



PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



Experience of old oil and gas boreholes eliminative cementation

Mgr. Sc. Mariana Kovalchuk

Ph. D. Bogdan Tershak

Prof. Dr.Sc. Khrystyna Sobol

Ph. D. Volodymyr Terlyha



PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



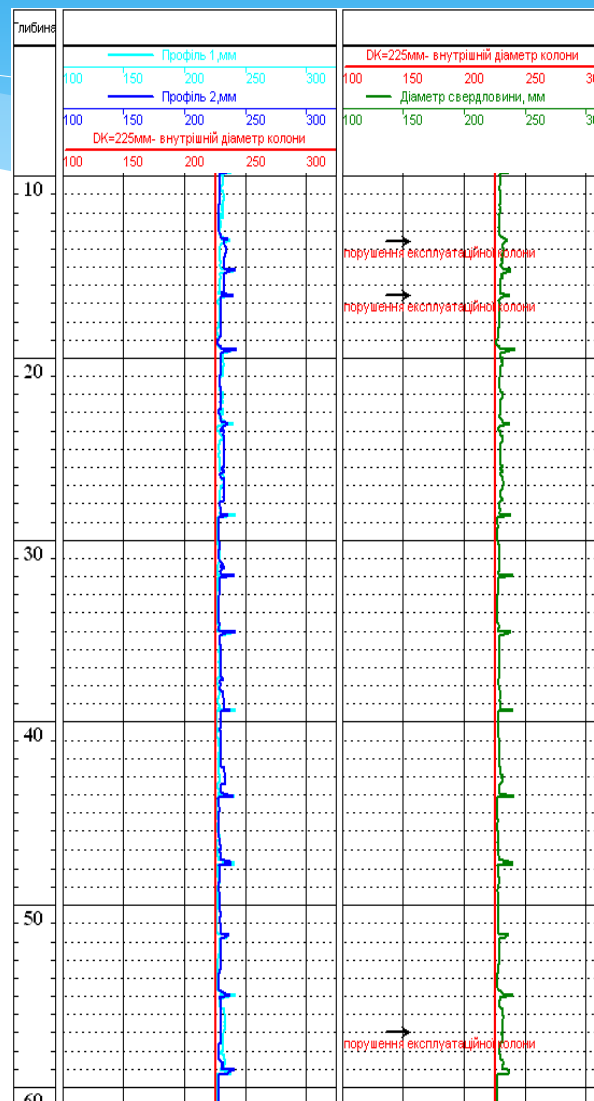
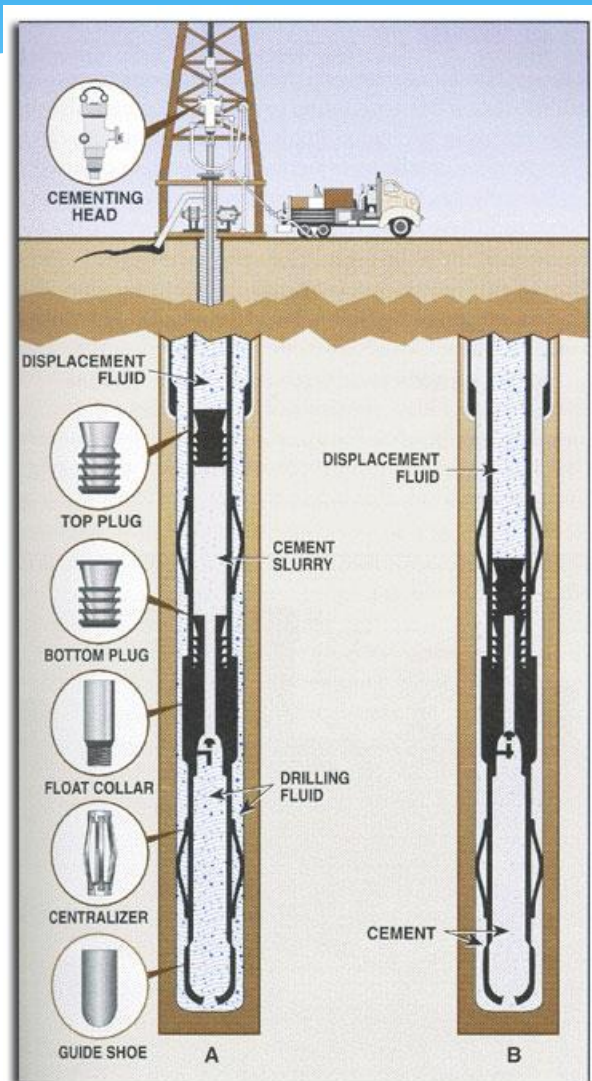
Actual condition of wellhead 131 Stara Kopalnia





