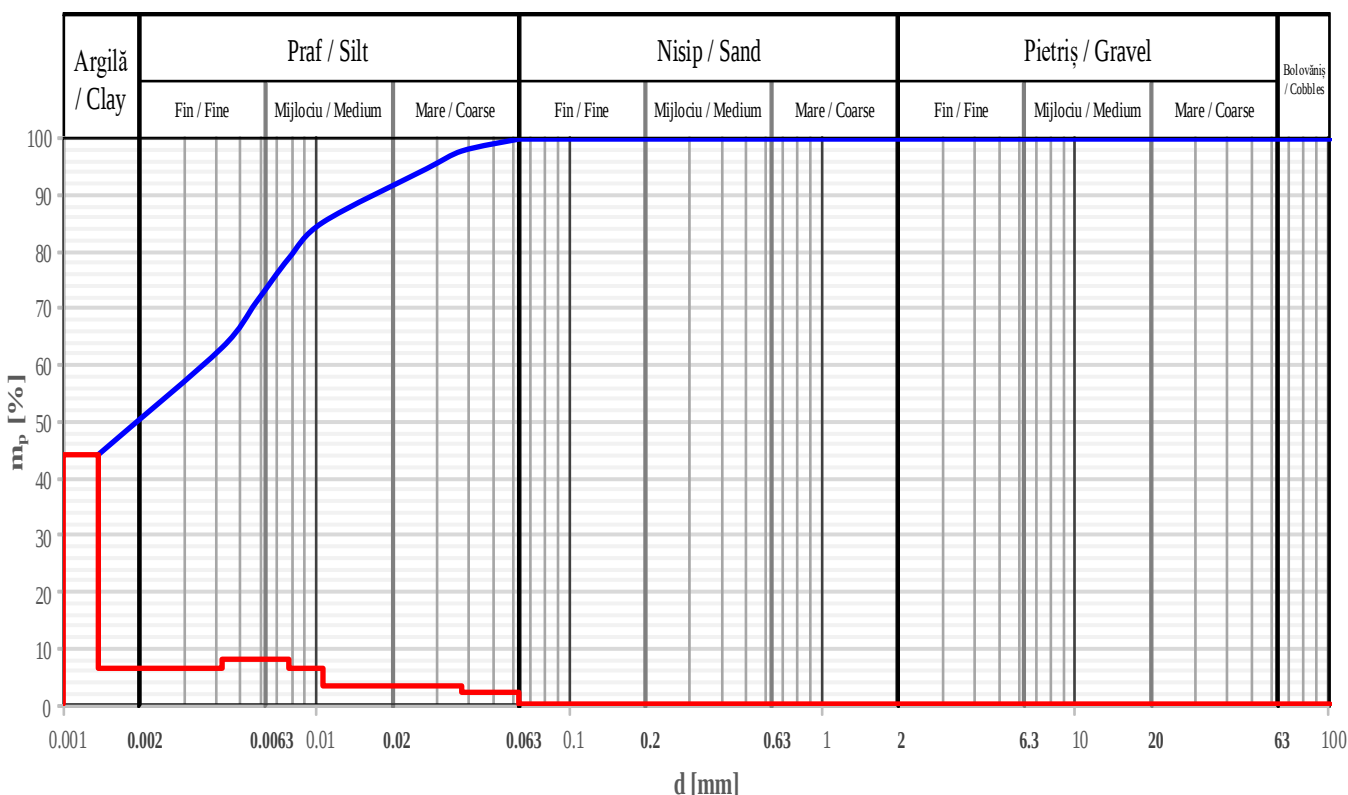


DCC-GEO-TEST CONSULT S.R.L.
 LABORATOR DE ANALIZE ȘI ÎNCERCĂRI
 ÎN CONSTRUCȚII - GRAD II
 Autorizație nr. 2940 din 15.08.2014/24.08.2018

