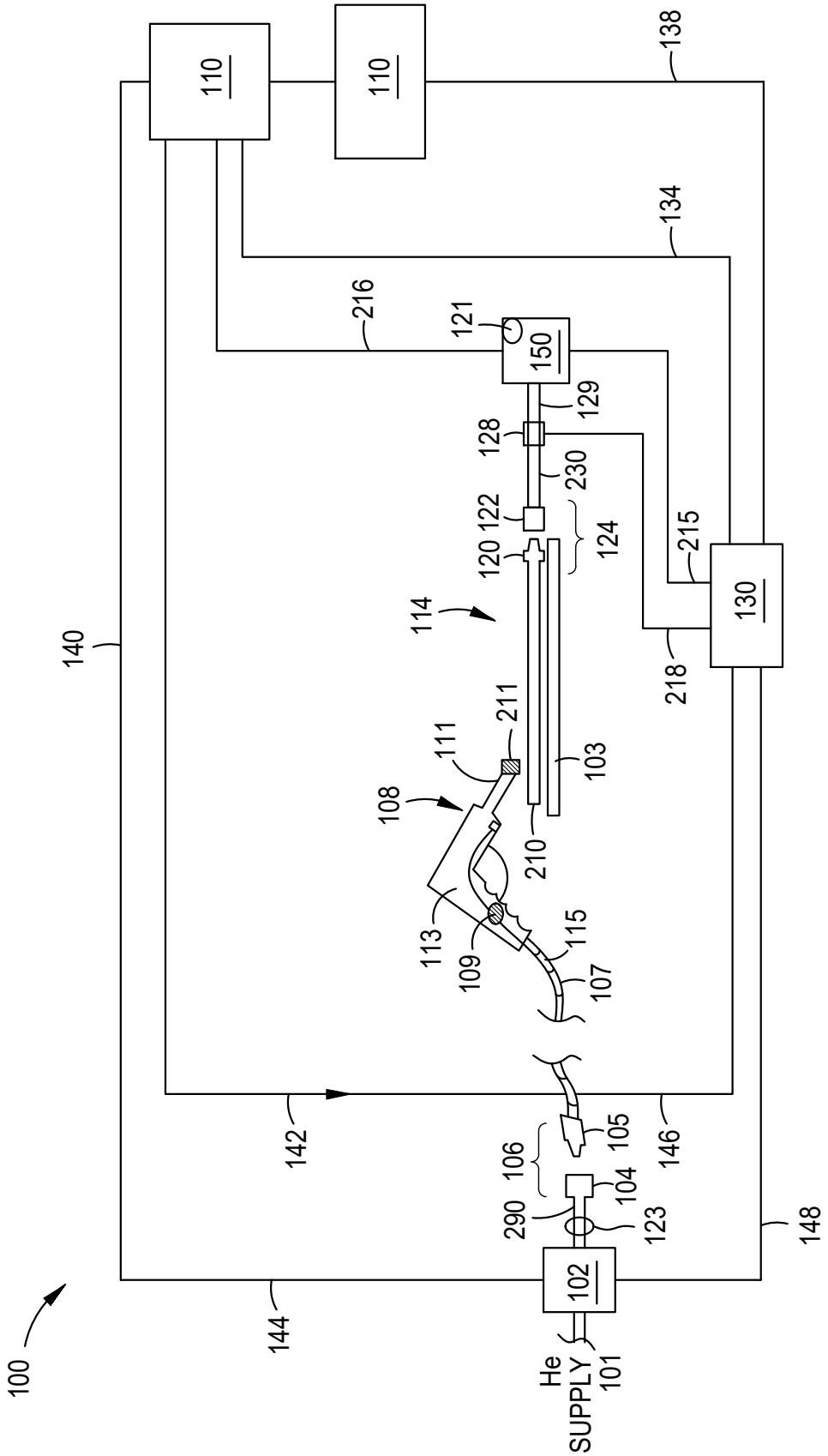

100
110
110
138
134
216
121
150
129
128
230
122
120
124
215
130
114
140
218
211
111
103
108
210
113
109
115
107
142
146
105
106
104
290
123
148
102
144
He
SUPPLY
101

