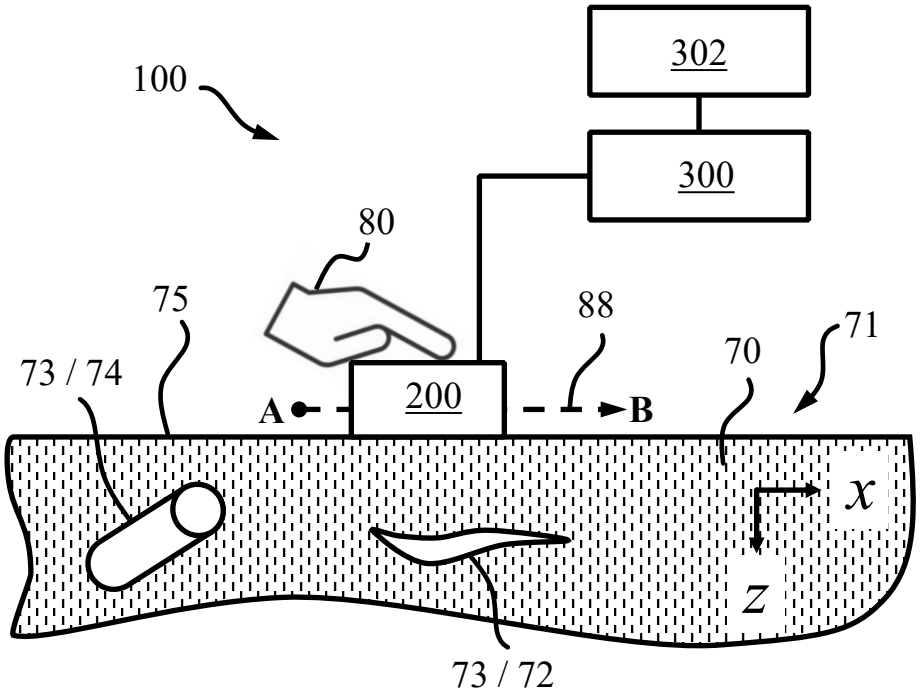

100
302
300
80
75
88
71
73 / 74
70
A
200
B
x
z
73 / 72

FIG. 1A

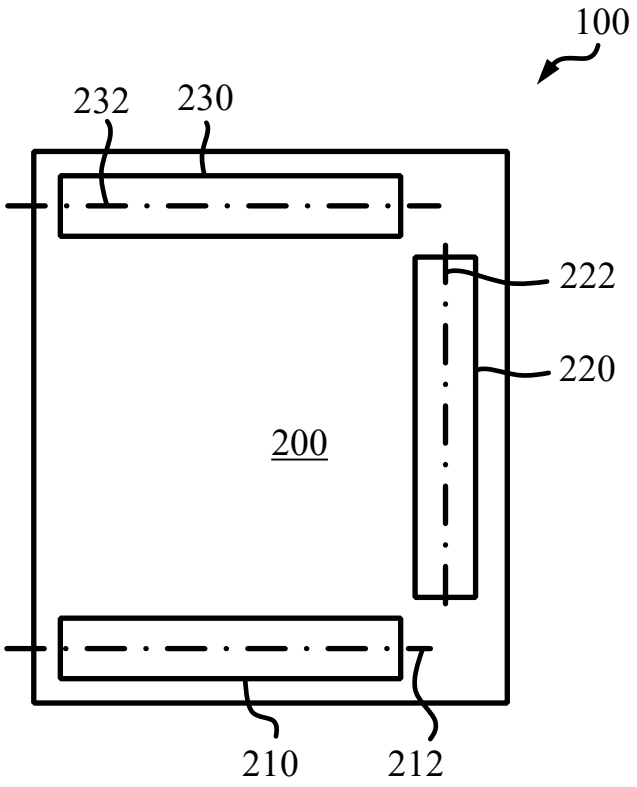

100
232
230
222
220
200
210
212

FIG. 1B

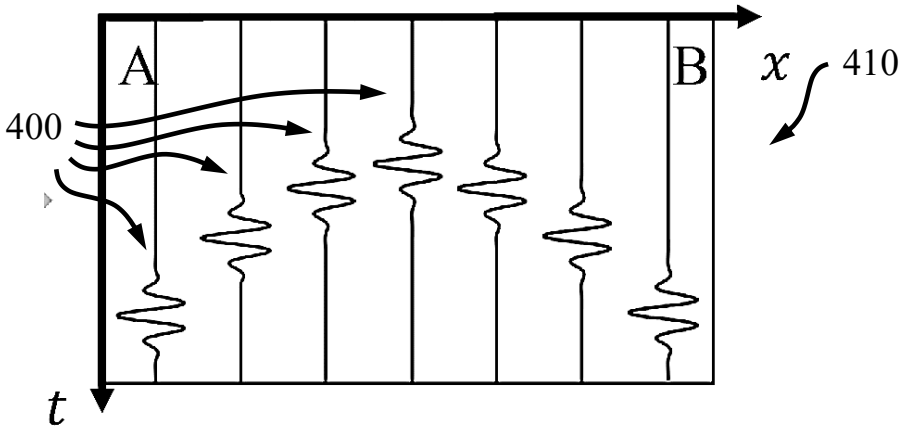


FIG. 2

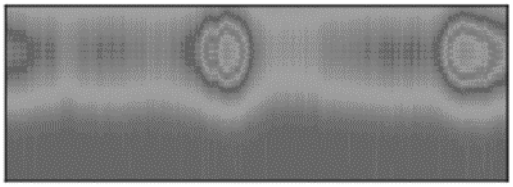


FIG. 3A

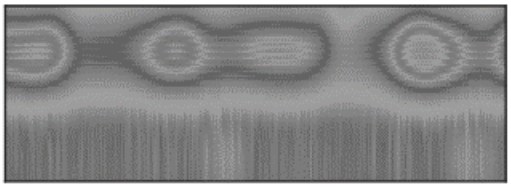


FIG. 3B

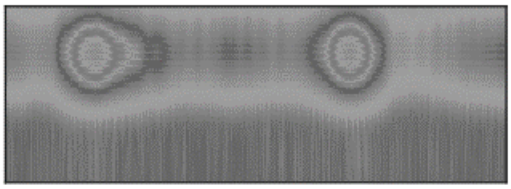


FIG. 3C

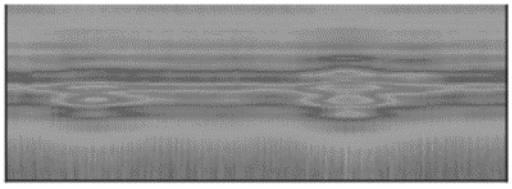


FIG. 3D

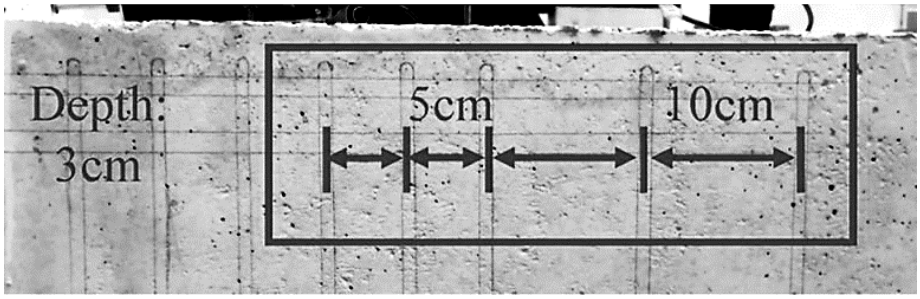

Depth:
3cm
5cm
10cm

FIG. 4A

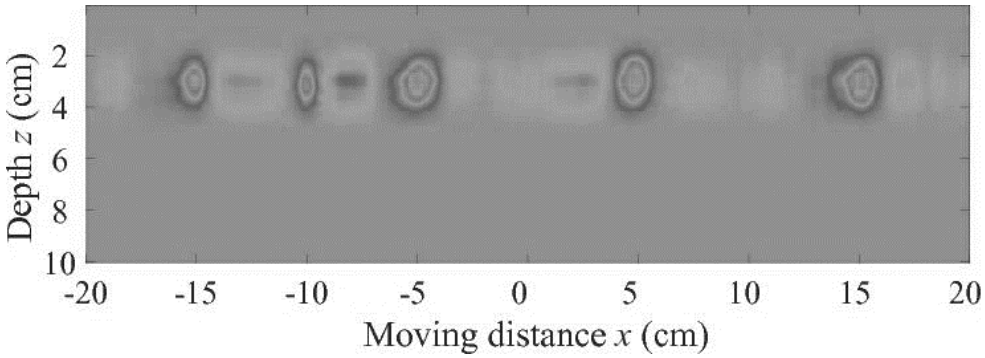

Depth z (cm)
2
4
6
8
10
-20
-15
-10
-5
0
5
10
15
20
Moving distance x (cm)

