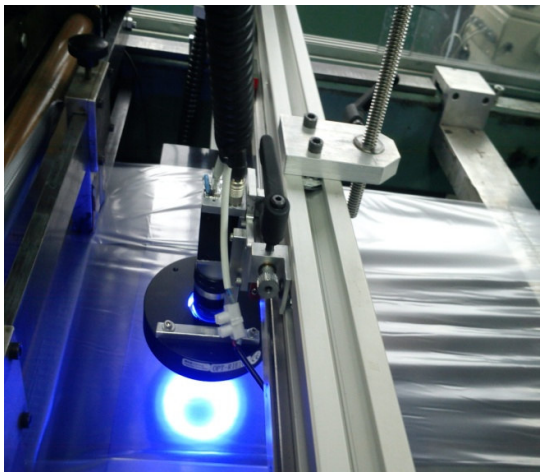
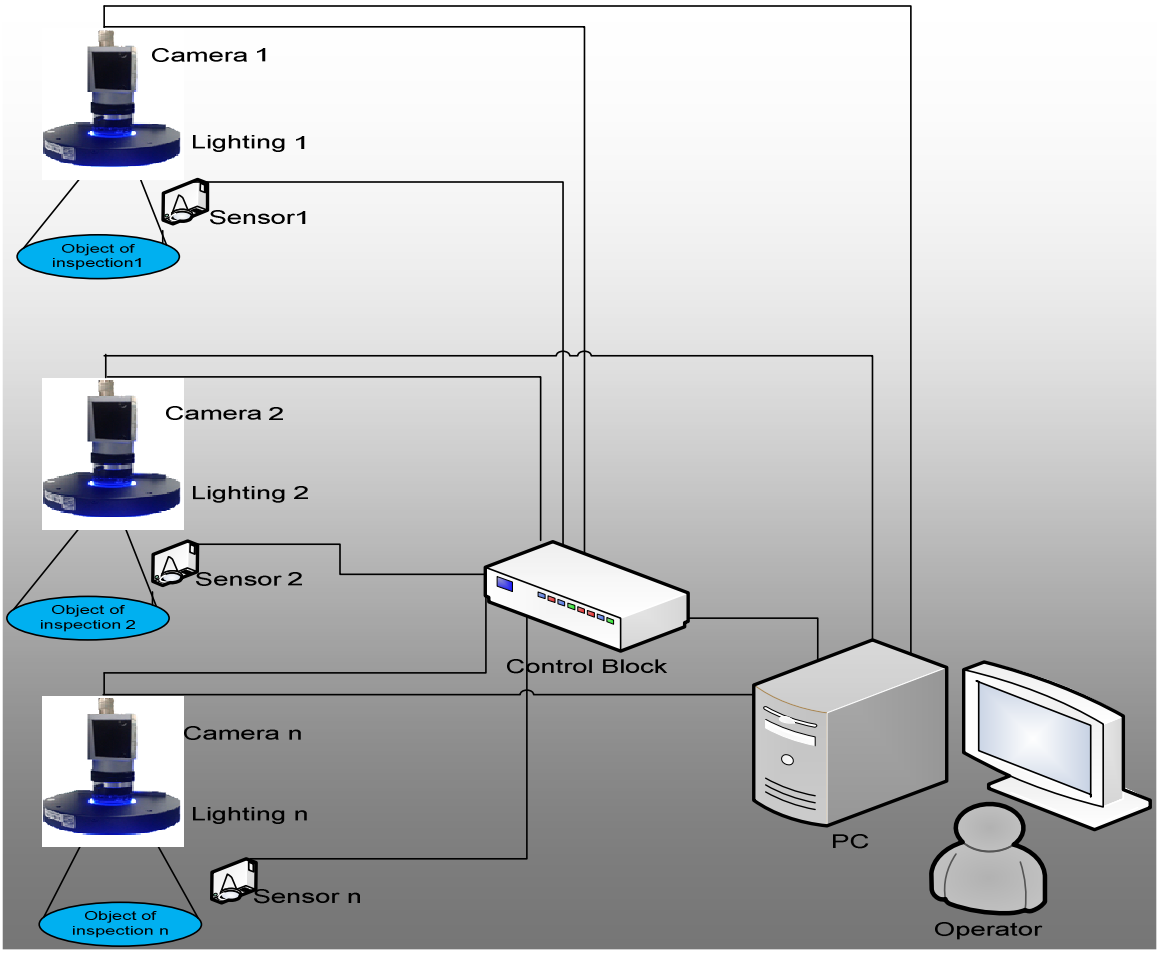
# Stepak Vision Check-In Inspection Vision System