Amplasament / Location: Reabilitarea liniei de cale ferata Roman – Iasi - Frontiera
 Forajul/Borehole: POD 20
 Proba/Sample: PNT 12
 Adancimea/Depth(m): 12,000-12,30

Raport de incercare nr. / Test report no.60 259



Curba granulometrica / Granulometric curve

Identificarea si clasificarea pamanturilor SR EN ISO 14688/2-2018 / SR EN ISO 14688/2- 2018 / STAS 1913/5-85													
Argila / Clay (Cl)								cenusie		Un = #N/A			
Conform SR EN ISO 14688/2- 2005, la cerinta beneficiar ului	Pamant fin / Fine				Pamant grosier / Coarse						Pamant foarte grosier / Very		
	Argila (Cl)	Praf (Si)			Nisip (Sa)			Pietris (Gr)			Bolovanis (Co)		
		Fin (fSi)	Mediu (mSi)	Mare (cSi)	Fin (fSa)	Mediu (mSa)	Mare (cSa)	Fin (fGr)	Mediu (mGr)	Mare (cGr)			
		49	51			0			0			0	
		< 0,002	< 0,0063	< 0,02	< 0,063	< 0,2	< 0,63	< 2	< 6,3	< 20		< 63	< 200mm
%	49	24	19	8	0	0	0	0	0	0	0		

CLASIFICAREA PAMANTURILOR /SR Pamant fin / Fine soil
 EN ISO 14688/2-2018 / SR EN ISO 14688/2-2018 #N/A

Executat de / Performed by:
 ing. Nina IOSIF

Nina IOSIF

Sef Laborator / Laboratory head: Constanta ANDREI

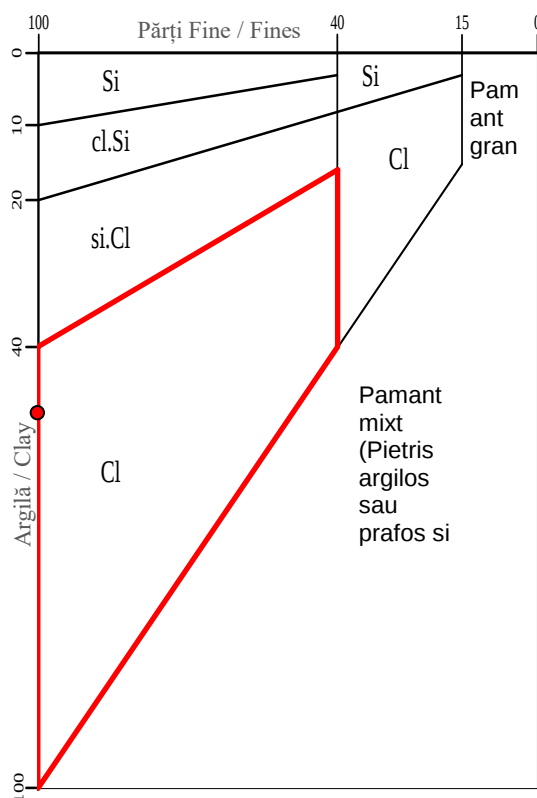
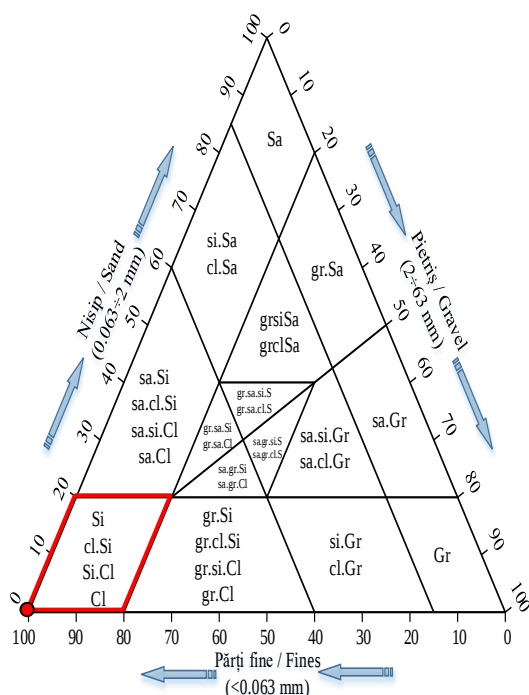