FIG. 4B

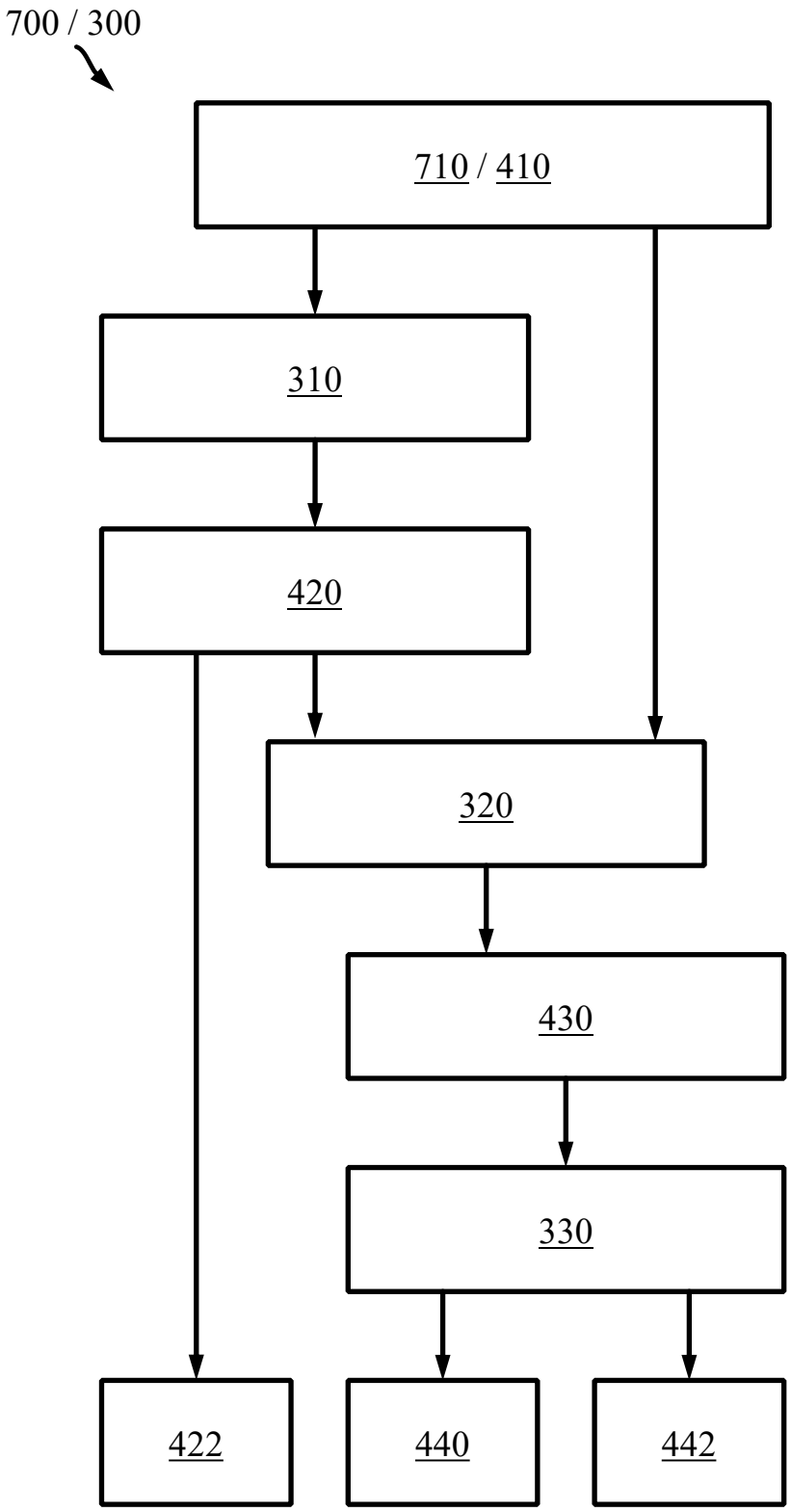


FIG. 5

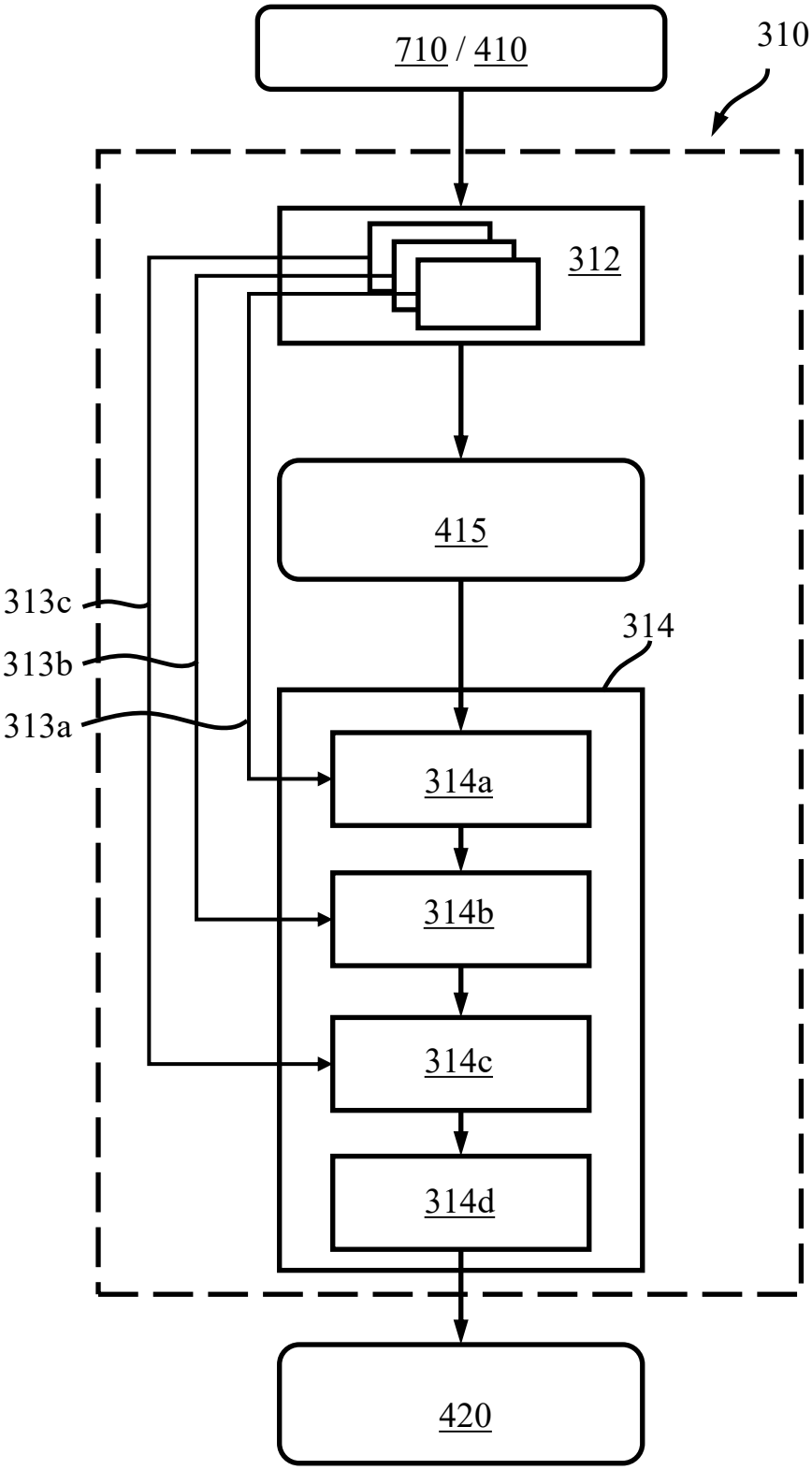


FIG. 6

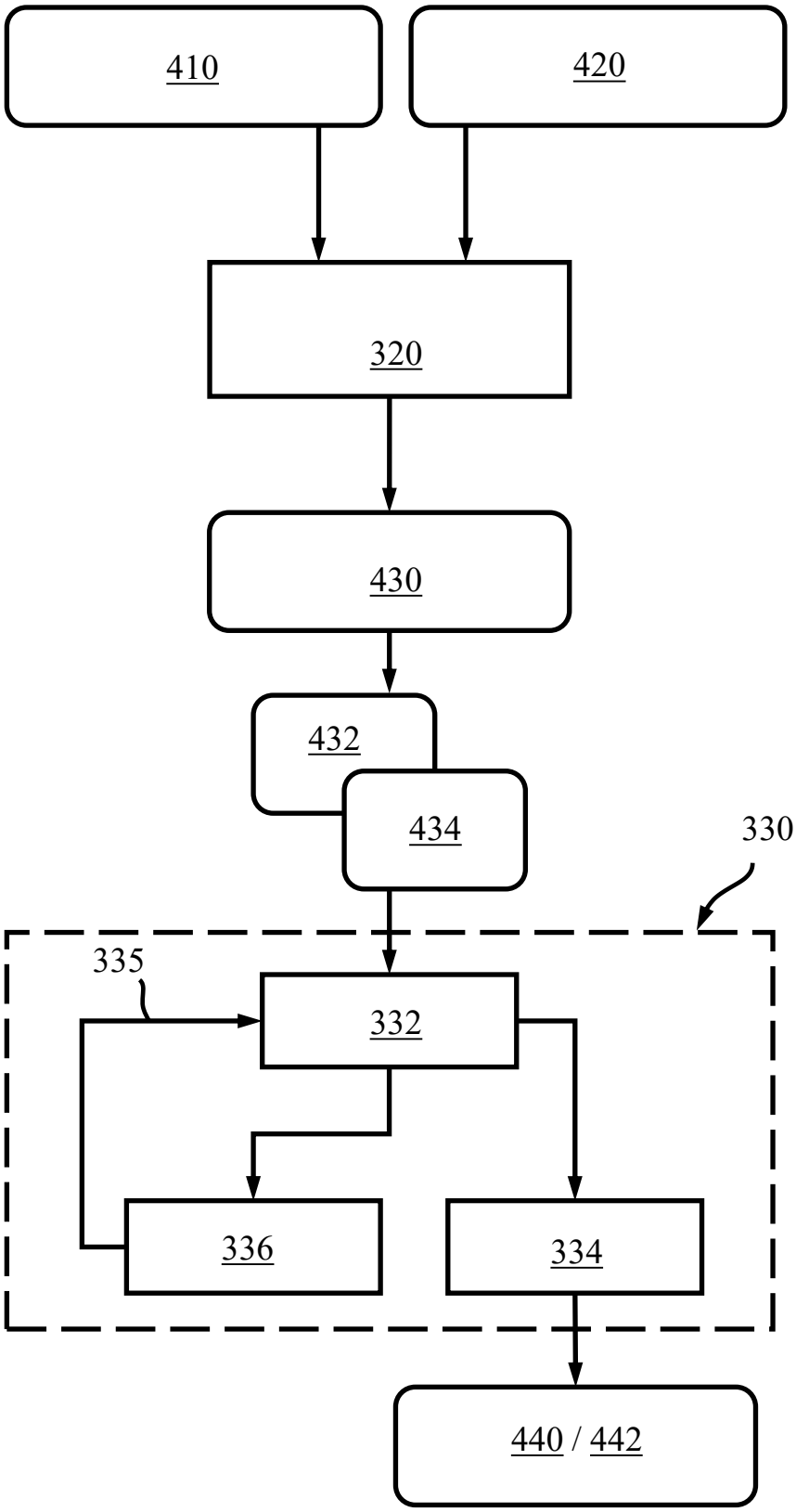


FIG. 7

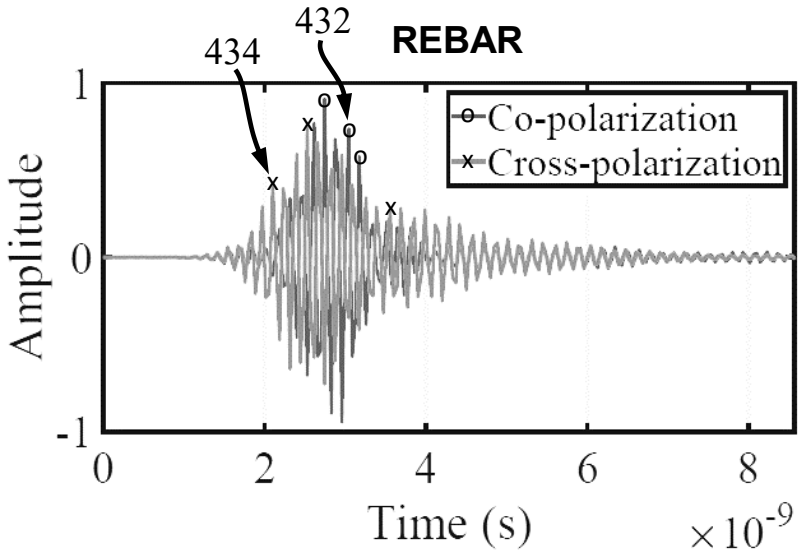

REBAR
434
432
