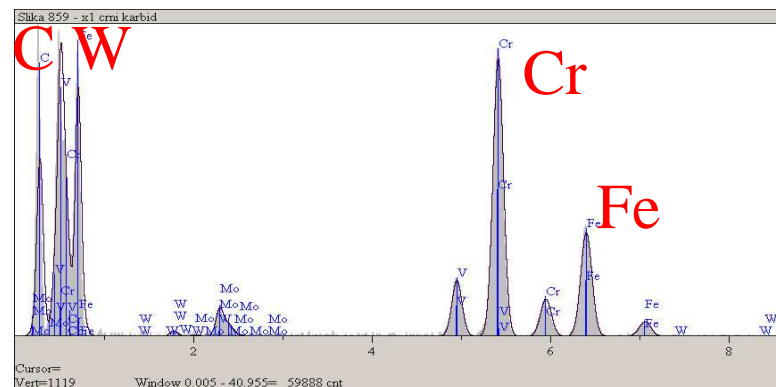
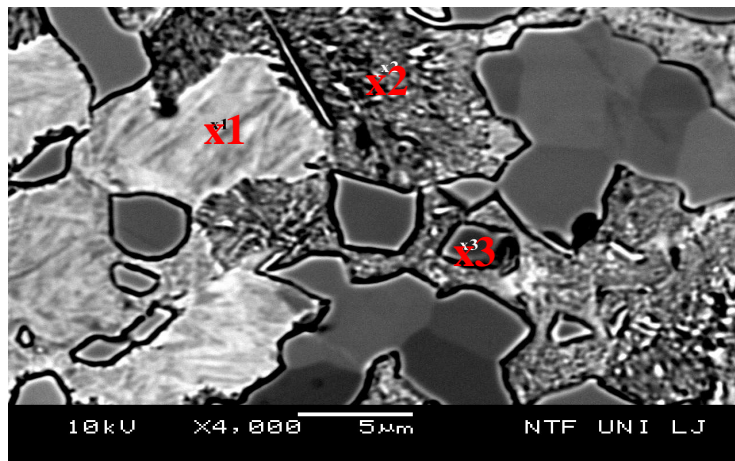




Analiza in karakterizacija materialov na OMM



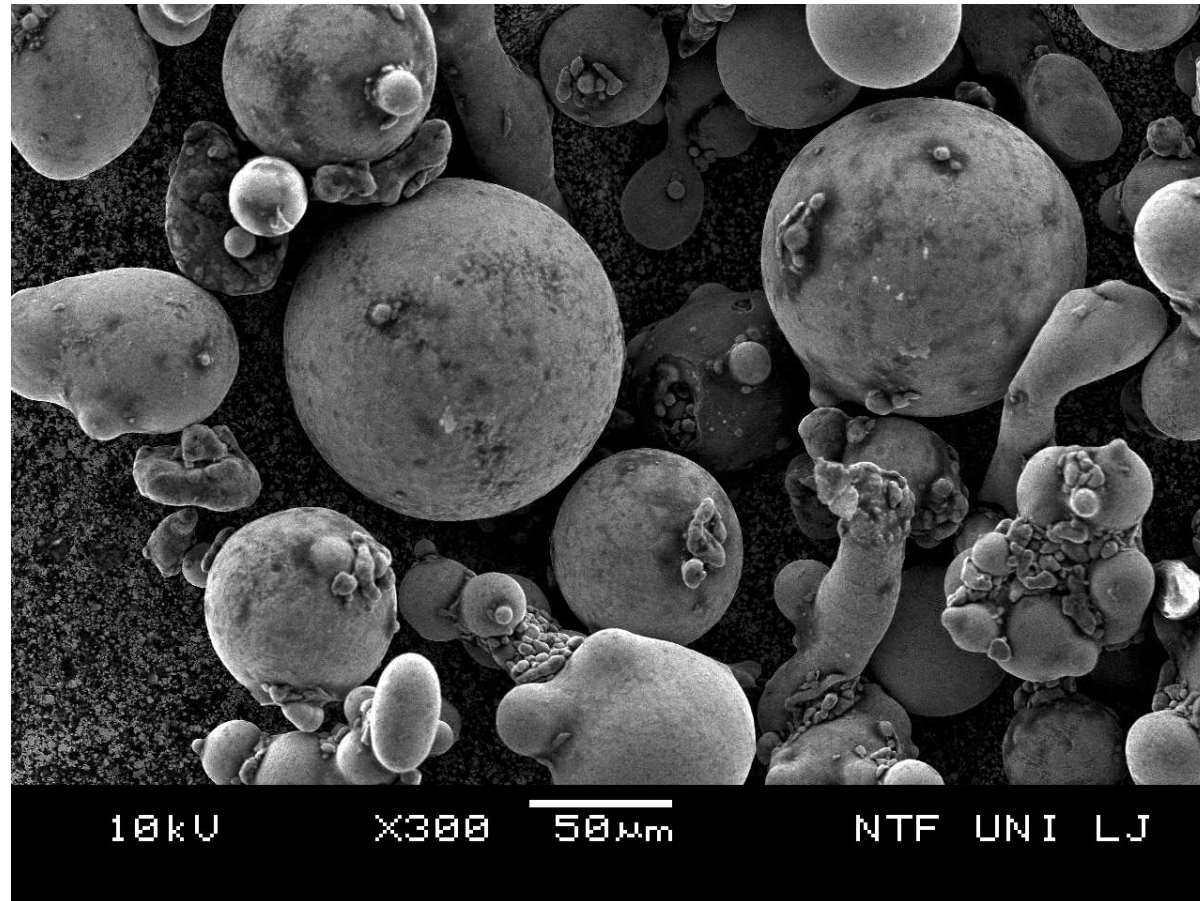
Slika odbitih elektronov - večfazni material (oksidacija zlitine)