FIG. 1

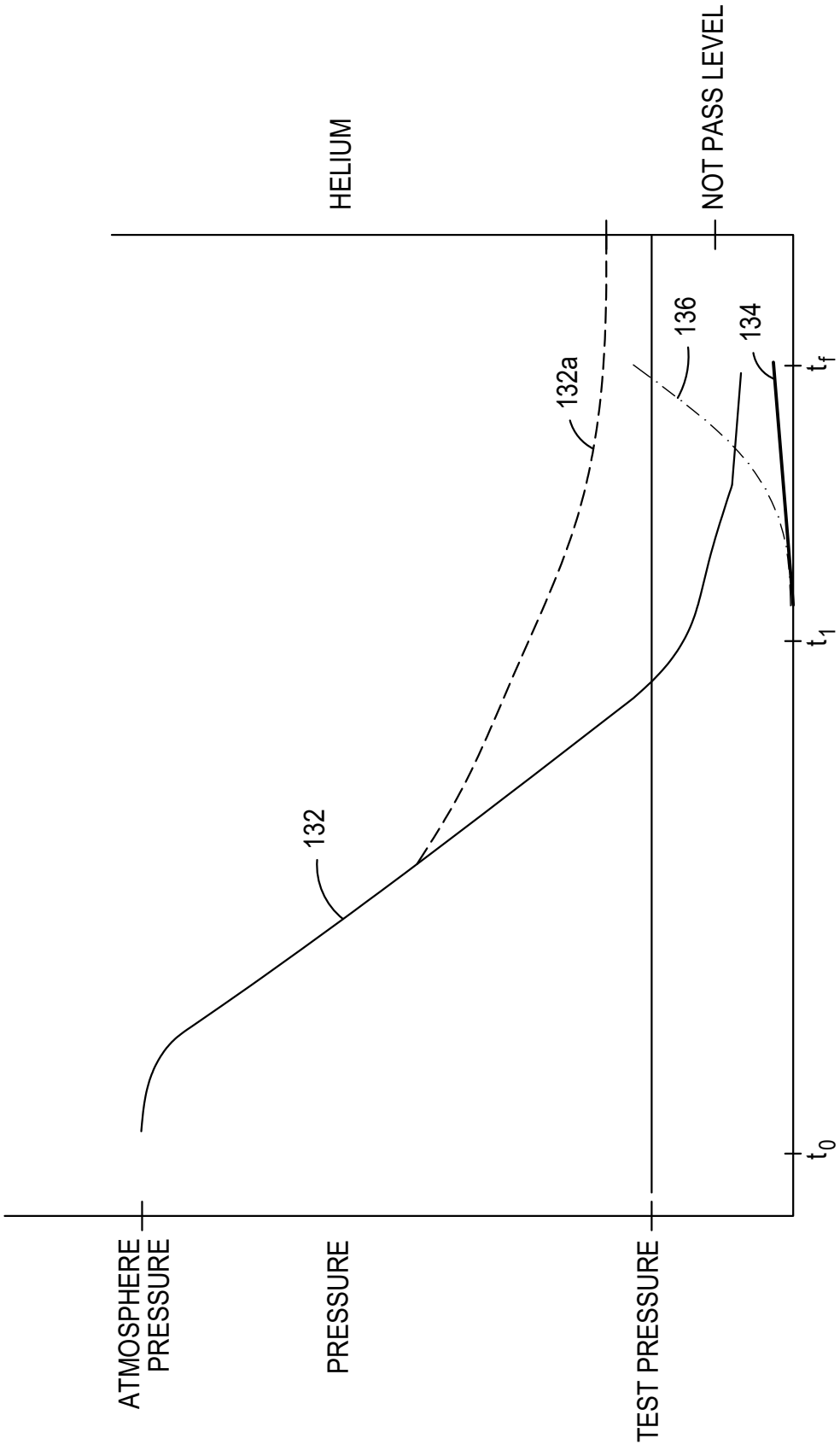

ATMOSPHERE PRESSURE
PRESSURE
TEST PRESSURE
HELIUM
NOT PASS LEVEL
132
132a
136
134
t_0
t_1
t_f
TIME
y
z
x

FIG. 2

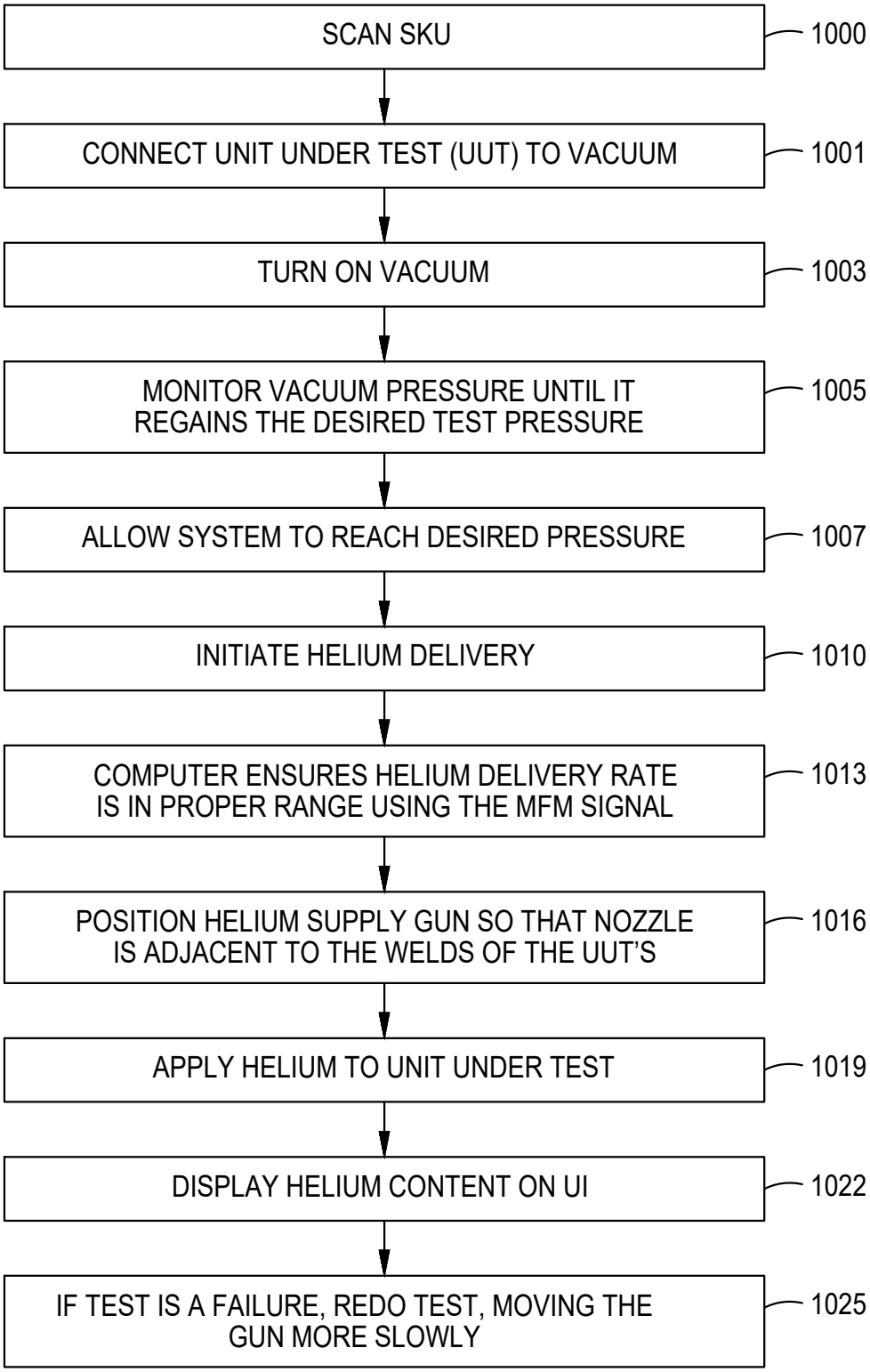

SCAN SKU
1000
CONNECT UNIT UNDER TEST (UUT) TO VACUUM
1001
TURN ON VACUUM
1003
MONITOR VACUUM PRESSURE UNTIL IT REGAINS THE DESIRED TEST PRESSURE
1005
ALLOW SYSTEM TO REACH DESIRED PRESSURE
1007
INITIATE HELIUM DELIVERY
1010
COMPUTER ENSURES HELIUM DELIVERY RATE IS IN PROPER RANGE USING THE MFM SIGNAL
1013
POSITION HELIUM SUPPLY GUN SO THAT NOZZLE IS ADJACENT TO THE WELDS OF THE UUT'S
1016
APPLY HELIUM TO UNIT UNDER TEST
1019
DISPLAY HELIUM CONTENT ON UI
1022
IF TEST IS A FAILURE, REDO TEST, MOVING THE GUN MORE SLOWLY
1025

