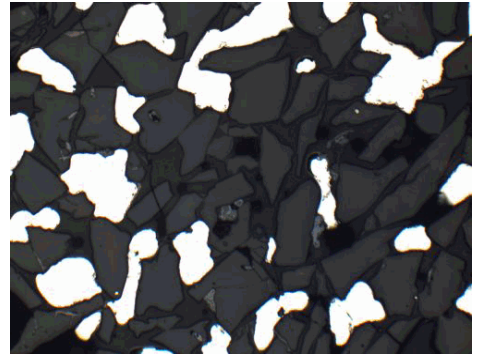

Introduction

Analysis of a sample from a porous disc filtration apparatus (PoDFA), demands a well prepared surface in order to enable a valid quantitative and qualitative examination. Grinding and polishing with suitable parameters, surfaces and suspensions, makes up the specialized method resulting in a plane and artefact free microstructure.



Material Name: PoDFA
Sample comments: Samples are received in 30 mm epoxy mounts

Developed by: Birgitte Nielsen

Date: 13-02-2015

Grinding/Polishing

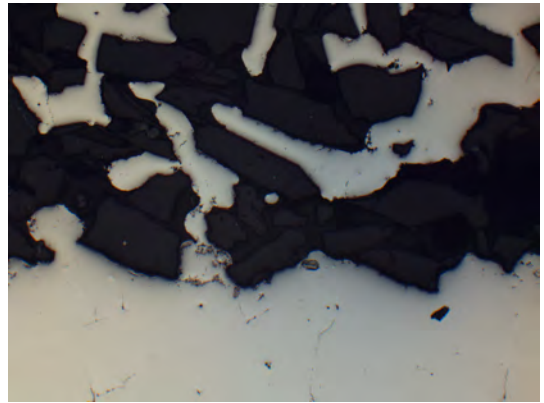
Equipment: Tegramin-25
Disc diameter: 250 mm / 10"
Specimen holder: 02606935 - PEDST
Comments:



Step	1	2	3	4	5
 Position					
 Disc / Cloth	MD-Molto 220	SiC Foil #500	MD-Pan	MD-Dur	MD-Chem
 Speed [rpm]	300	300	150	150	150
Dressing [µm]					
 Cooling	0		2	2	3
 Suspension			DiaPro Pan 15 µm	DiaPro Dur 3 µm	OP-U NonDry
Pre-dosing			3	4	5
Dosing			7	9	11
 Lubricant	Water	Water			
Pre-dosing					
Dosing					
 Force [N] Single/Holder	25 /	25 /	30 /	30 /	25 /
 Holder speed	150	150	150	150	150
Rotation direction	>>	>>	>>	>>	>>
Holder offset					
 Time [min]	2:00	:30	5:00	5:00	1:00
 Stock removal [µm]					
Pause between steps	No	No	No	No	No
IRR [µm/min]					
 Cleaning program no.					



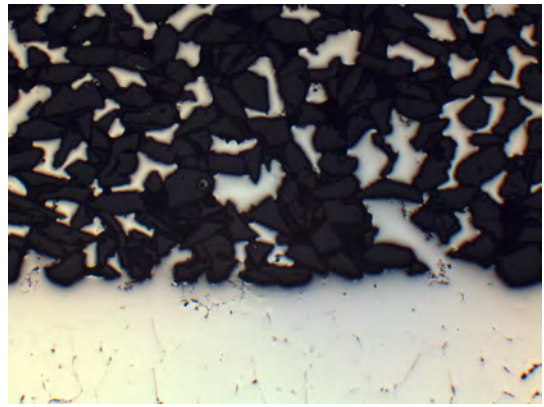
Sample 1, BFx50



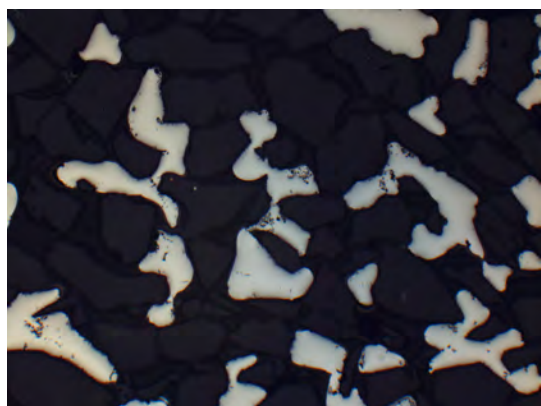
Sample 1, BFx100



Sample 3, BFx100



Sample 3, BFx50



Sample 5, BFx100



Sample 5, BFx50

Summary

A specialized 5 step method has been developed addressing the difficulties in preparation of a sample containing both hard and soft phases. Well impregnated samples prepared with various principles like rigid discs and low resilience sloths results in artefact free samples in 13,5 minutes.

Signed by: Birgitte Nielsen

Struers

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