Data / Date: 07.12.2020

COD PROBA 60 259

Raport de incercare nr. / Test report no.60 259

	d (mm)	mp (%)
CERNERE	100	100,0
	100	100,0
	100	100,0
	100	100,0
	100	100,0
	100	100,0
	90	100,0
	63	100,0
	45	100,0
	31,5	100,0
	22,4	100,0
	16	100,0
	11,2	100,0
	5,6	100,0
SEDIMENTARE	3,15	100,0
	2	100,0
	0,5	100,0
	0,25	100,0
	0,10	100,0
	0,063	100,0
	0,063	#####
	0,037	97,89
	0,027	94,72
	0,020	91,56
	0,014	88,40
	0,011	85,24
	0,008	78,91
	0,006	71,00
	0,004	63,10
	0,003	56,77
	0,002	50,45
	0,001	44,12



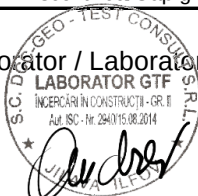
Clasificarea pamantului dupa SR EN ISO 14688-1:2018 / SR EN ISO 14688-2:2018

Tip pamant / Soil group	Tip fractiune		%	C_u (Un)	C_c	Forma curbei granulometrice / Shape of grading curve	C_u (Un)	C_c
Pamant fin / Fine	Argila	Cl	49	<3	<1	Foarte uniforma / Very uniform	#N/A	#####
	Praf	Si	51			Uniforma / Uniform		
Pamant grosier / Coarse	Nisip	Sa	0	3---6	<1	Uniformitate medie / Medium uniformity		
	Pietris	Gr	0	6---15	<1	Neuniforma / Non-uniform		
Pamant foarte grosier / Very coarse	Bolovanis	Co		>15	1---3	Discontinua / Gap graded		
				>15	<0,5			

Executat de / Performed by :
 ing. Nina IOSIF

Nina IOSIF

Sef Laborator / Laboratory head: Constanta ANDREI



Raport de incercare nr. / Test report no.60 260

**DETERMINAREA LIMITELOR DE PLASTICITATE /
DETERMINATION OF ATTEBERG LIMITS
STAS 1913/4-86**

Nr. de caderi ale cupei (N)	25	UMIDITATE NATURALA NATURAL MOISTURE STAS 1913/1-82			LIMITA DE CURGERE LIQUID LIMIT W_L %				LIMITA DE FRAMANTARE PLASTIC LIMIT W_P %		
Adancimea de patrundere a conului (S) mm	10				Metoda cu cupa						
					45	33	23	15			
PROBA UMEDA + TARA A (gr)		150,00			33,51	35,43	33,55	36,12	20,39	20,58	21,19
PROBA USCATA + TARA B (gr)		125,24			25,66	27,05	25,74	27,42	19,56	19,68	20,24
TARA C (gr)					14,21	15,23	14,99	15,80	15,66	15,55	15,83
A - B		24,76			7,85	8,38	7,81	8,69	0,83	0,89	0,95
B - C		125,24			11,46	11,83	10,76	11,63	3,91	4,14	4,42
$W(\%) = (A-B)/(B-C)*100$		19,77			68,51	70,82	72,60	74,78	21,21	21,62	21,44
$W(\%)$ MEDIU		19,77			72,24				21,42		

DESCRIEREA PROBEI /
DESCRIPTION OF THE SOIL:

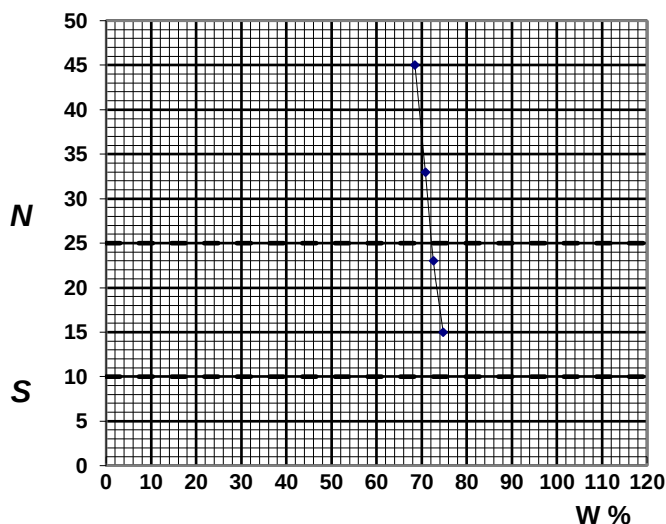
Argila grasa cenusie tare / very stiff consistency

SR EN ISO 14688/1/2-2018

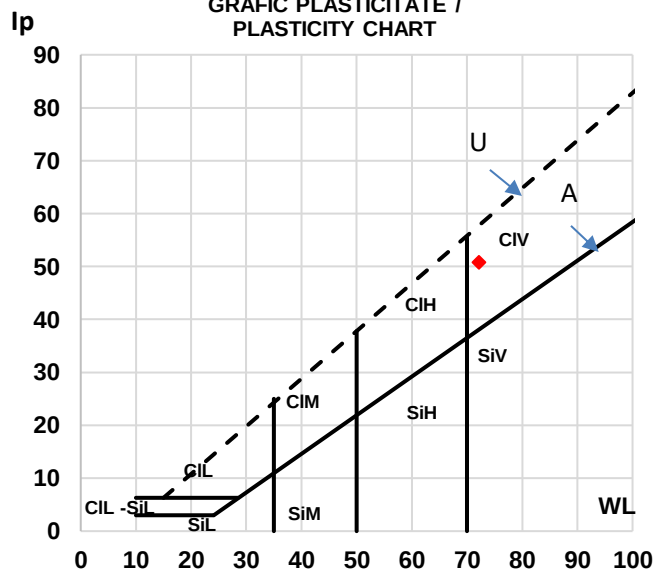
Pamant fin cu plasticitate foarte mare / Fine soil, very high plasticity

CIV

GRAFICUL LIMITEI SUPERIOARE DE PLASTICITATE
UPPER LIMIT OF PLASTICITY CHART



GRAFIC PLASTICITATE /
PLASTICITY CHART



SR EN ISO 14688/2-2018

LIMITA DE FRAMANTARE / PLASTIC LIMIT	$W_P =$	21,42	%	Tip pamant / Type of Soil		Plasticitate / Plasticity		Limita de curgere / Liquid limit
UMIDIT. NATUR. / NATURAL MOISTURE	$W =$	19,77	%	Cl	Clay	Low	redusa	<35
LIMITA DE CURGERE / LIQUID LIMIT	$W_L =$	72,24	%	Si	Silt	Medium	medie	35----50
INDICE DE PLASTICIT./PLASTICITY INDEX	$I_P = W_L - W_P$	50,82	%			Heigh	mare	50----70
INDICE DE CONSISTENȚĂ / CONSISTENCY INDEX	$I_C = (W_L - W) / I_P$	1,03				Very heigh	foarte mare	>70
INDICE DE LICHIDITATE/ LIQUIDITY INDEX	$I_L = (W - W_P) / I_P$	-0,03				O	organic	