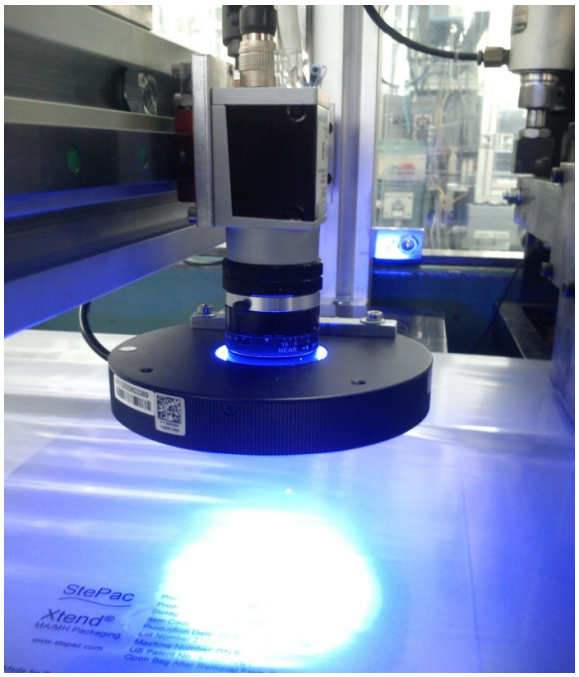




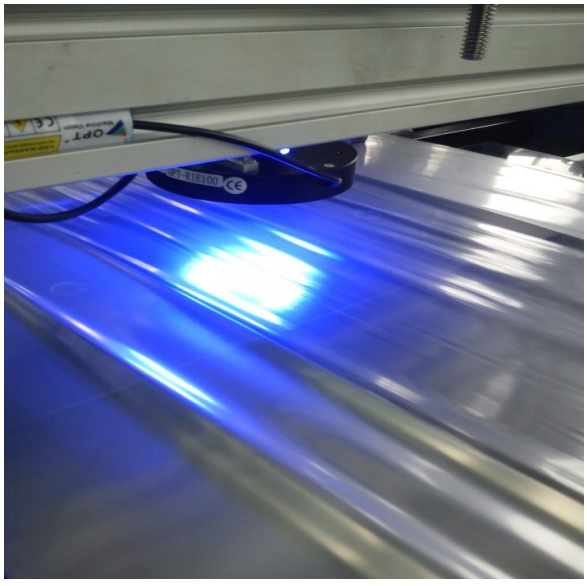
## Componets:

