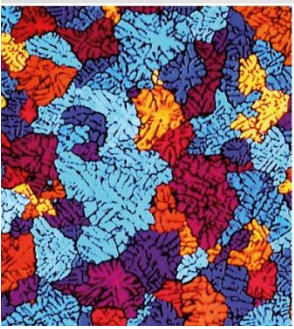


Application lab report

Electrolytical polishing of a steel sample in short time and one-step



QATM-Preparation method

Objective:

The aim of the investigation is to develop a fast one-step preparation method for the received samples. Therefore, the Qetch 1000 should be used.

Electrolytical polishing and etching – sample STAVAX niet gezandstraald

Device					
QETCH 1000					
Step	Electrolyte	Voltage [V]	Pumping power [%]	Mask [cm ²]	Duration [min]

Electrolytic polishing

 Polishing (electrolytic)	Electrolyte K1	20 - 30	external etching unit	external etching unit	4:00-5:00
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Electrolytic Etching

 Etching (electrolytic)	-	-	-	-	-
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Notes

QATM-Preparation method

Sample STAVAX niet gezandstraald



Figure 1: Sample STAVAX niet gezandstraald BEFORE electrolytical polishing.




Figure 2 and 3: Sample STAVAX niet gezandstraald AFTER electrolytical polishing.

QATM-Preparation method

Electrolytical polishing and etching – sample 1.2842 niet gezandstraald

Device					
QETCH 1000					
Step	Electrolyte	Voltage [V]	Pumping power [%]	Mask [cm ²]	Duration [min]

Electrolytic polishing

	Polishing (electrolytic)	Electrolyte K1	20 - 30	external etching unit	external etching unit	4:00-5:00
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Electrolytic Etching

	Etching (electrolytic)	-	-	-	-	-
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Notes

QATM-Preparation method

Sample 1.2842 niet gezandstraald



Figure 4: Sample 1.2842 niet gezandstraald BEFORE electrolytical polishing.




Figure 5 and 6: Sample 1.2842 niet gezandstraald AFTER electrolytical polishing.

QATM-Preparation method

Electrolytical polishing and etching – sample 1.2842

Device					
QETCH 1000					
Step	Electrolyte	Voltage [V]	Pumping power [%]	Mask [cm ²]	Duration [min]

Electrolytic polishing

	Polishing (electrolytic)	Electrolyte K1	30 - 40	external etching unit	external etching unit	5:00
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Electrolytic Etching

	Etching (electrolytic)	-	-	-	-	-
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Notes

QATM-Preparation method

Sample 1.2842



Figure 7: Sample 1.2842 BEFORE electrolytical polishing.



Figure 8 and 9: Sample 1.2842 AFTER electrolytical polishing.