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



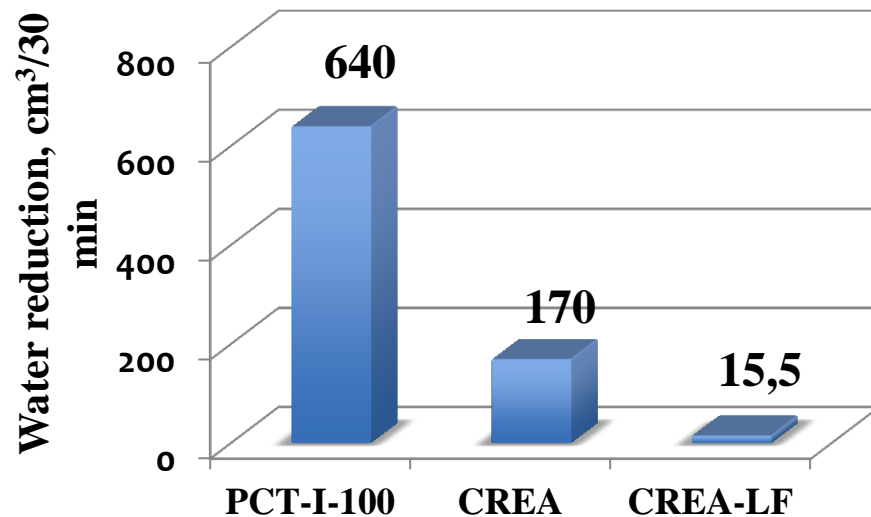
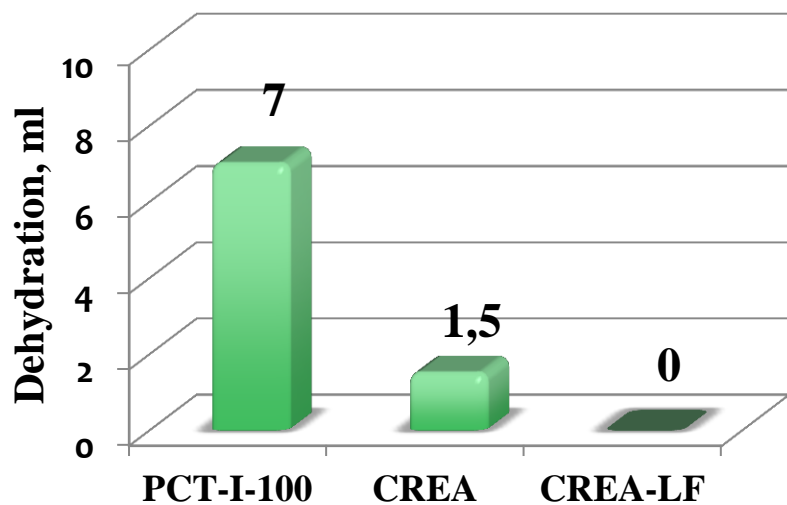
Materials properties

Type of material	Component composition, %				
	CaO	SiO ₂	Fe ₂ O ₃	Al ₂ O ₃	Other
PCT-I-100	66,40	21,40	3,50	5,25	3,45
CREA CREA-LF	55,71	26,4	2,35	5,89	7,65



PL-BY-UA
2007-2013

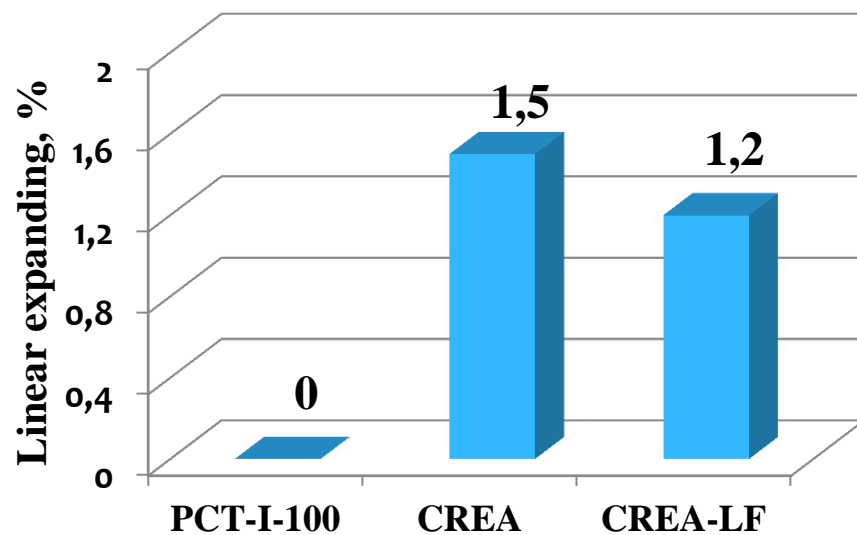
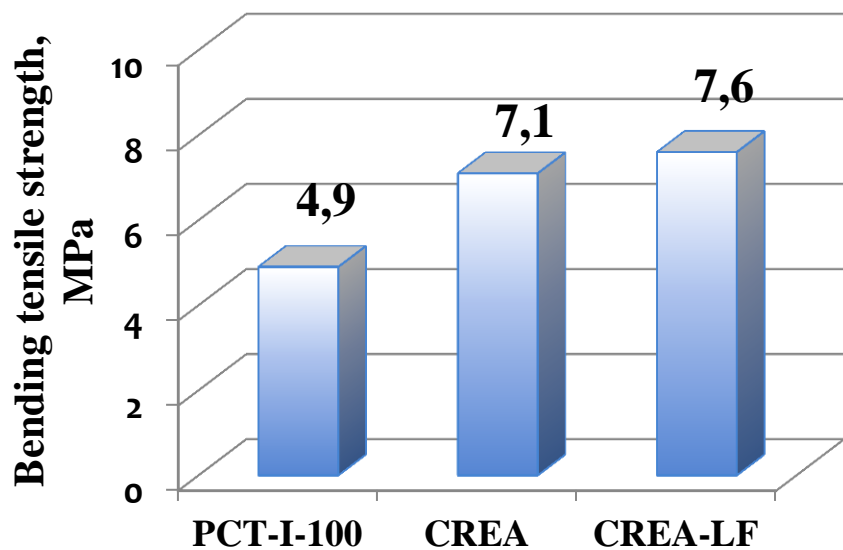
Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