Co-polarization
Cross-polarization
Amplitude
Time (s)
×10^-9
1
0
-1
0
2
4
6
8

FIG. 8A

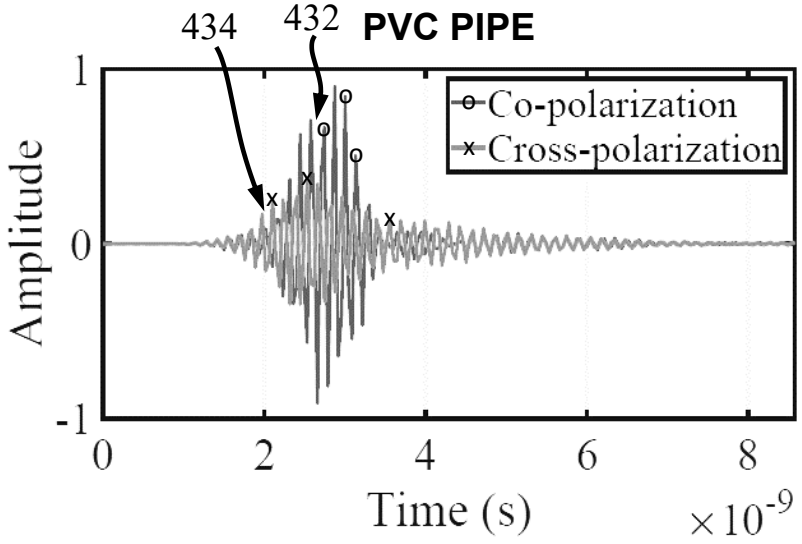

PVC PIPE
434
432
Co-polarization
Cross-polarization
Amplitude
Time (s)
×10^-9
1
0
-1
0
2
4
6
8