Spektri rentgenskih žarkov iz faz z različno kemično sestavo

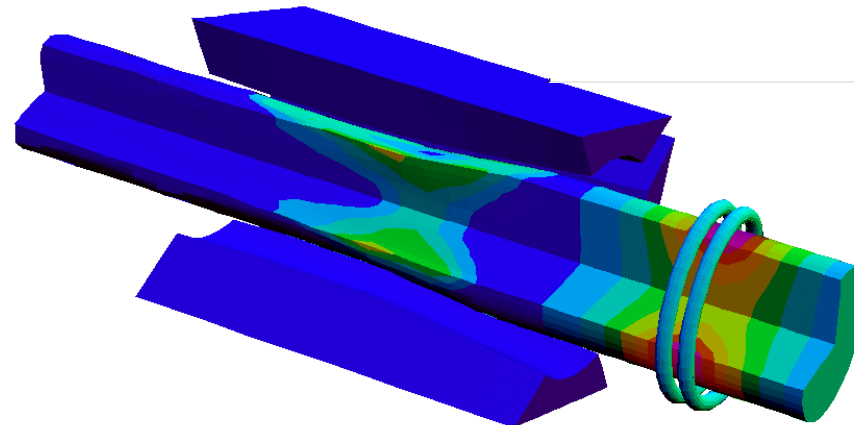
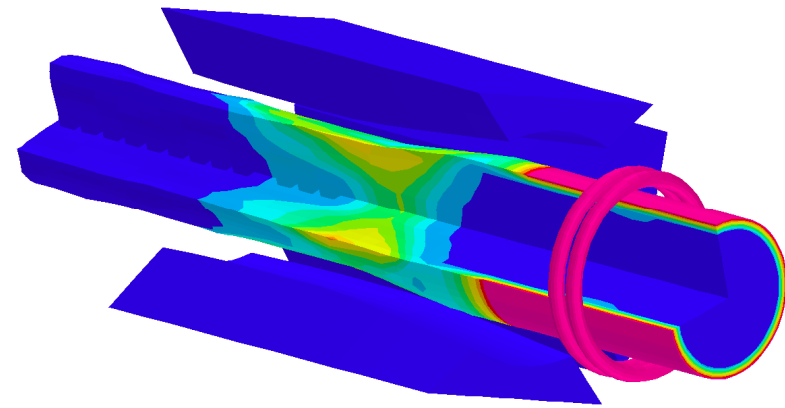
This project has been funded with support from the European Commission