Executat de / Performed by: Laborant Emilia Dumitru

Data / Date: 07.12.2020

COD PROBA 60

260

Sef Laborator / Laboratory head: Constanta ANDREI

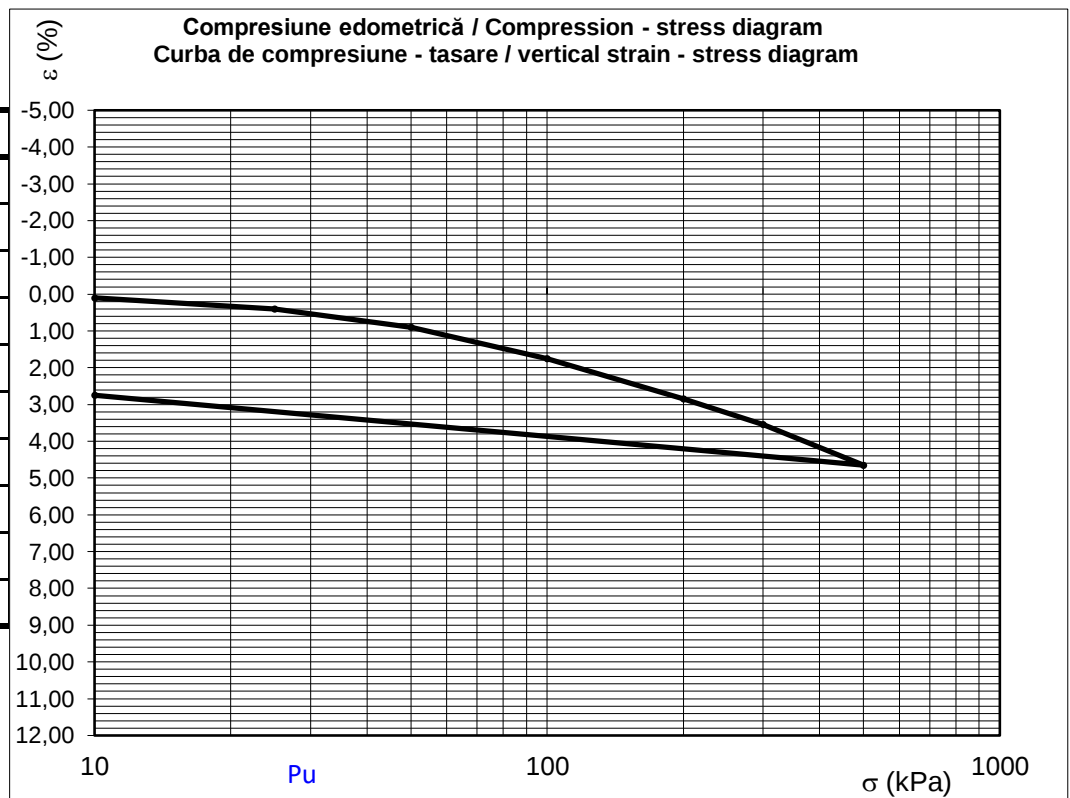
Raport de incercare nr. / Test report no.60 261

DETERMINAREA COMPRESIBILITATII PAMANTURILOR PRIN INCERCAREA IN EDMETRU

INCREMENTAL LOADING OEDOMETER TEST

STAS 8942/1-89

Indici fizici	INITIAL	FINAL
$m_u(g)$	165,52	164,63
$m_d(g)$	140,03	140,03
$V(cm^3)$	76,31	73,34
$w(%)$	18,20	17,57
$r(g/cm^3)$	2,17	2,24
$r_d(g/cm^3)$	1,83	1,91
$r_s(g/cm^3)$	2,72	2,72
$n(%)$	32,54	29,81
$e(-)$	0,482	0,425
$S(-)$	1,00	1,00



s (kPa)	e(%)	M (kPa)	mv(1/kPa)	av(1/kPa)
10	0,10			
25	0,40			
50	0,90			
100	1,75			
200	2,85			
300	3,55	14285,7	7,00E-05	1,04E-04
500	4,65	18181,8	5,50E-05	8,15E-05
10	2,75			

DESCRIEREA PROBEI /
DESCRIPTION OF THE SOIL:

Argila grasa cenusie

tare / very stiff consistency

Executat de / Performed by:

ing. Nina IOSIF

COD PROBA 60 261

Data / Date: 07.12.2020

SEF LABORATOR / LABORATORY HEAD

Constanta ANDRE

