YIELD LOCUS OF: Eskal150-0.2kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 253 Pa

Raw data:

N,pre = 0,4595 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3490,5	-0,660	0,0909	0,2305	0,0993
5	1	3490,5	-0,740	0,0909	0,2305	0,0914
2	1	3490,5	-0,730	0,1868	0,2384	0,1470
3	1	3490,5	-0,830	0,2778	0,2305	0,1788
4	1	3490,5	-0,810	0,3686	0,2305	0,2186

Stresses:

Tau,pre,m = 162 Pa SIGMA,pre,m = 253 Pa

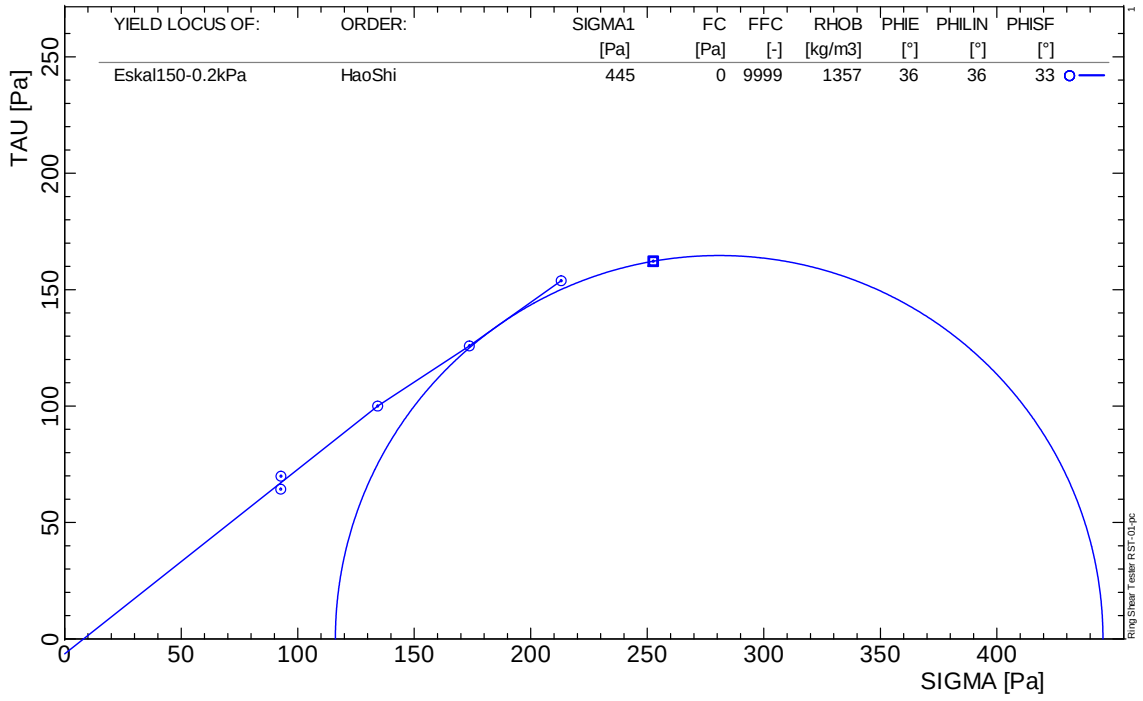
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	93	161	69	70	1361
5	93	161	64	64	1358
2	134	167	103	100	1358
3	174	161	125	126	1355
4	213	161	153	154	1355

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
445	0	9999,00	9999,00	-6	1357	35,9	35,9	32,7

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.2kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 253 Pa

Raw data:

N,pre = 0,4595 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3489,4	-0,440	0,0909	0,2384	0,0874
5	1	3489,4	-0,450	0,0909	0,2384	0,0874
2	1	3489,4	-0,430	0,1868	0,2464	0,1391
3	1	3489,4	-0,540	0,2778	0,2384	0,1828
4	1	3489,4	-0,490	0,3686	0,2384	0,2225

Stresses:

Tau,pre,m = 168 Pa SIGMA,pre,m = 253 Pa

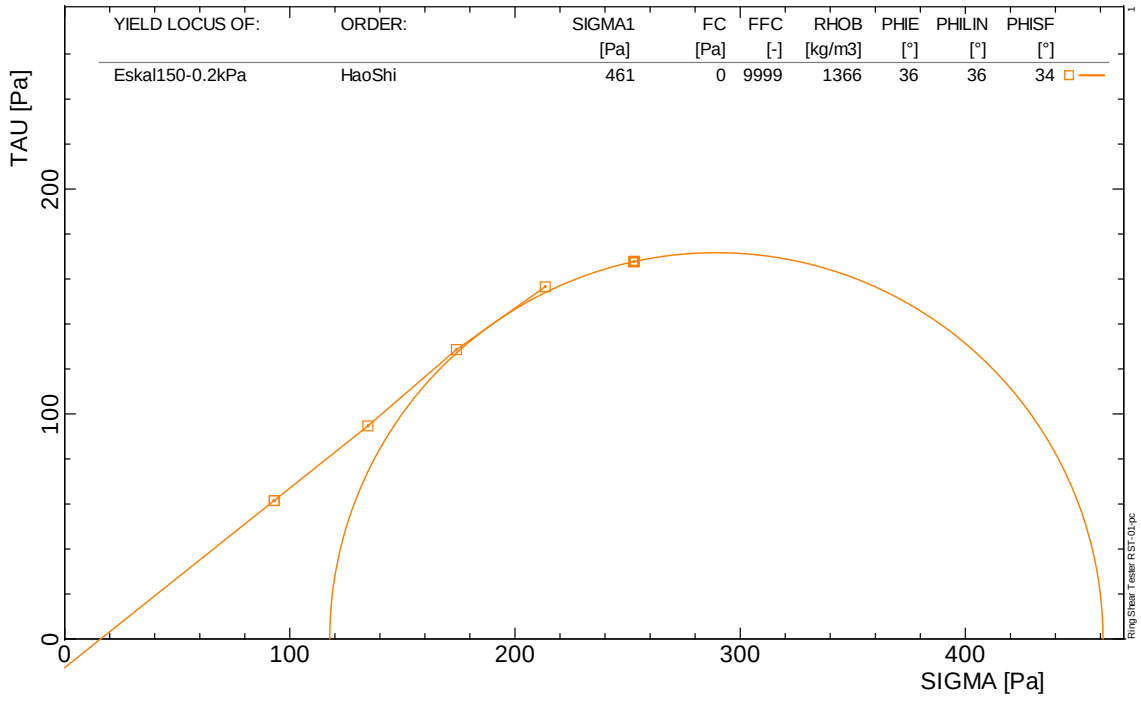
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	93	167	61	62	1367
5	93	167	61	62	1367
2	135	172	97	95	1367
3	174	167	128	129	1364
4	213	167	156	157	1365

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
461	0	9999,00	9999,00	-13	1366	36,4	36,4	33,6

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.2kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 253 Pa

Raw data:

N,pre = 0,4595 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3491,8	-0,530	0,0909	0,2305	0,0914
5	1	3491,8	-0,670	0,0909	0,2305	0,0834
2	1	3491,8	-0,640	0,1868	0,2305	0,1351
3	1	3491,8	-0,650	0,2778	0,2305	0,1748
4	1	3491,8	-0,670	0,3686	0,2305	0,2146

Stresses:

Tau,pre,m = 161 Pa SIGMA,pre,m = 253 Pa

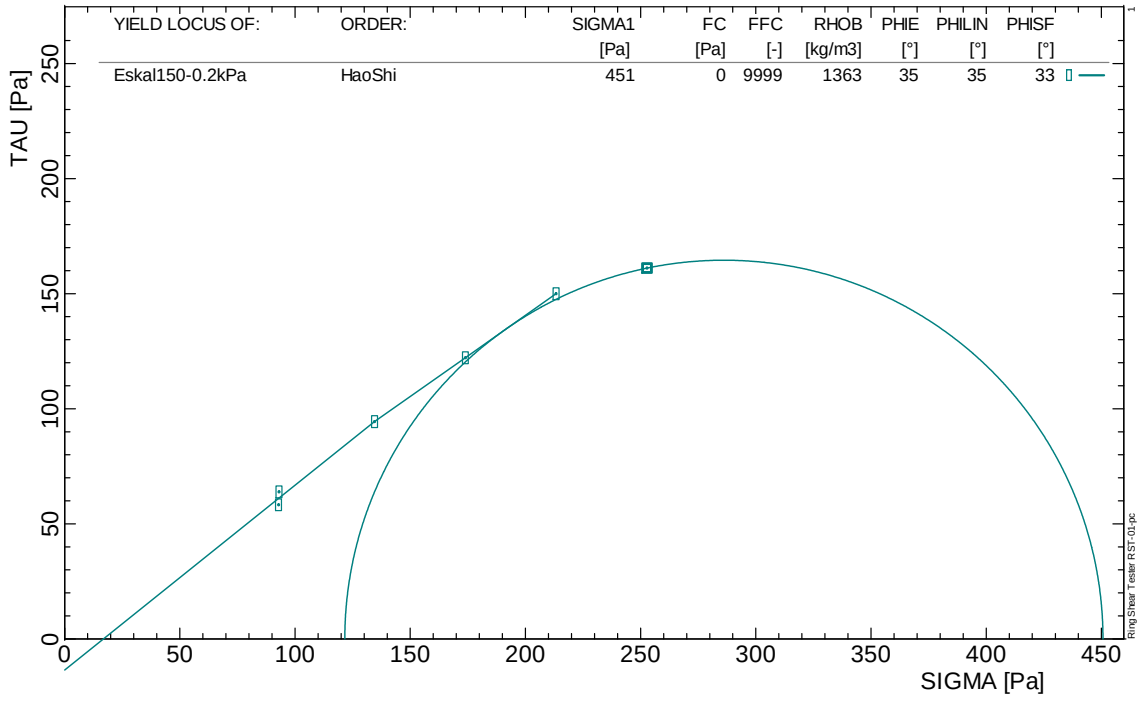
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	93	161	64	64	1367
5	93	161	58	58	1362
2	134	161	94	94	1363
3	174	161	122	122	1362
4	213	161	150	150	1362

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
451	0	9999,00	9999,00	-14	1363	35,1	35,1	32,5

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.4kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 454 Pa

Raw data:

N,pre = 0,9241 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3490,5	-0,630	0,1868	0,4292	0,1431
5	1	3490,5	-0,390	0,1868	0,4212	0,1351
2	1	3490,5	-0,580	0,3686	0,4212	0,2265
3	1	3490,5	-0,520	0,5555	0,4133	0,3060
4	1	3490,5	-0,440	0,7373	0,4172	0,3815

Stresses:

Tau,pre,m = 294 Pa SIGMA,pre,m = 454 Pa

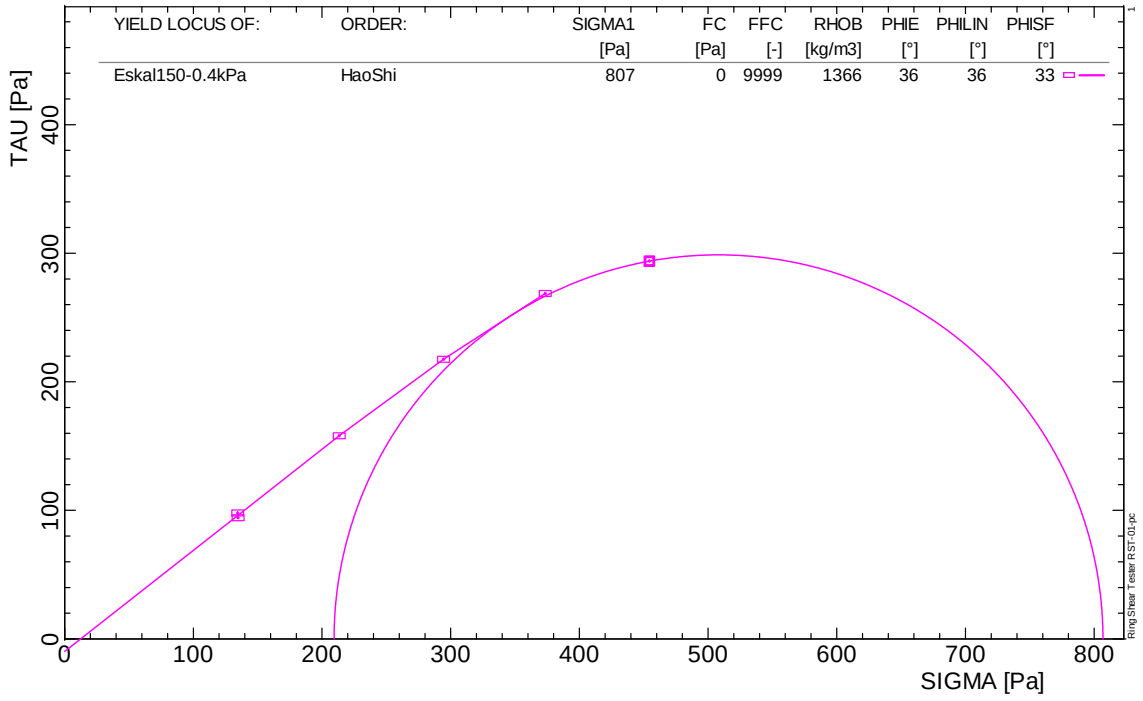
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	134	300	100	98	1362
5	135	294	94	94	1370
2	213	294	158	158	1363
3	295	289	214	218	1365
4	373	292	267	269	1368

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
807	0	9999,00	9999,00	-10	1366	36,0	36,0	32,9

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.4kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 455 Pa

Raw data:

N,pre = 0,9241 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3489,4	-0,460	0,1868	0,4212	0,1351
5	1	3489,4	-0,180	0,1868	0,4212	0,1311
2	1	3489,4	-0,400	0,3686	0,4172	0,2225
3	1	3489,4	-0,340	0,5555	0,4093	0,3020
4	1	3489,4	-0,250	0,7373	0,4172	0,3735

Stresses:

Tau,pre,m = 292 Pa SIGMA,pre,m = 455 Pa

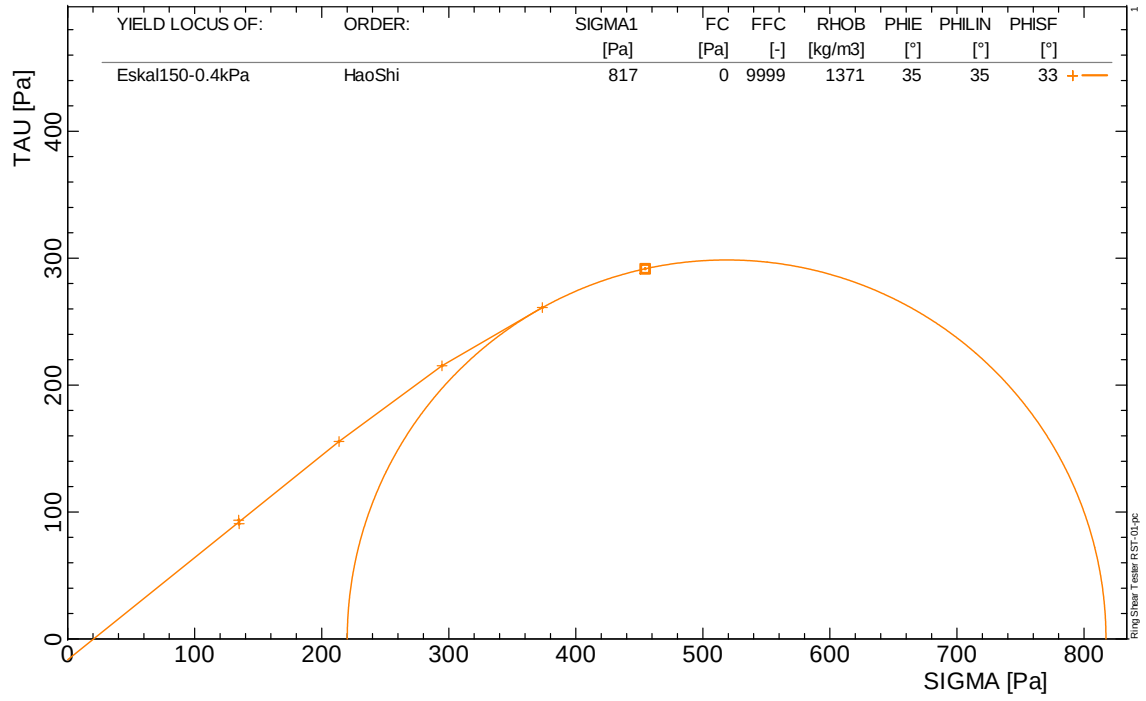
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	135	294	94	94	1366
5	135	294	92	91	1376
2	214	292	156	156	1369
3	295	286	211	215	1371
4	374	292	261	261	1374