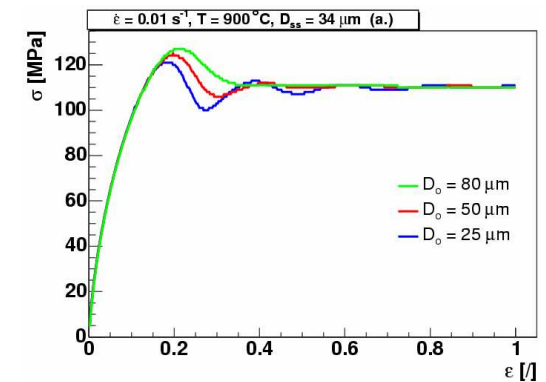
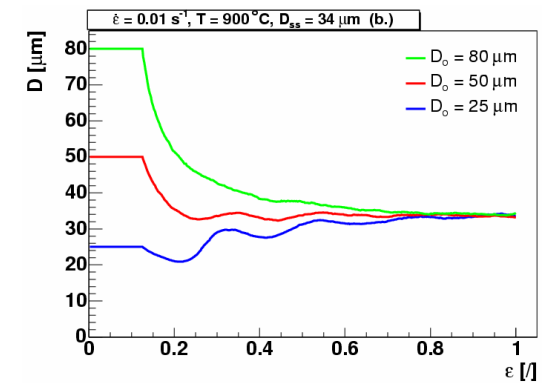
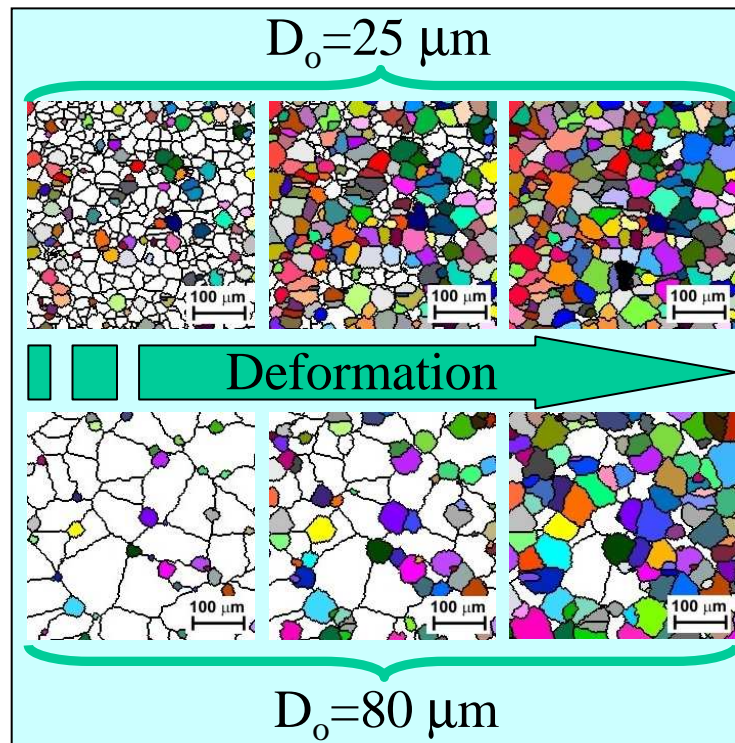
Metal powder