FIG. 8B

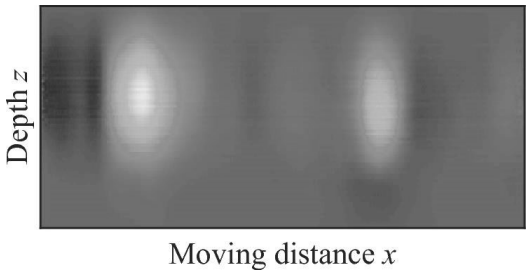


FIG. 9A

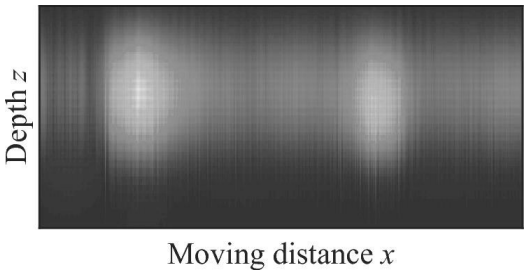


FIG. 9B

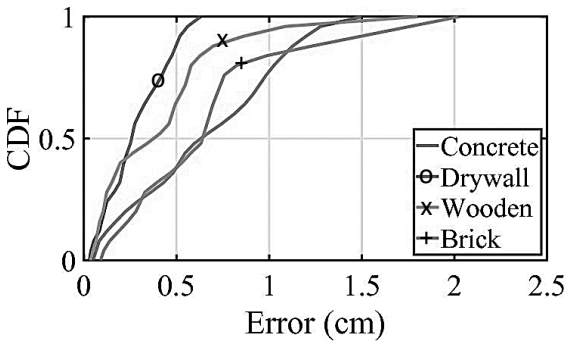


FIG. 10A

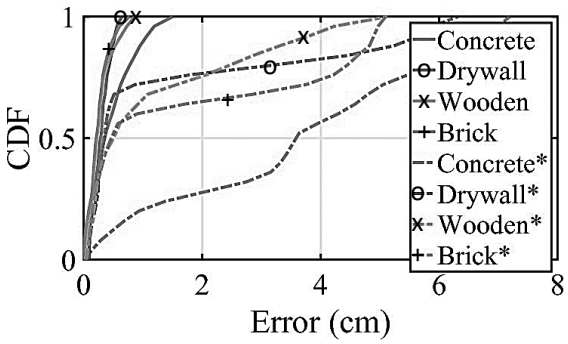


FIG. 10B

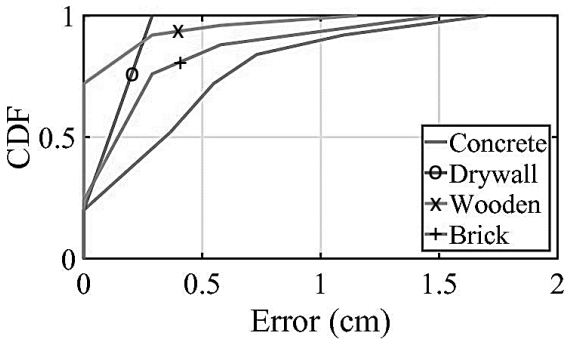


FIG. 11A

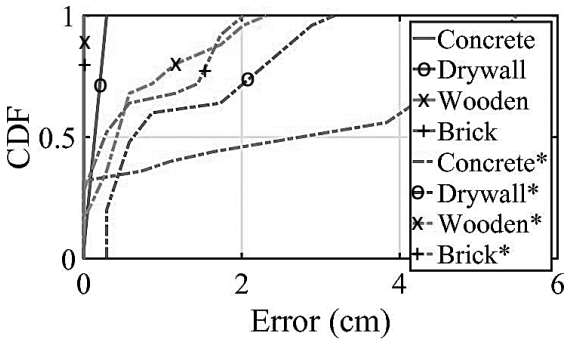


FIG. 11B

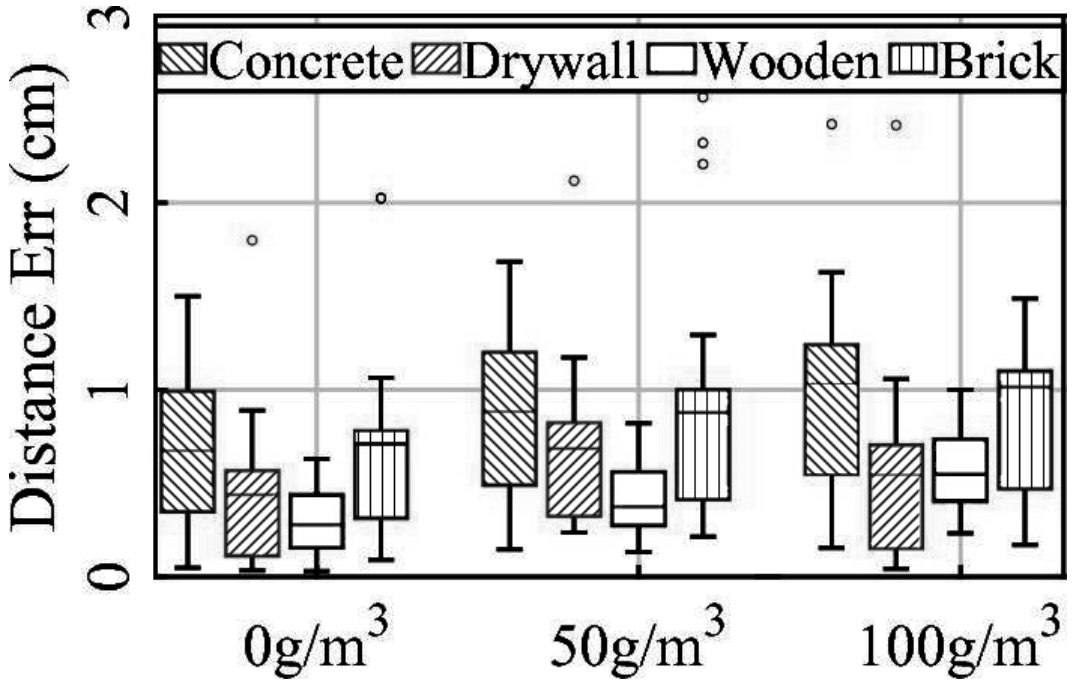


FIG. 12A

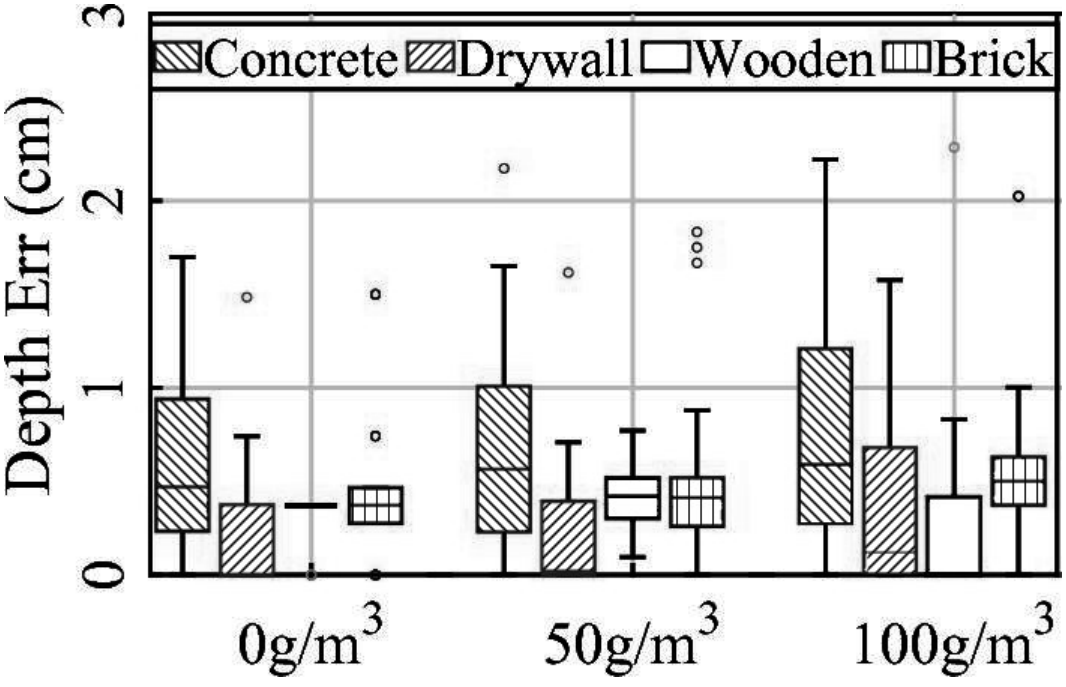