FIG. 3

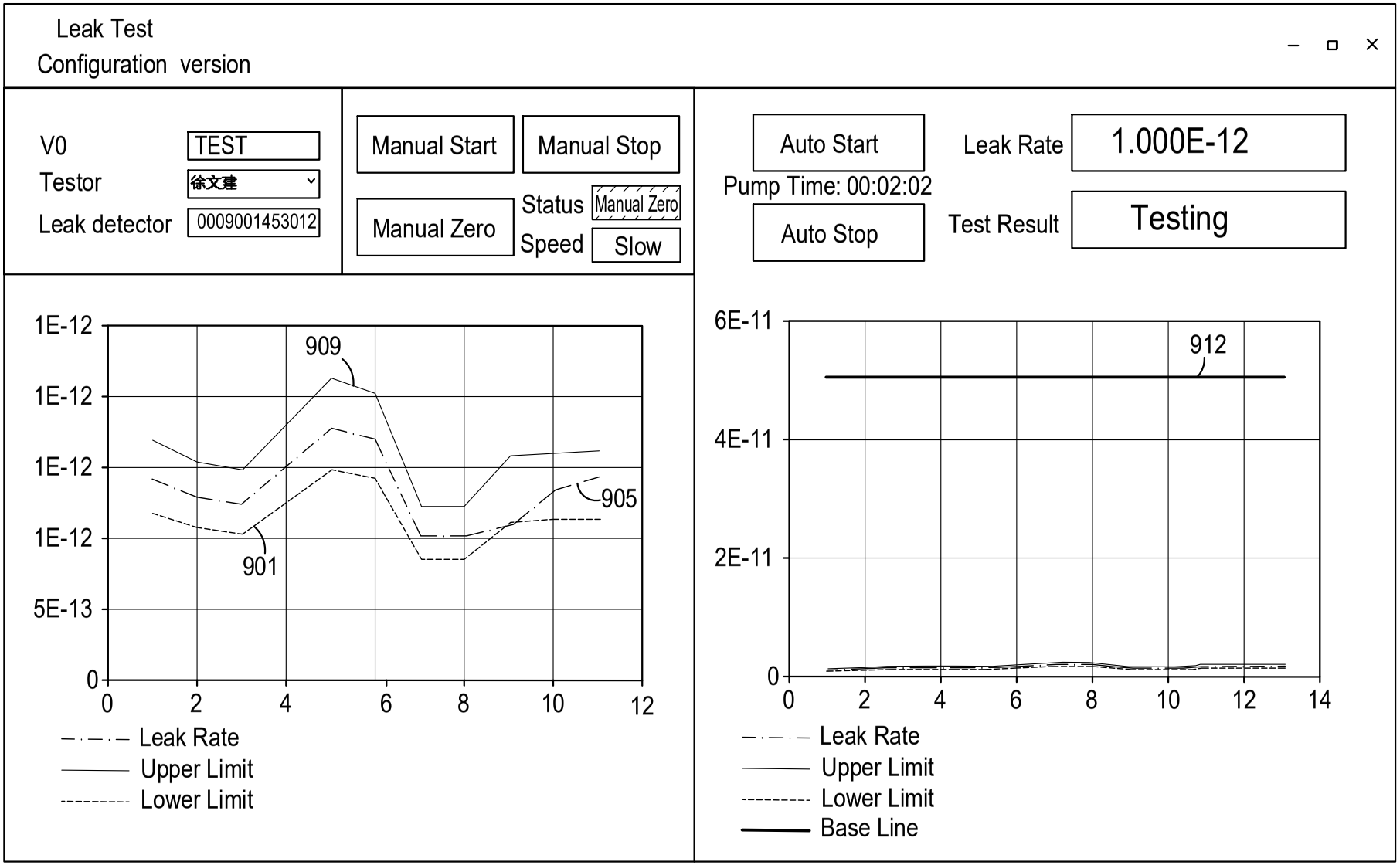

Leak Test
Configuration version
V0
TEST
Testor
徐文建
Leak detector
0009001453012
Manual Start
Manual Stop
Manual Zero
Status
Manual Zero
Speed
Slow
Auto Start
Pump Time: 00:02:02
Auto Stop
Leak Rate
1.000E-12
Test Result
Testing
1E-12
1E-12
1E-12
1E-12
5E-13
0
909
905
901
0
2
4
6
8
10
12
Leak Rate
Upper Limit
Lower Limit
6E-11
4E-11
2E-11
0
912
0
2
4
6
8
10
12
14
Leak Rate
Upper Limit
Lower Limit
Base Line