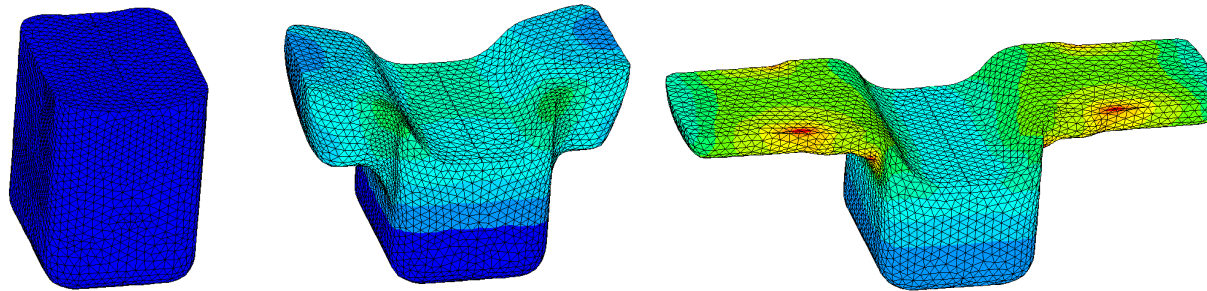




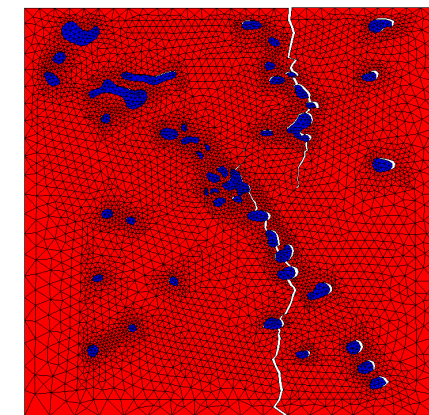
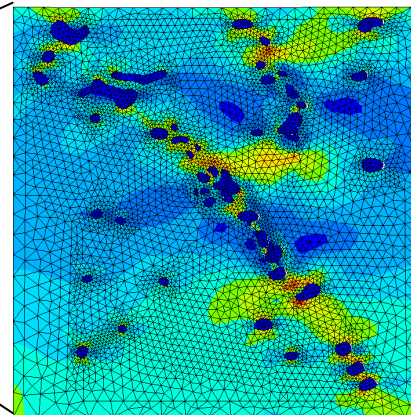
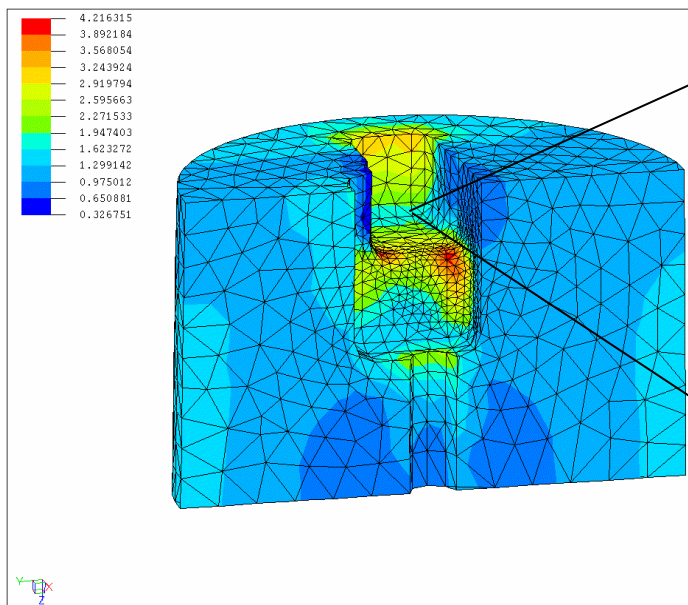
Simultana termična analiza STA-Netzsch







Macroscopic analyses of forming processes and tool loads and micromechanical analyses of materials



project has been funded with support from the European Commission

Material forming industry in Slovenia



This project has been funded with support from the European Commission

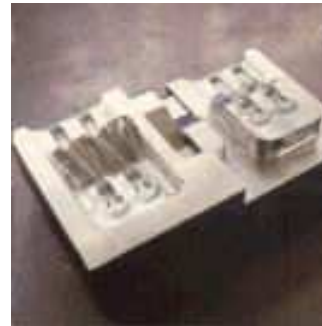
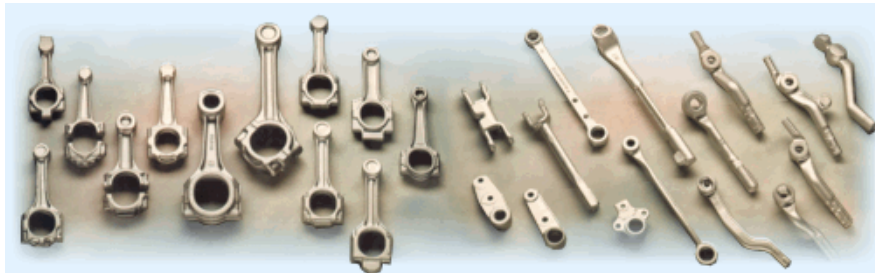
Hitrorezna jekla
Legirana orodna jekla za delo v hladnem
Legirana orodna jekla za delo v vročem
Nizko legirana orodna jekla za delo v hladnem
Specialna VOD in nerjavna jekla
Ostala specialna jekla
Legirana konstrukcijska jekla
Nelegirana konstrukcijska jekla



- vlečenje aluminija
- iztiskanje aluminija
- kovanje aluminija
- toplo in hladno valjanje aluminija



- utopno kovanje jekla
- hladno kovanje
- strojna obdelava odkovkov
- proizvodnja sintranih delov iz kovinskih prahov

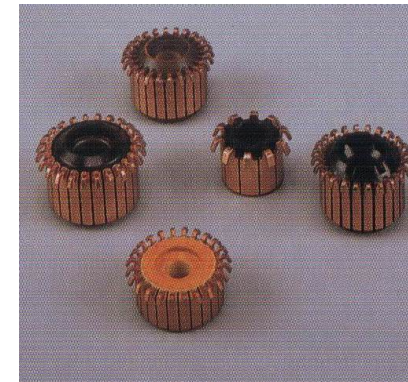


Hladno kovanje

- alternatorji
- zaganjalniki
- električni motorji
- orodja



- tračni komutatorji
- profilni komutatorji
- složeni komutatorji posebnih izvedb
- veliki komutatorji



Pločevinke: za prehrano, ECO CAN, s tlačnim pokrovom, z izlivnim grlom.
Doze za loščila, kozmetiko, štirioglate konične ročke in dekorativna embalaža



utopno kovanje jekla, aluminija, bakra in medenine





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- ❖ **Material forming and casting technologies**
- ❖ **Thermomechanical testing of materials**
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- ❖ **Superplastic Al alloys**
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FORUM MATERIALCI IN METALURGI NA SPLETU:
www.euromaterials.com/materialci/