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
817	0	9999,00	9999,00	-16	1371	35,1	35,1	32,7

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.4kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 455 Pa

Raw data:

N,pre = 0,9241 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3491,8	-0,580	0,1868	0,4292	0,1391
5	1	3491,8	-0,320	0,1868	0,4212	0,1351
2	1	3491,8	-0,520	0,3686	0,4212	0,2265
3	1	3491,8	-0,460	0,5555	0,4172	0,3020
4	1	3491,8	-0,380	0,7373	0,4212	0,3815

Stresses:

Tau,pre,m = 295 Pa SIGMA,pre,m = 455 Pa

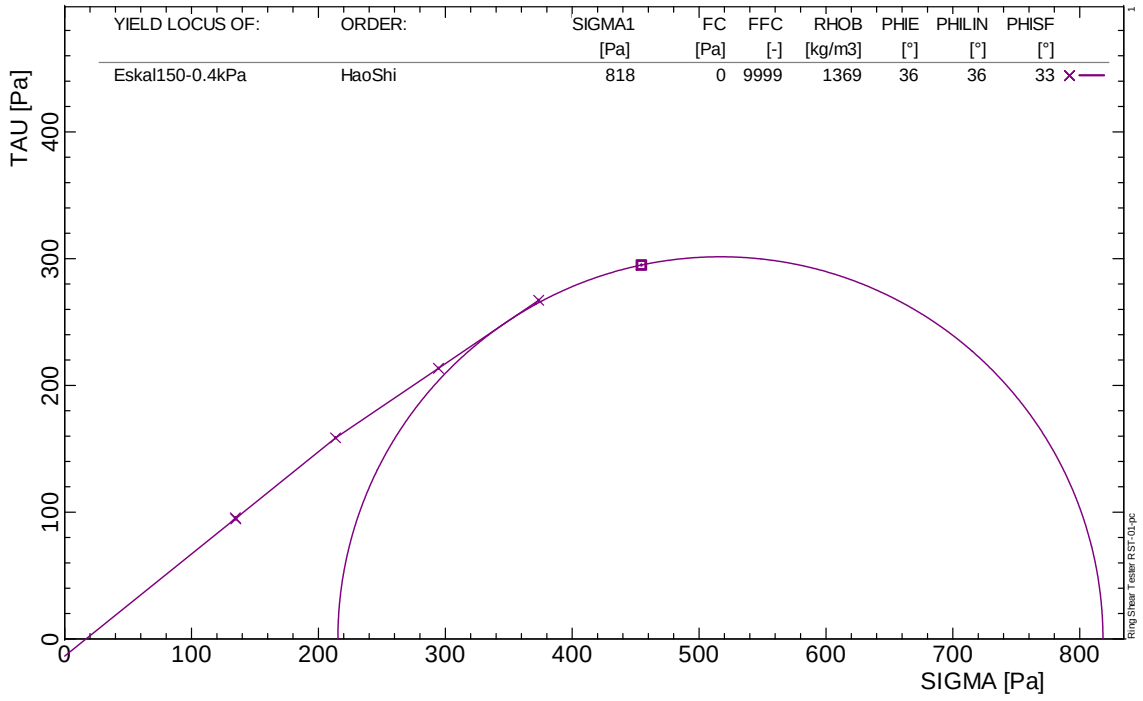
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	135	300	97	96	1365
5	135	294	94	95	1374
2	213	294	158	159	1367
3	295	292	211	214	1369
4	374	294	267	267	1372