FIG. 4

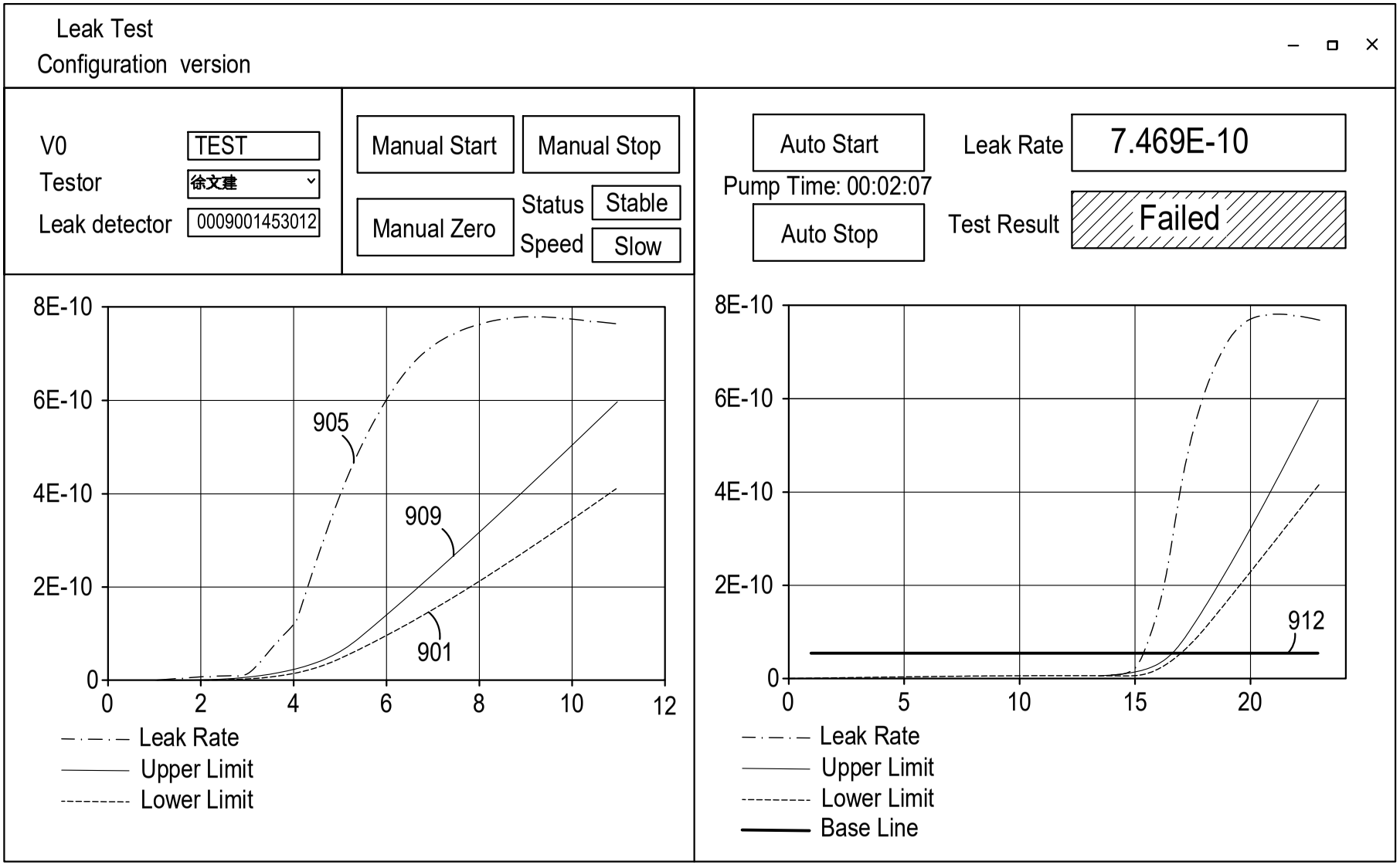

Leak Test
Configuration version
V0
TEST
Testor
徐文建
Leak detector
0009001453012
Manual Start
Manual Stop
Manual Zero
Status
Stable
Speed
Slow
Auto Start
Pump Time: 00:02:07
Auto Stop
Leak Rate
7.469E-10
Test Result
Failed
8E-10
6E-10
4E-10
2E-10
0
905
909
901
0
2
4
6
8
10
12
Leak Rate
Upper Limit
Lower Limit
912
0
5
10
15
20
Base Line