FIG. 12B

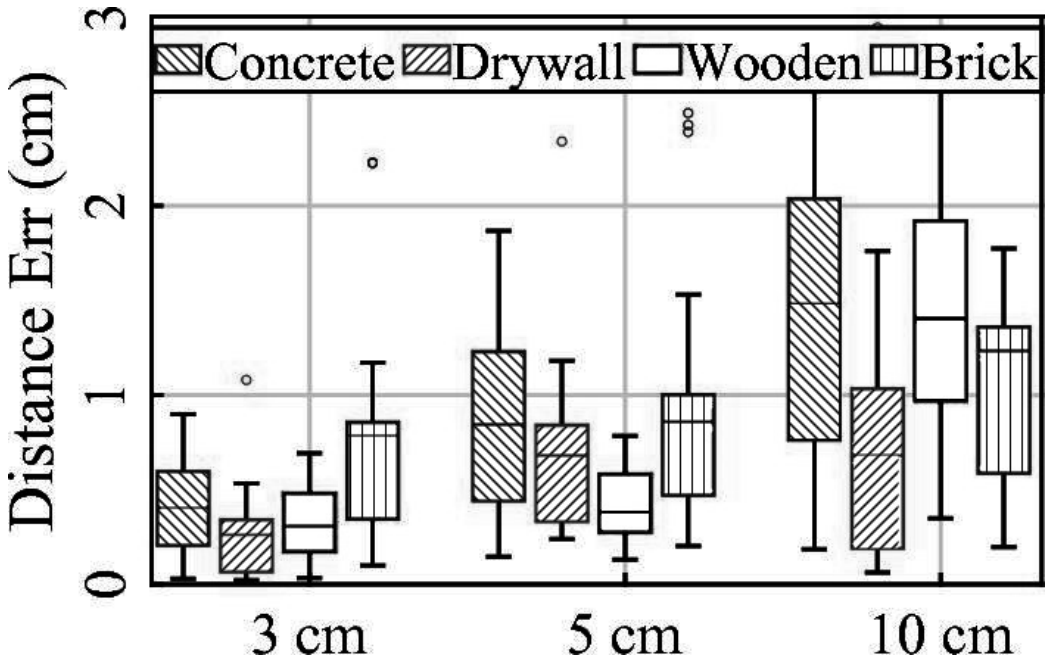


FIG. 13A

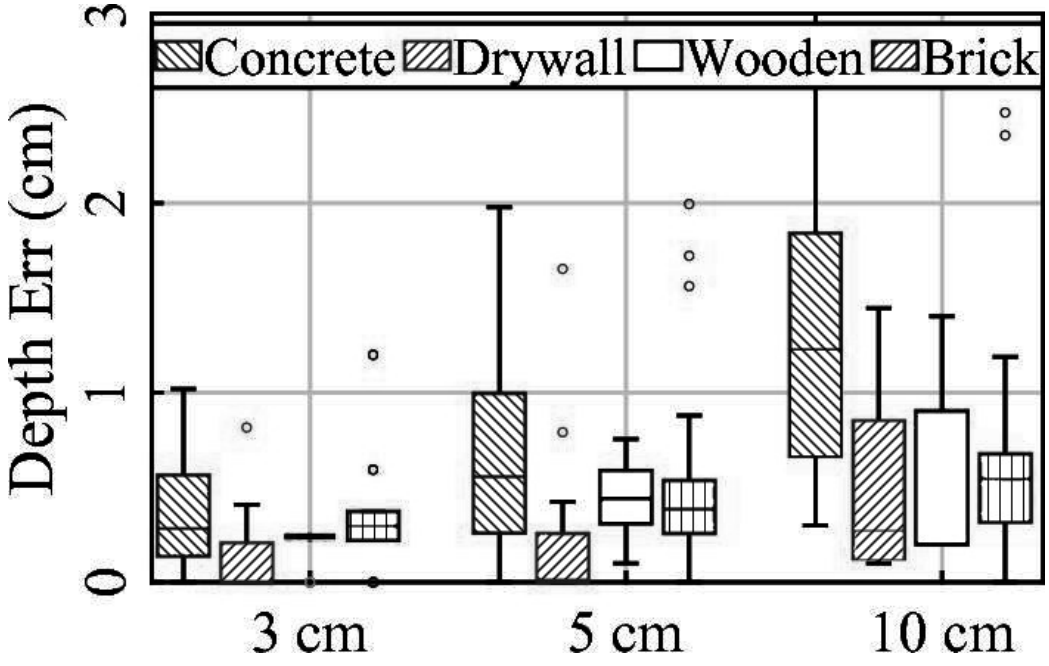


FIG. 13B

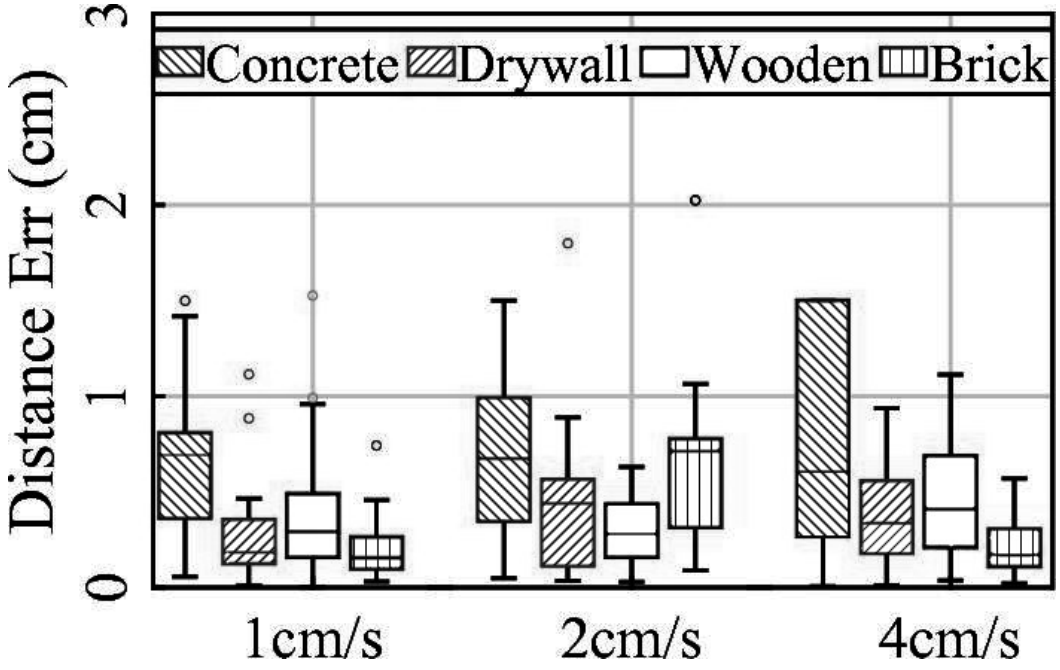


FIG. 14A

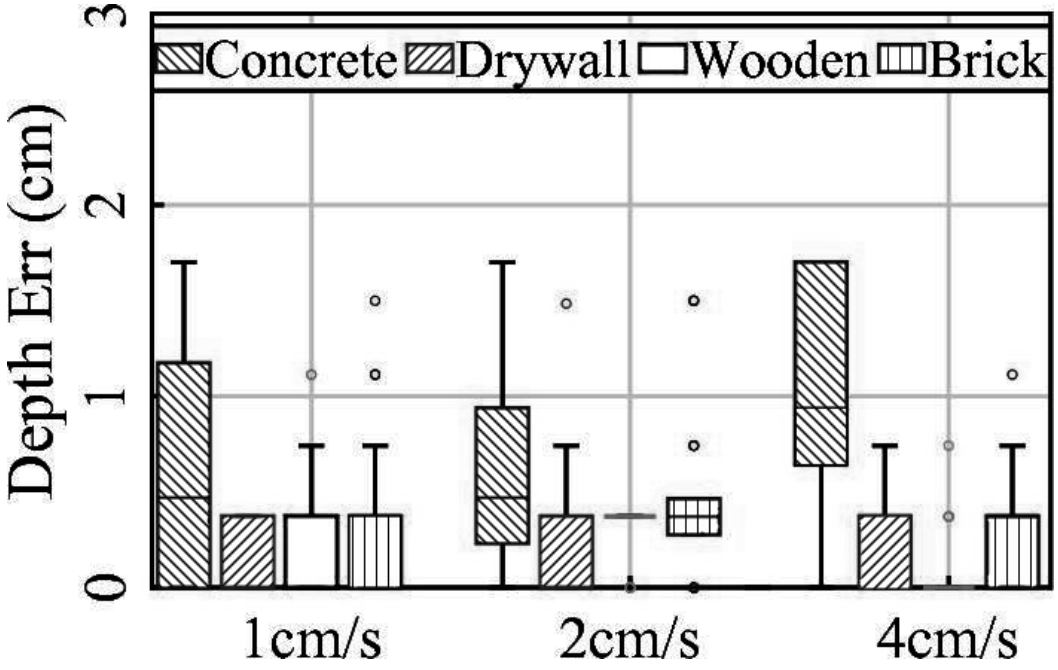


FIG. 14B

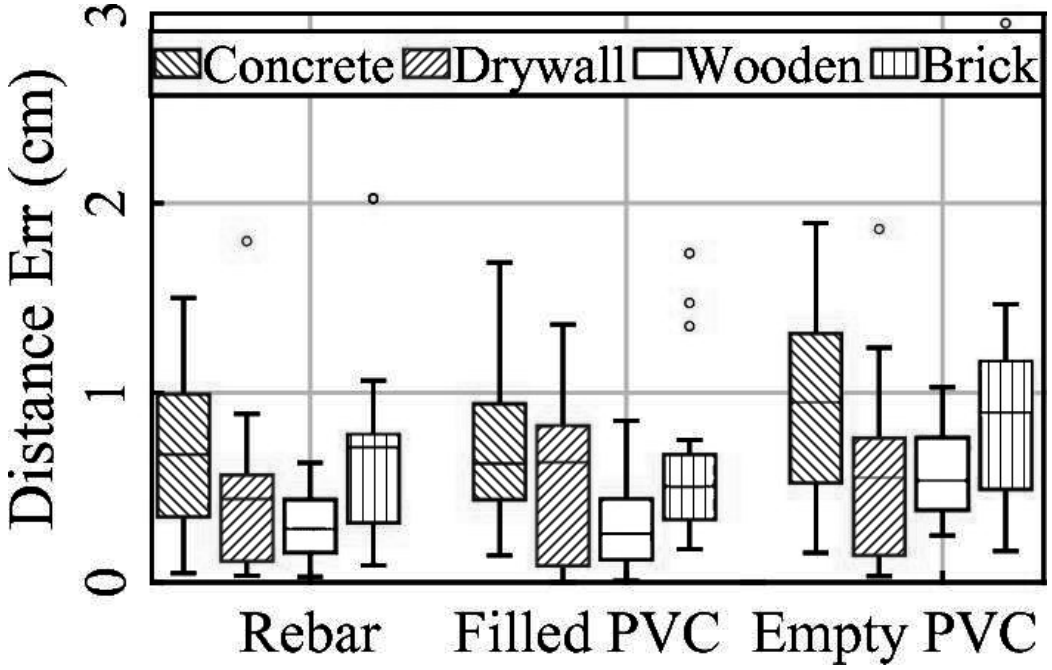


FIG. 15A

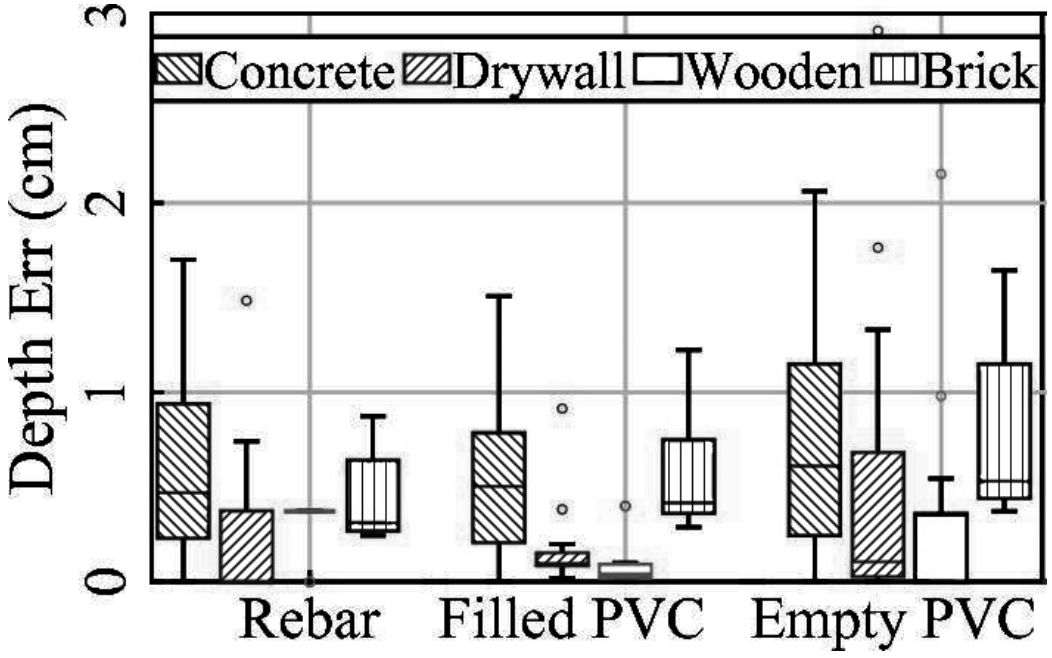


FIG. 15B

Wall medium: Concrete Wall

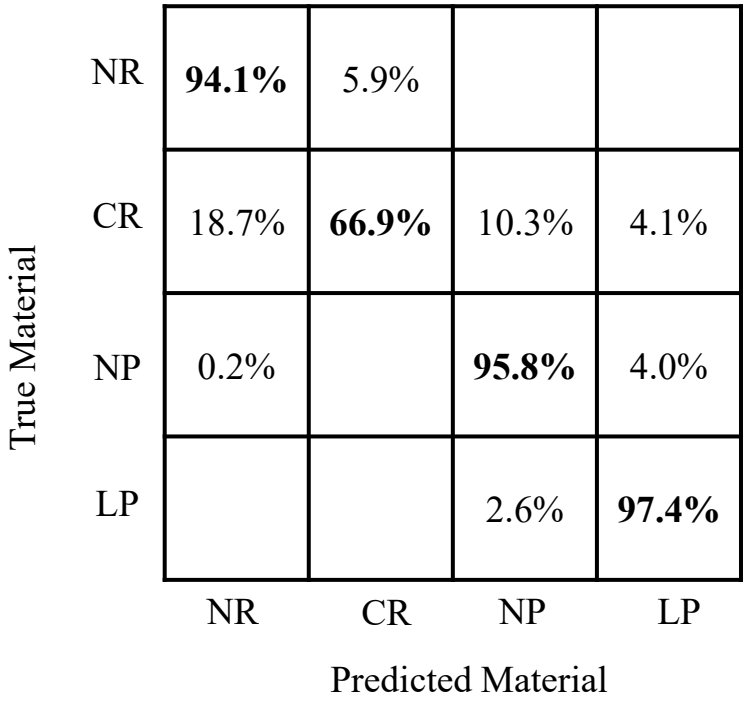


FIG. 16A