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
818	0	9999,00	9999,00	-14	1369	35,7	35,7	33,0

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.6kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 654 Pa

Raw data:

N,pre = 1,3837 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3490,5	-0,300	0,2778	0,6239	0,1788
5	1	3490,5	-0,140	0,2778	0,6119	0,1748
2	1	3490,5	-0,270	0,5555	0,6080	0,3099
3	1	3490,5	-0,250	0,8282	0,5960	0,4292
4	1	3490,5	-0,190	1,1059	0,6080	0,5484

Stresses:

Tau,pre,m = 426 Pa SIGMA,pre,m = 654 Pa

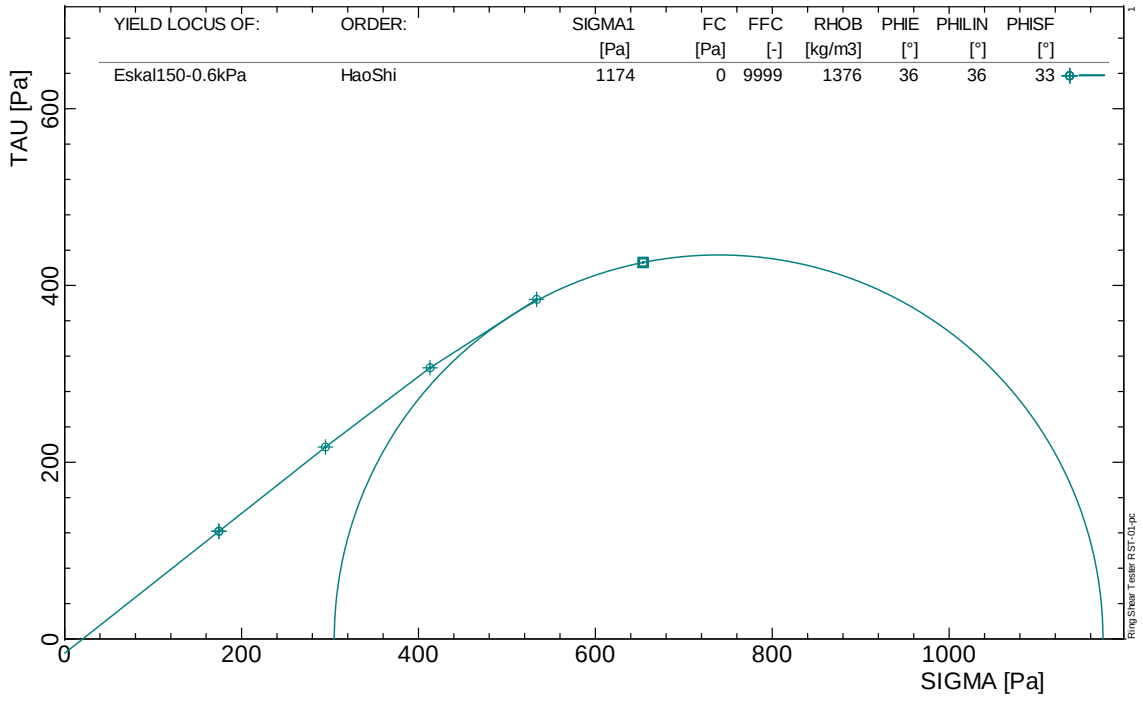
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	174	436	125	122	1373
5	175	428	122	122	1379
2	295	425	217	217	1374
3	413	417	300	307	1375
4	534	425	383	384	1377

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
1174	0	9999,00	9999,00	-16	1376	36,0	36,0	33,1

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.6kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 654 Pa

Raw data:

N,pre = 1,3837 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3489,4	-0,080	0,2778	0,6437	0,1907
5	1	3489,4	0,090	0,2778	0,6358	0,1828
2	1	3489,4	-0,030	0,5555	0,6318	0,3219
3	1	3489,4	0,000	0,8282	0,6278	0,4451
4	1	3489,4	0,050	1,1059	0,6318	0,5643

Stresses:

Tau,pre,m = 443 Pa SIGMA,pre,m = 654 Pa

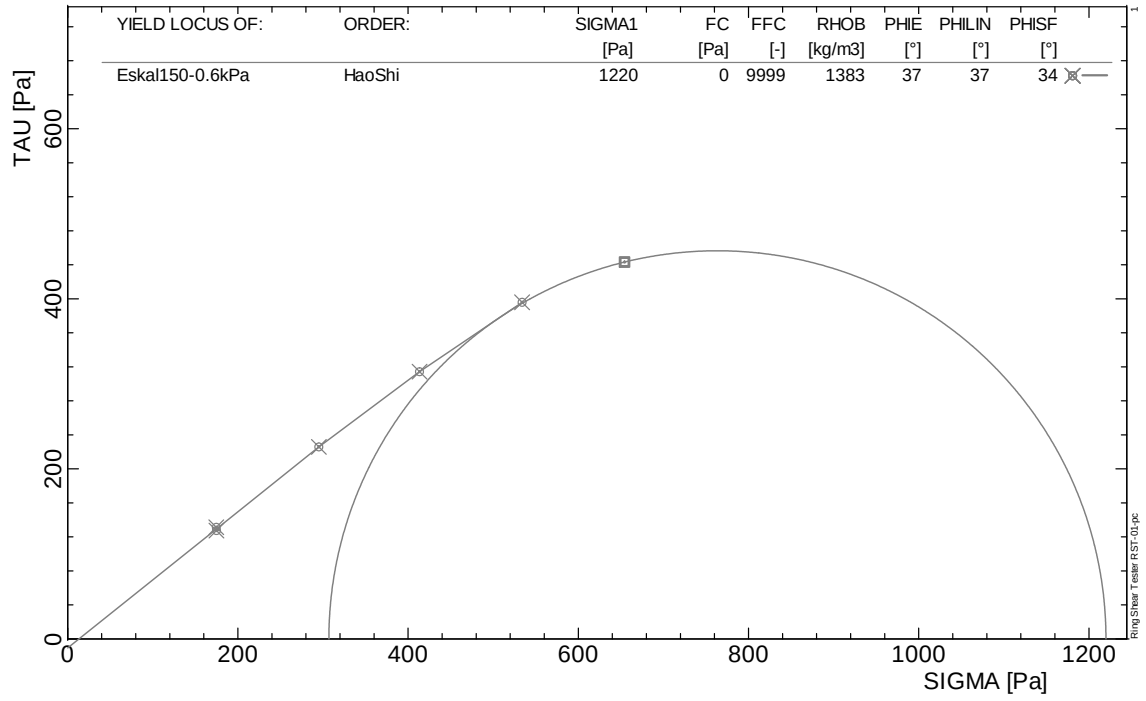
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	175	450	133	131	1380
5	175	444	128	127	1386
2	295	442	225	226	1382
3	413	439	311	314	1383
4	534	442	394	396	1384

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
1220	0	9999,00	9999,00	-11	1383	36,7	36,7	34,1

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal150-0.6kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA,pre,m = 654 Pa

Raw data:

N,pre = 1,3837 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	3491,8	-0,270	0,2778	0,6517	0,1947
5	1	3491,8	-0,050	0,2778	0,6398	0,1907
2	1	3491,8	-0,210	0,5555	0,6358	0,3258
3	1	3491,8	-0,170	0,8282	0,6278	0,4490
4	1	3491,8	-0,110	1,1059	0,6358	0,5682

Stresses:

Tau,pre,m = 446 Pa SIGMA,pre,m = 654 Pa

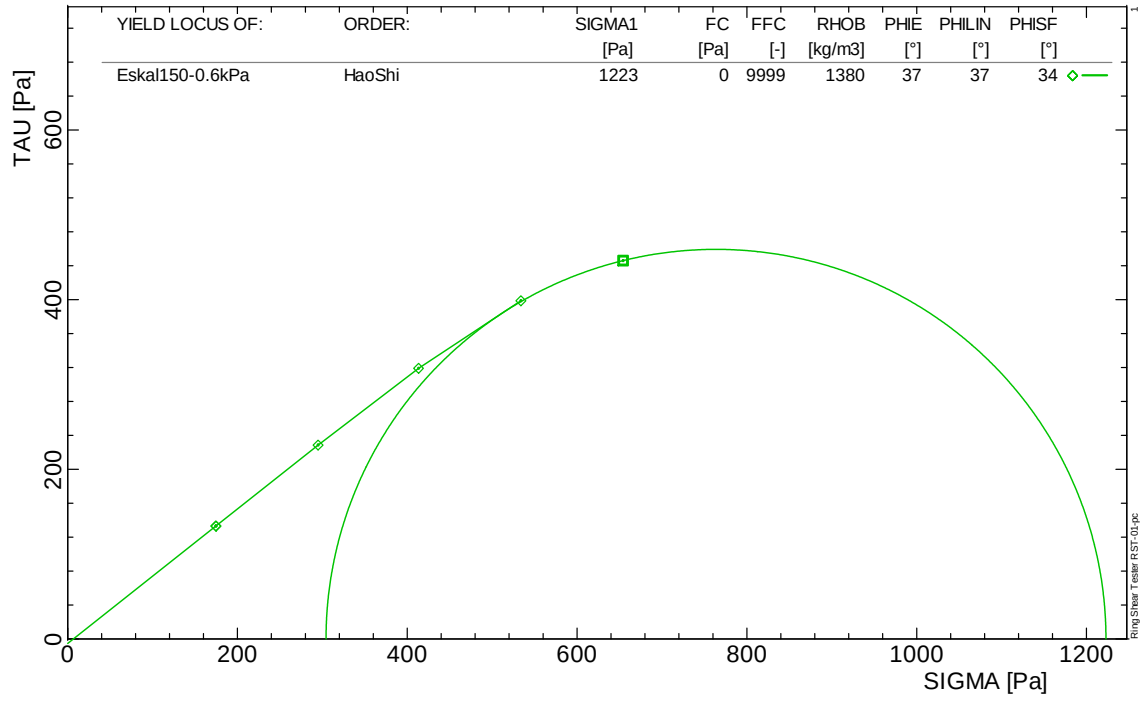
No.	SIGMA,sh [Pa]	TAU,pre [Pa]	TAU,sh [Pa]	TAU,sh,pr [Pa]	RHOB [kg/m3]
1	174	456	136	133	1376
5	175	447	133	133	1384
2	295	444	228	229	1378
3	413	439	314	319	1379
4	534	444	397	399	1381

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU,C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
1223	0	9999,00	9999,00	-5	1380	37,0	37,0	34,3

Approximation of the yield locus: Straight sections

Prorating: on



Flowability (summary of test results for yield loci)

Bulk solid	Order	SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	RHOB [kg/m3]
Eskal150-0.2kPa	HaoShi	445	0	9999,00	9999,00	1357
Eskal150-0.2kPa	HaoShi	461	0	9999,00	9999,00	1366
Eskal150-0.2kPa	HaoShi	451	0	9999,00	9999,00	1363
Eskal150-0.4kPa	HaoShi	807	0	9999,00	9999,00	1366
Eskal150-0.4kPa	HaoShi	817	0	9999,00	9999,00	1371
Eskal150-0.4kPa	HaoShi	818	0	9999,00	9999,00	1369
Eskal150-0.6kPa	HaoShi	1174	0	9999,00	9999,00	1376
Eskal150-0.6kPa	HaoShi	1220	0	9999,00	9999,00	1383
Eskal150-0.6kPa	HaoShi	1223	0	9999,00	9999,00	1380

Approximation of the yield loci: Straight sections
Prorating: on