FIG. 5

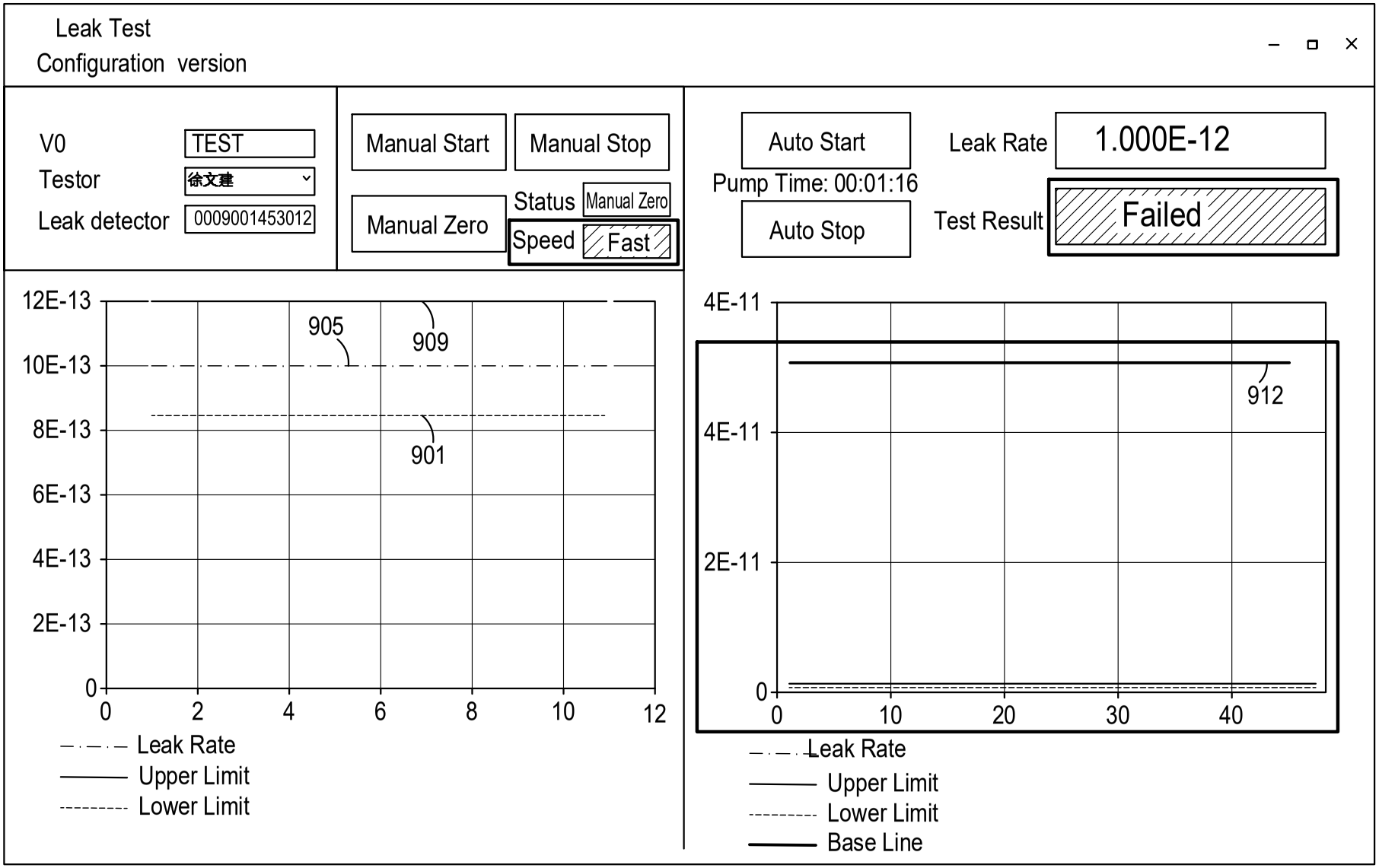

Leak Test
Configuration version
V0
TEST
Testor
徐文建
Leak detector
0009001453012
Manual Start
Manual Stop
Manual Zero
Status
Manual Zero
Speed
Fast
Auto Start
Pump Time: 00:01:16
Auto Stop
Leak Rate
1.000E-12
Test Result
Failed
12E-13
10E-13
8E-13
6E-13
4E-13
2E-13
0
905
909
901
0
2
4
6
8
10
12
Leak Rate
Upper Limit
Lower Limit
4E-11
4E-11
2E-11
0
912
0
10
20
30
40
Leak Rate
Upper Limit
Lower Limit
Base Line