Wall medium: Dry wall

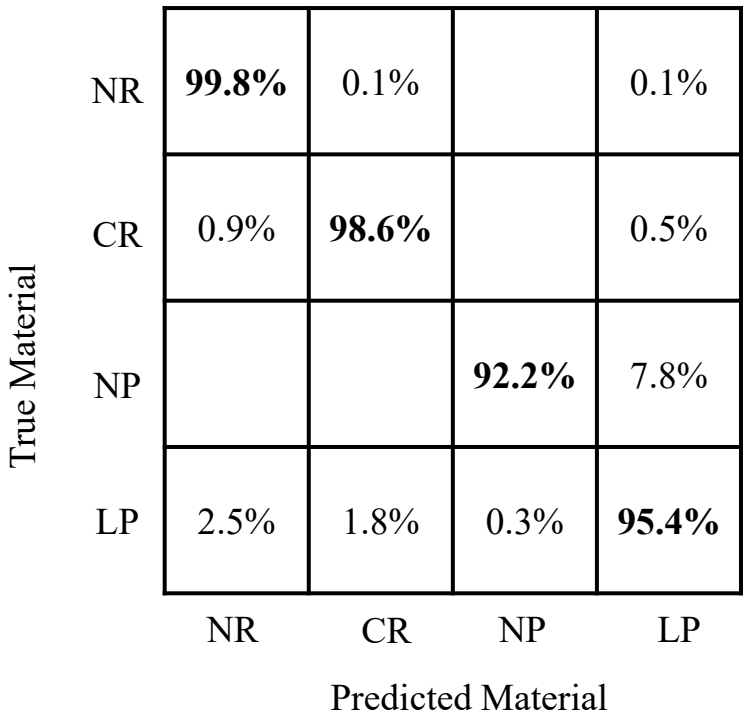


FIG. 16B

Wall medium: Wooden Wall

True Material \ Predicted Material	NR	CR	NP	LP
NR	**97.7%**	0.2%	0.8%	1.3%
CR		**100.0%**		
NP			**99.2%**	0.8%
LP		5.2%	0.4%	**94.4%**

FIG. 16C

Wall medium: Brick wall

True Material \ Predicted Material	NR	CR	NP	LP
NR	**82.3%**	6.2%	11.0%	0.5%
CR	0.3%	**97.7%**		2.0%
NP		15.7%	**82.0%**	2.3%
LP		20.9%	4.5%	**74.6%**