1. Cameras
2. Sensors
3. Lightings
4. Control Block
5. Output Device
6. Computer + Inspection Software

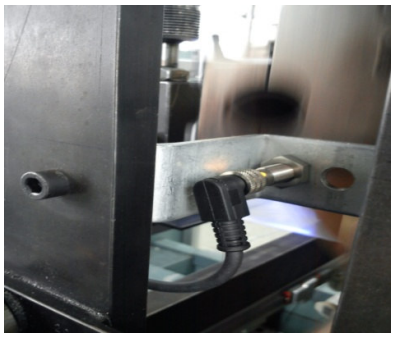
## Camera plus lighting



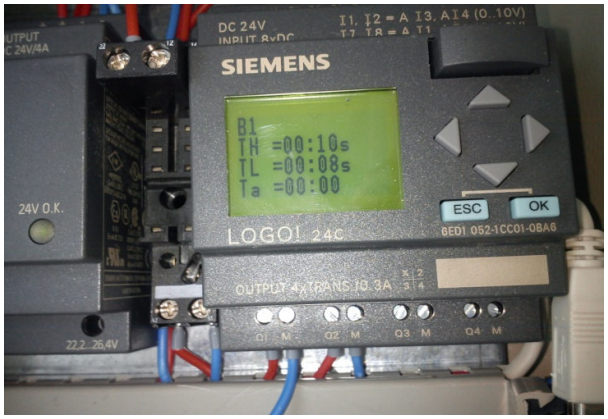

## Lighting



**Sensors**



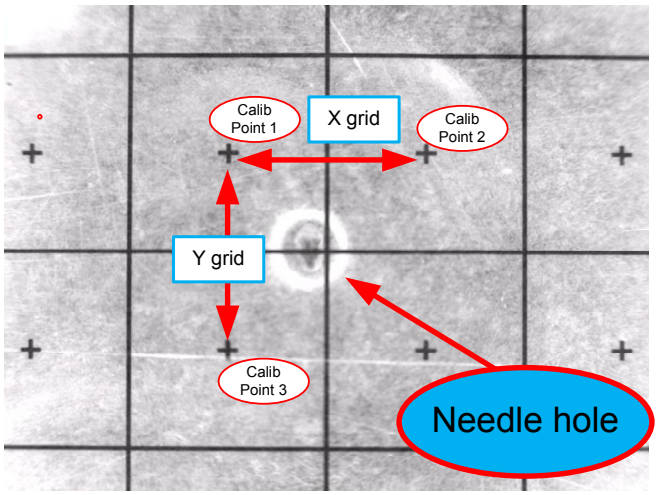
**Control Block**




**Output Device**

**Computer + Inspection Software**

## Calibration

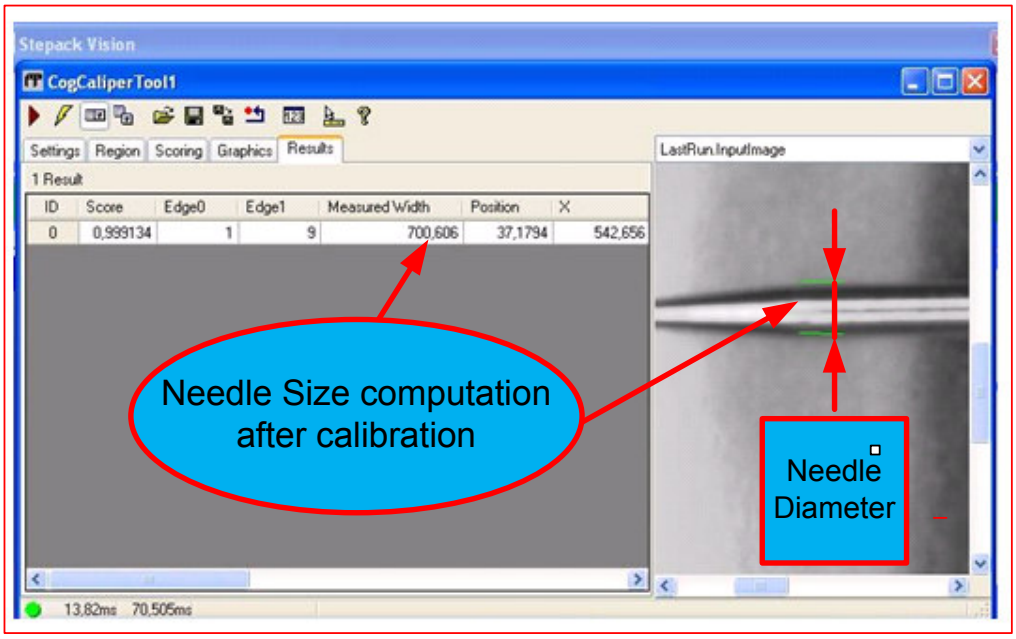



X grid - Step 3587,25 microns

Y grid - Step 3587,25 microns

## Needle Control measurement

(Size in Microns)