Results of comparative tests PCT I-100, CREA and CREA-LF

N°	Indicators name	Indicators value				
		According to DSTU	PCT- I-100	Composite mortars		
				CREA	CREA-LF	
1	Grinding fineness - sieve residue with grid N°.008 according to GOST 6613, not more than, %	15	11,8	3,4	4,8	
2	Specific surface, m ² /kg, no less than	-	285	315	320	
3	Density of cement suspension , g/cm ³	-	1,82	1,86	1,85	
4	Water-cement ratio	0,5	0,48	0,45	0,45	
5	Dehydration,ml, not more	8,7	7,0	1,5	0	
6	Spreadability of cement past, mm, not less than	200	195	230	225	
7	Thickening time to ₃₀ Berden units, min. not less than	90	90	>100	>100	
8	Setting time, hour-min.	initial	-	1-30	1-45	2-00
		final	-	2-10	2-25	2-15
9	Strength of cement stone, MN/m ² , not less than, after 1 day	bending tensile	3,5	4,9	7,1	7,6
		compressive	-	18,1	17,6	18,4
10	Linear expansion of cement stone,%	-	-	1,5	1,2	
11	Water reduction, cm ³ /30 min	-	640	170	15,5	

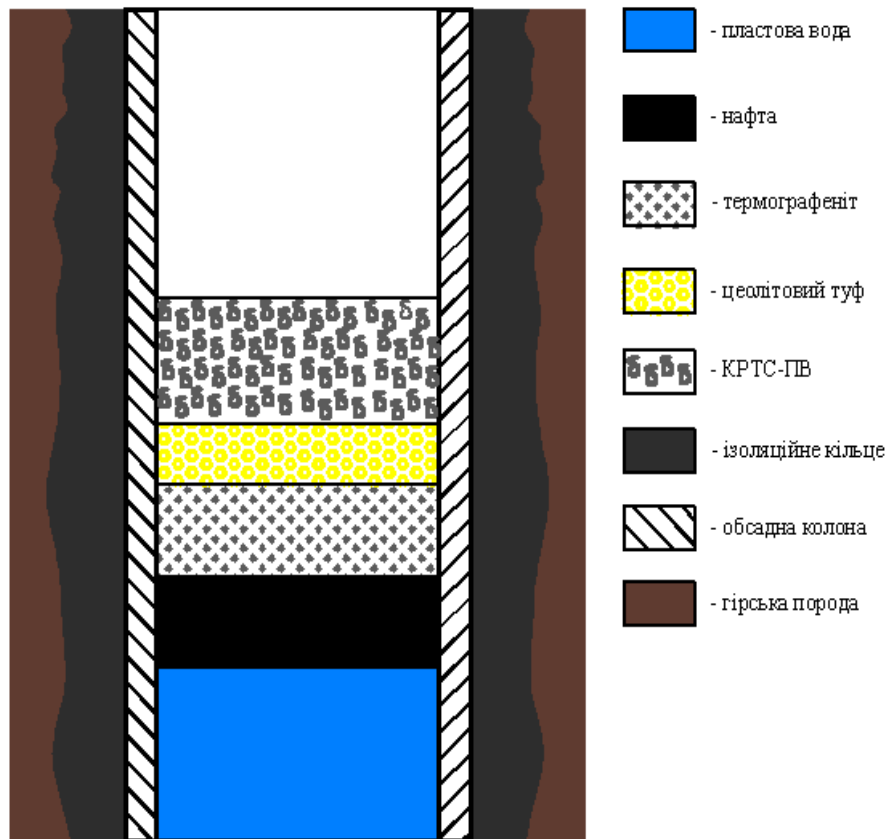


PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



Scheme of isolation screen construction with zeolitic tuff usage in liquidation borehole





PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



Conclusion:

The oil and gas deposits of Carpathians are characterized by its unique mining-and-geological properties and plenty of old mining holes which require high-efficiency liquidating cementation. Summarising of results of researches in the direction of solving this problem, evidences the experience of application of the modern plugging composition materials produced by technology of dry building mixture preparation and high-efficiency sorbents such as zeolite tuff and thermographenite.



PL-BY-UA
2007-2013

Cross-border Cooperation Programme
Poland – Belarus – Ukraine 2007–2013
co-financed by the European Union



Thank You for attention!