FIG. 6

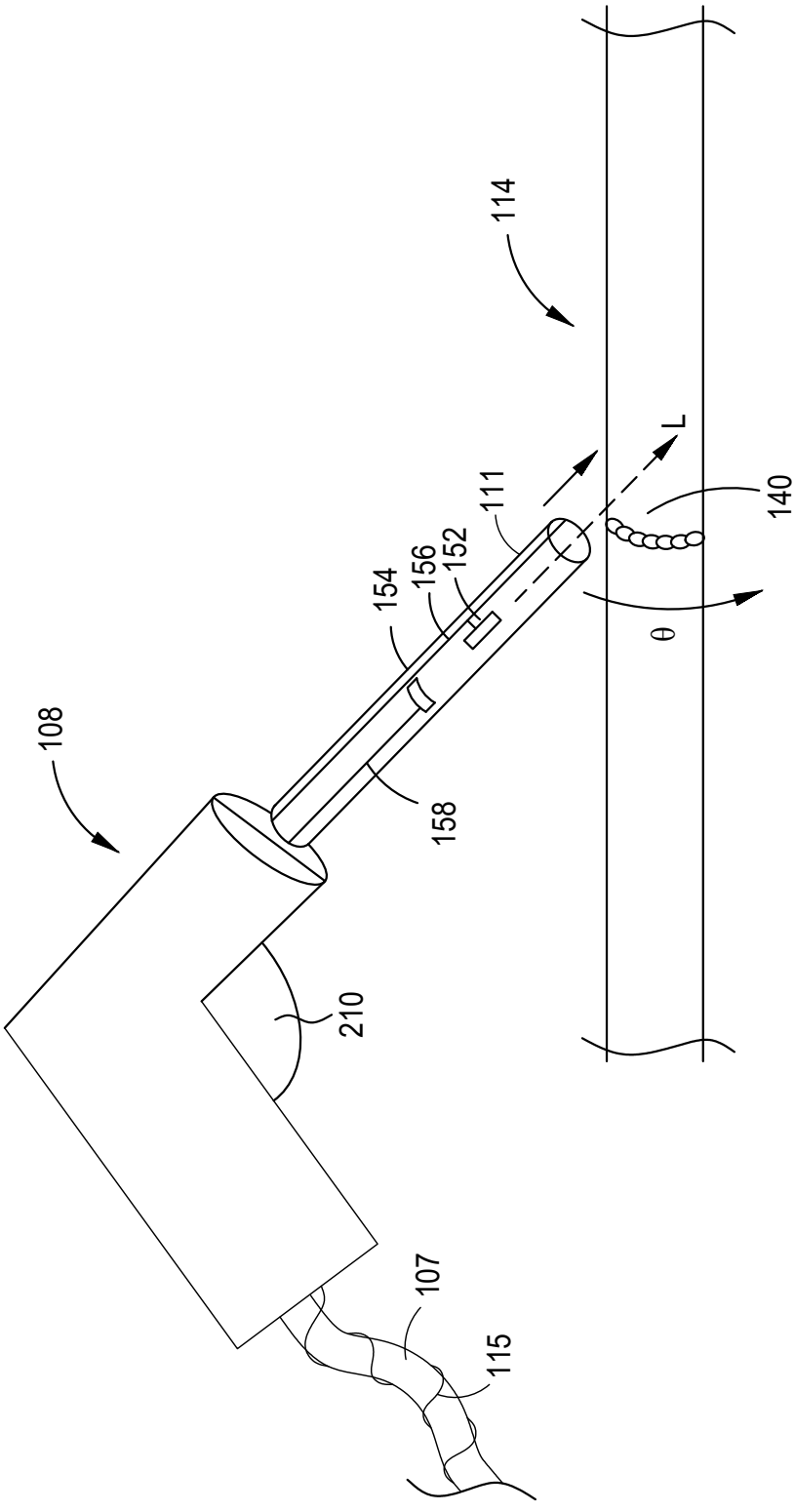


FIG. 7