FIG. 16D

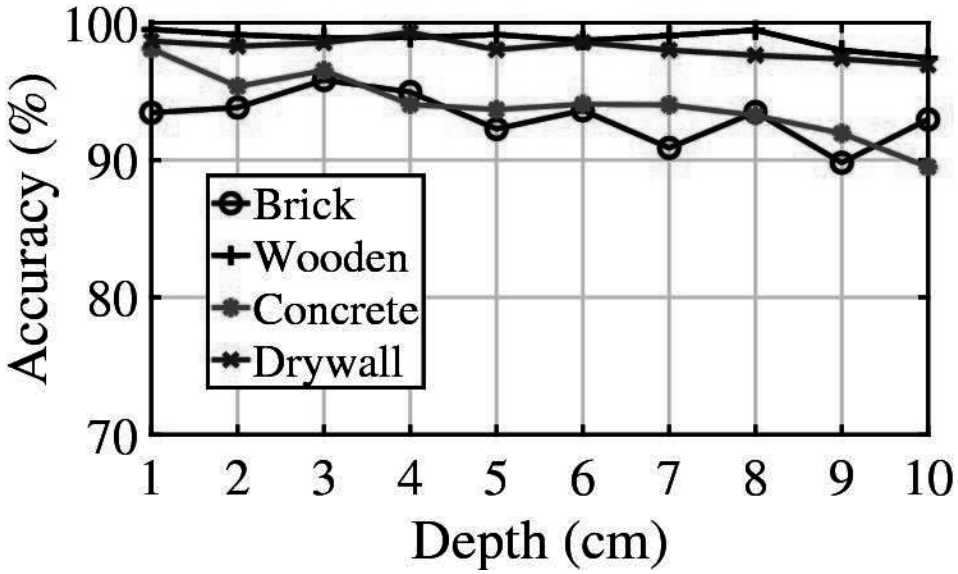


FIG. 17A

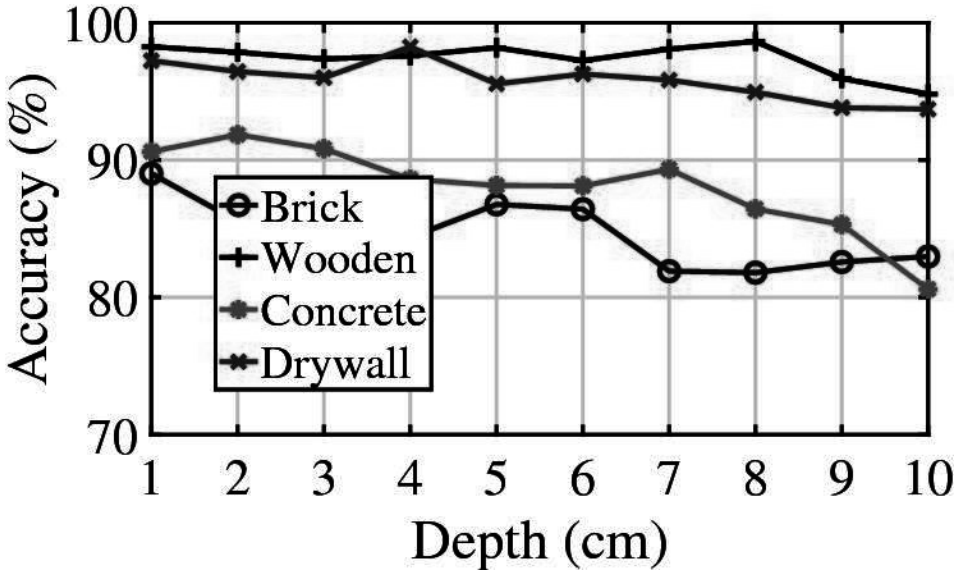


FIG. 17B

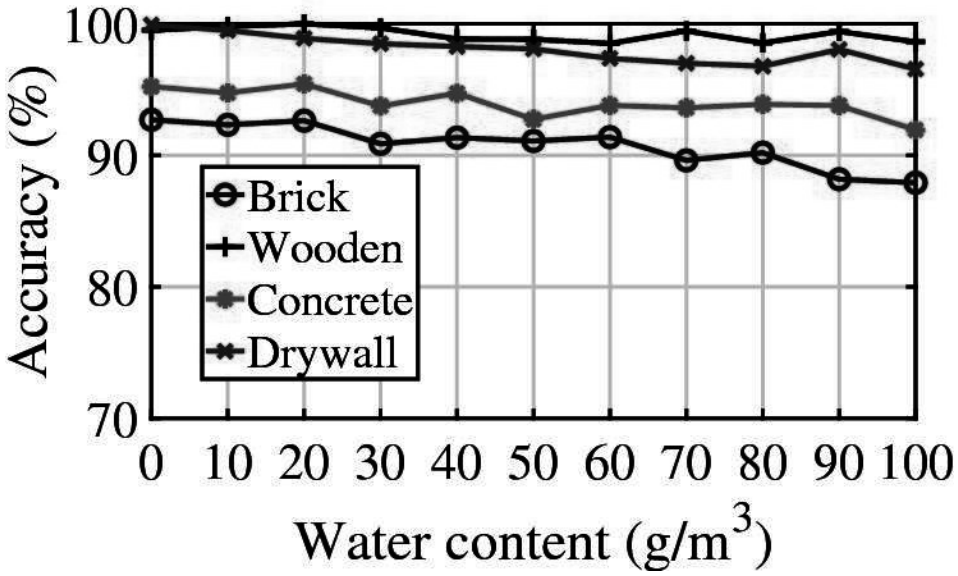


FIG. 18A

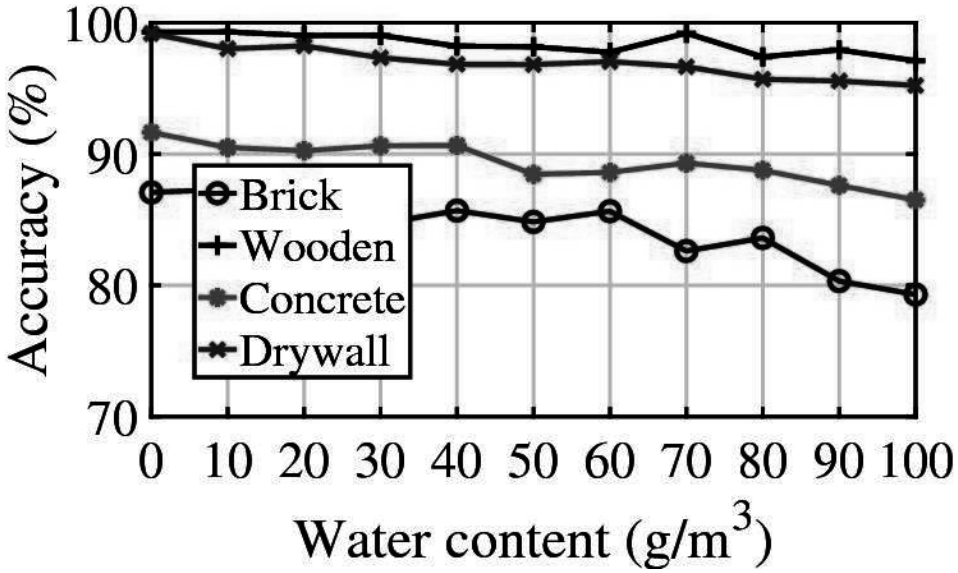