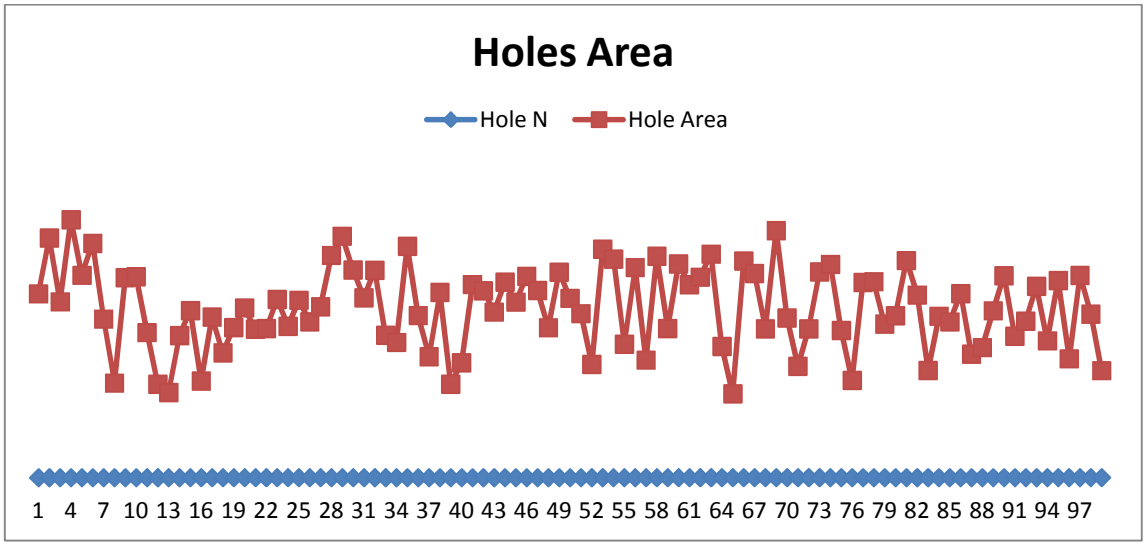


## Stepak GN6 Needle Holes measurement

(Size in Microns)

14:22 20.4.2012 r.

| Hole N | Hole Area |
|---|---|
| 1 | 95708,90911 |
| 2 | 124713,4261 |
| 3 | 91551,1286 |
| 4 | 134208,3575 |
| 5 | 105343,7659 |
| 6 | 121914,9199 |
| 7 | 82555,93037 |
| 8 | 49253,70761 |
| 9 | 104144,4061 |
| 10 | 104564,182 |
| 11 | 75539,67576 |
| 12 | 48654,02773 |
| 13 | 44376,31124 |
| 14 | 73980,50806 |
| 15 | 86933,59351 |
| 16 | 50313,14207 |
| 17 | 83675,33282 |
| 18 | 64945,33118 |
| 19 | 78078,32059 |
| 20 | 88372,82522 |
| 21 | 77258,75808 |
| 22 | 77638,55534 |
| 23 | 92770,47769 |
| 24 | 78837,91511 |
| 25 | 92350,70177 |
| 26 | 81116,69866 |
| 27 | 88952,51578 |
| 28 | 115678,2492 |
| 29 | 125672,9139 |
| 30 | 108062,3147 |
| 31 | 93630,01885 |
| 32 | 107902,4 |
| 33 | 74100,44404 |
| 34 | 70402,4181 |
| 35 | 120415,7202 |
| 36 | 84374,95935 |
| 37 | 63006,36623 |
| 38 | 96388,54631 |
| 39 | 48614,04907 |
| 40 | 59828,06286 |
| 41 | 100506,3482 |
| 42 | 97228,09814 |
| 43 | 86173,99899 |
| 44 | 101725,6973 |
| 45 | 91351,2353 |
| 46 | 104744,086 |
| 47 | 97408,00211 |
| 48 | 78018,3526 |
| 49 | 106902,9336 |
| 50 | 93330,17891 |
| 51 | 85354,43649 |
| 52 | 58948,53236 |
| 53 | 118836,5632 |
| 54 | 113739,2842 |
| 55 | 69482,90895 |
| 56 | 109321,6424 |
| 57 | 61187,33726 |
| 58 | 115218,4946 |
| 59 | 77638,55534 |
| 60 | 111180,6501 |
| 61 | 100446,3802 |
| 62 | 104324,3101 |
| 63 | 116297,9184 |
| 64 | 68283,54919 |
| 65 | 43636,70605 |
| 66 | 112699,8391 |
| 67 | 106163,3284 |
| 68 | 77478,64071 |
| 69 | 128571,3666 |
| 70 | 83075,65294 |
| 71 | 57889,09791 |
| 72 | 77458,65138 |
| 73 | 107022,8695 |
| 74 | 110960,7674 |
| 75 | 76599,11021 |
| 76 | 50612,98201 |
| 77 | 101525,804 |
| 78 | 101965,5692 |
| 79 | 79857,3709 |
| 80 | 84215,04471 |
| 81 | 112939,711 |
| 82 | 94989,29325 |
| 83 | 55710,261 |
| 84 | 83995,16209 |
| 85 | 80996,76268 |
| 86 | 95768,8771 |
| 87 | 64225,71532 |
| 88 | 67663,87998 |
| 89 | 86793,6682 |
| 90 | 105003,9473 |
| 91 | 73560,73215 |
| 92 | 81436,52793 |
| 93 | 99546,86035 |
| 94 | 71162,01262 |
| 95 | 102505,2811 |
| 96 | 61807,00647 |
| 97 | 105203,8406 |
| 98 | 85054,59655 |
| 99 | 55650,29302 |


Holes Area
Hole N
Hole Area
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55 58 61 64 67 70 73 76 79 82 85 88 91 94 97