FIG. 18B

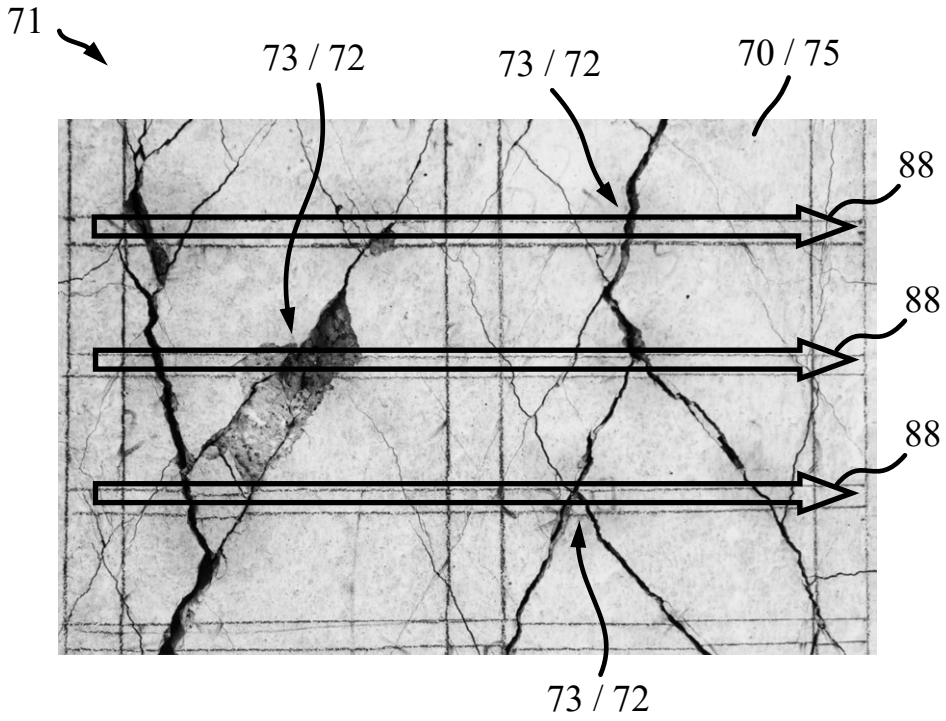


FIG. 19A

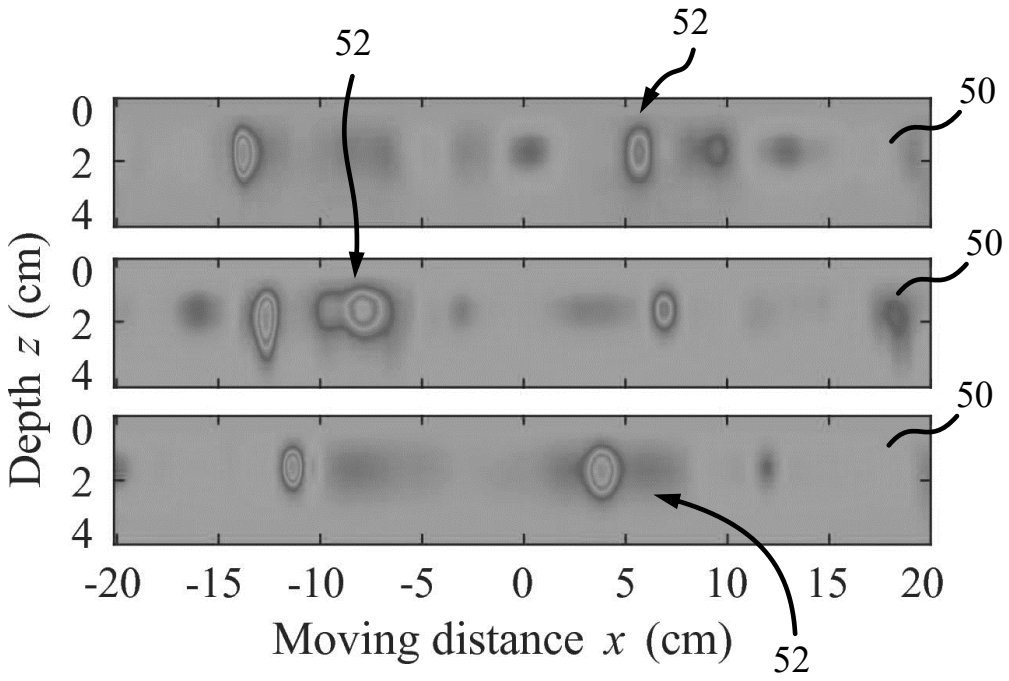


FIG. 19B

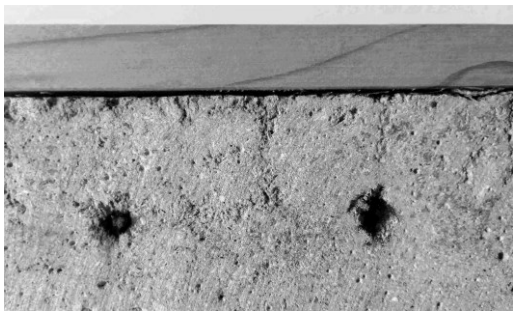


FIG. 20A

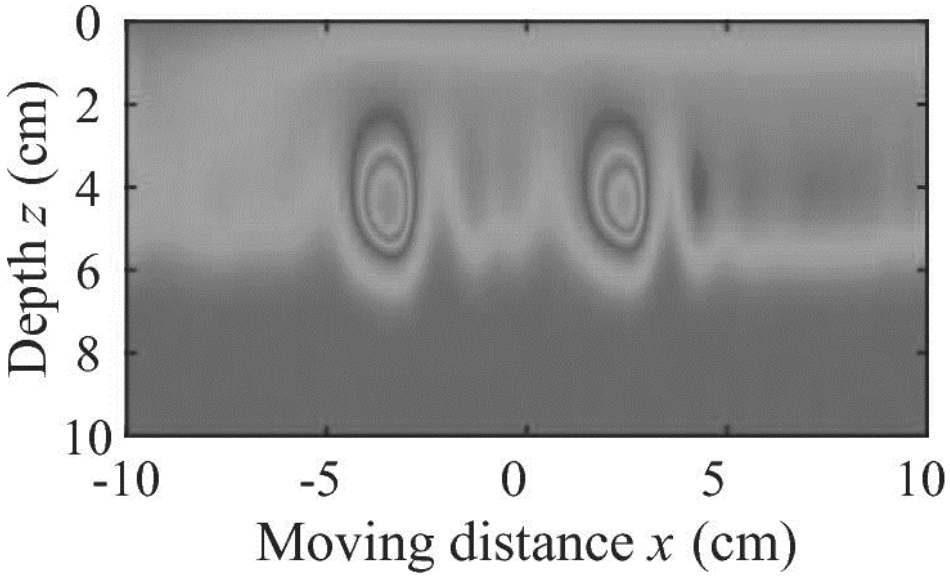


FIG. 20B